Marijuana Legalization in Colorado: Early Findings

A Report Pursuant to Senate Bill 13-283

March 2016

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

700 Kipling St., Denver, Colorado 80215
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Prepared by

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

Stan Hilkey, Executive Director, Department of Public Safety
Jeanne M. Smith, Director, Division of Criminal Justice
Kim English, Research Director, Office of Research and Statistics

COLORADO
Department of Public Safety

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TABLE OF CONTENTS

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 the Division of Criminal Justice in the Department of Public Safety to 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, codified as C.R.S. 24-33.4-516.

The majority of the information presented here should be considered pre-commercialization, baseline data because much of the information is available only through 2014, and data sources vary considerably in terms of what exists historically. Consequently, it is too early to draw any conclusions about the potential effects of marijuana legalization or commercialization on public safety, public health, or youth outcomes, and this may always be difficult due to the lack of historical data. Furthermore, the information presented here should be interpreted with caution. The decreasing social stigma regarding marijuana use could lead individuals to be more likely to report use on surveys and to health workers in emergency departments and poison control centers, making marijuana use appear to increase when perhaps it has not. Finally, law enforcement officials and prosecuting attorneys continue to struggle with enforcement of the complex and sometimes conflicting marijuana laws that remain. Thus, the lack of pre-commercialization data, the decreasing social stigma, and challenges to law enforcement combine to make it difficult to translate these early findings into definitive statements of outcomes.

Recognizing the challenges involved in interpreting the data presented here, the following findings are summarized in this report:

Public Safety

- The total number of marijuana arrests decreased by 46% between 2012 and 2014, from 12,894 to 7,004 (Table 1). Marijuana possession arrests, which make up the majority of all marijuana arrests, were nearly cut in half (-47%). Marijuana sales arrests decreased by 24%, while arrests for marijuana production did not change appreciably (-2%). Marijuana arrests that were unspecified, meaning the specific reason for the arrest was not noted by law enforcement, went down by 42%.

- As a share of all arrests in Colorado, marijuana was responsible for 6% of all arrests in 2012 and 3% in 2014.

- The number of marijuana arrests decreased by 51% for Whites, 33% for Hispanics, and 25% for African-Americans. The marijuana arrest rate for African-Americans (348 per 100,000) was almost triple that of Whites (123 per 100,000) in 2014.

- Ten major Colorado counties (Adams, Arapahoe, Boulder, Broomfield, Douglas, El Paso, Jefferson, Larimer, Mesa, and Weld) showed a decrease in arrests, ranging between -30% (El Paso) and -63% (Adams). The average decrease across these 10 counties was -46%. Denver's

reported marijuana arrest data for 2012 and 2013 was incomplete due to separate jail arrest and citation systems. Cite and release data were not reported to the Colorado Bureau of Investigation until July 2013. Additionally, the 2014 arrest data reported by Denver include a non-criminal civil citation, which lead to an over-reporting of marijuana arrests for that year. See Appendix L, Table 16 for internal marijuana arrest data from the Denver Police Department.

- In terms of court filings, the total number of marijuana-related filings declined 81% between 2012 and 2015, from 10,340 to 1,954. The number of felony filings declined 45% (1,023 to 566), misdemeanors declined 1% (586 to 409), and petty offenses dropped 89% (8,728 to 979) between 2012 and 2015. The charge of marijuana possession dropped 88% (9,130 to 1,068).
    - Filings fell 69% for juveniles 10 to 17 years old, 78% for young adults 18 to 20 years old, and 86% for adults 21 or older.
- In terms of organized crime, between 2012 and 2015 there were 88 filings under the Colorado Organized Crime Control Act (C.R.S.18-17.104) that were in conjunction with some marijuana charge, including distribution (56), conspiracy (16), manufacture (10), and possession with intent to sell (6).
- The most common marijuana industry-related crime in Denver is burglary, accounting for 63% of marijuana crime related to the industry in 2015.
- Traffic safety data is limited, but the Colorado State Patrol (CSP) found that the number of summons issued for Driving Under the Influence in which marijuana or marijuana-in-combination with other drugs decreased 1% between 2014 and 2015 (674 to 665).
    - The prevalence of marijuana or marijuana-in-combination identified by CSP as the impairing substance increased from 12% of all DUIs in 2014 to 15% in 2015.
    - The Denver Police Department found summons where marijuana or marijuana-in-combination was recorded increased from 33 to 73 between 2013 and 2015. Citations for marijuana or marijuana-in-combination account for about 3% of all DUIs in Denver. Toxicology results from Chematox Laboratory showed an increase in positive cannabinoid screens for drivers, from 57% in 2012 to 65% in 2014. Of those that tested positive on the initial screen, the percent testing positive for delta-9 Tetrahydrocannabinol (THC) at 2 nanograms/millileter rose from 52% in 2012 to 67% in 2014.
    - Fatalities with THC-only or THC-in-combination positive drivers increased 44%, from 55 in 2013 to 79 in 2014. Note that the detection of any THC in blood is not an indicator of impairment but only indicates presence in the system. Detection of delta-9 THC, one of the psychoactive properties of marijuana, may be an indicator of impairment.

- The percent of 18 to 25 year-old probationers testing positive for THC is stable, with 33% in 2012 and 32% in 2014. The percent of 26 or older probationers testing positive for THC is stable, with 21% in 2012 and 20% in 2014.

- Regarding illegal cultivation on public land, the number of seizures or plants seized on public lands shows no discernible trend.

- In terms of assessing the extent of diversion of marijuana to other states, the Colorado Information Analysis Center (CIAC) compiled data from a service called Black Asphalt, an online forum for law enforcement drug interdiction with more than 20,000 active members. From January 1, 2014 to August 30, 2015 there were 261 drug-related interdiction submissions in which Colorado was the initiating state. Of those 261 submissions, 169 (65%) were for marijuana/hashish.

Public Health

- According to the National Survey on Drug Use and Health, administered by the Substance Abuse and Mental Health Services Administration, the current prevalence rates for marijuana usage in the past 30 days have increased significantly for young adults (18 to 25 years old), from 21% in 2006 (pre-commercialization) to 31% in 2014 (post-commercialization). Reported current marijuana use by adults (26 years or older) increased significantly, from 5% in 2006 to 12% in 2014.

- 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. Overall, in 2014, 14% of adults reported marijuana use in the past 30 days and 33% of current users reported using daily.

- The Colorado Department of Public Health and Environment analyzed data from the Colorado Hospital Administration and categorized visits according to determine if the visit indicated possible marijuana exposure or used a diagnosis/billing code indicating marijuana.

    - Hospitalizations with possible marijuana exposures, diagnoses, or billing codes per 100,000 hospitalizations increased from 803 per 100,000 before commercialization (2001-2009) to 2,413 per 100,000 after commercialization (2014-June 2015).

    - The period of retail commercialization showed a significant increase in emergency department visits, from 739 per 100,000 (2010–2013) to 956 per 100,000 ED visits (2014–June 2015).

- The number of calls to poison control mentioning human marijuana exposure has increased over the past 10 years. There were 44 calls in 2006 and 227 in 2015.

Youth Impacts

- Data on youth marijuana use is available from two sources, the Healthy Kids Colorado Survey, with 40,000 students responding in 2013 and the National Survey on Drug Use and Health, with fewer than 1,000 respondents.

  - The HKCS results indicate a slight decline in "past 30 day use" of marijuana while the NSDUH shows a gradual increase over time. In 2013, the HKCS found that 80% of high school students *did not* use marijuana in the past 30 days. The HKCS shows that marijuana use increases by grade level, and the NSDUH shows that youth use of marijuana in Colorado is above the national average. The perception of health risk of using marijuana is declining among youth in Colorado, according to both surveys.

- The number of juvenile marijuana arrests increased 5%, from 3,234 in 2012 to 3,400 in 2014. The rate of juvenile marijuana arrests per 100,000 increased from 598 in 2012 to 611 in 2014 (+2%).

  - The number of White juvenile arrests decreased from 2,198 in 2012 to 2,016 in 2014 (-8%).
  - The number of Hispanic juvenile arrests increased from 778 in 2012 to 1,006 in 2014 (+29%).
  - The number of African-American juvenile arrests increased from 205 in 2012 to 324 in 2014 (+58%).

- Data on drug tests from the Division of Probation Services shows that the percent of 10- to 14-year-old group testing positive for THC one or two times increased from 19% in 2012 to 23% in 2014, while the percentage testing positive three or more times went from 18% to 25%. The percent of 15- to 17-year-olds testing positive one or two times went down slightly, from 26% in 2012 to 25% in 2014, while those testing positive three or more times increased from 23% to 25%.

- The Colorado Department of Education data shows that that drug suspension rates increased from 391 (per 100,000 registered students) in the 2008-09 school year to 506 in 2009-10. The drug suspension rate has fluctuated somewhat since then and was 509 in the 2014-15 school year. The drug expulsion rate was 65 (per 100,000 registered students) in the 2008-09 school year, increasing to 90 in 2009-10, and then decreasing to 50 by 2014-15.

  - In the 2014-15 school year, discipline for drugs accounted for 41% of all expulsions, 31% of all law enforcement referrals, and 6% of all suspensions in Colorado.

  - Note that Senate Bill 12-046 and House Bill 12-1345 targeted reform of "zero tolerance" policies in schools, and appear to have decreased expulsions, suspensions, and referrals to law enforcement.[1] To assess drug-endangered children, data from CDPHE's Child Health Survey (targeting parents with children ages 1-14) was obtained. Of parents with children ages 1–14, 6.9% have some type of marijuana product around the house. When asked about where it is kept, 92% report storing it in a location the child cannot access

Additional Information

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

- In December 2015, there were 2,538 licensed businesses in Colorado. Seventy percent of the licenses for marijuana businesses are concentrated in the counties of Denver (1,112), El Paso (308), Pueblo (202), and Boulder (169).

- Total revenue from taxes, licenses, and fees increased from $76,152,468 in 2014 to $135,100,465 in 2015 (+77%). Excise tax revenue dedicated to school capital construction assistance was $35,060,590 in 2015.

- In November 2015 there were 109,922 individuals registered as medical marijuana cardholders. The most common conditions reported were severe pain (93%), muscle spasms (20%), and severe nausea (12%).

- Colorado's property crime rate decreased 3%, from 2,580 (per 100,000 population) in 2009 to 2,503 in 2014.

- Colorado's violent crime rate decreased 6%, from 327 (per 100,000 population) in 2009 to 306 in 2014.

It should be noted that the most fundamental challenge to interpreting data related to marijuana over time stems from unmeasured changes in human behavior concerning marijuana. Legalization may result in reports of increased use, when it may actually be a function of the decreased stigma and legal consequences regarding use rather than actual changes in use patterns. Likewise, those reporting to poison control, emergency departments, or hospitals may feel more comfortable discussing their recent use or abuse of marijuana for purposes of treatment. The impact from reduced stigma and legal consequences makes certain trends difficult to assess and will require additional time to measure post-legalization. Additionally, for example, the increase in law enforcement officers who are trained in recognizing drug use, from 32 in 2006 to 288 in 2015, can increase drug detection rates apart from any changes in driver behavior. For these reasons, these early, baseline findings should be carefully considered in light of the need to continue to collect and analyze relevant data.

SECTION ONE

INTRODUCTION

In 2013, following the passage of Amendment 64 which allows for the retail sale and possession of marijuana, the Colorado General Assembly passed Senate Bill 13-283. This bill mandated the Division of Criminal Justice in the Department of Public Safety to 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, codified as C.R.S. 24-33.4-516.

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There were several challenges in locating appropriate data for some of the metrics specified in S.B. 13-283. Those challenges are discussed in detail in the report, but it should be made clear that there are many areas of interest where the data to measure impacts do not currently exist.

This report is organized as follows: Section One describes the mandate to report per Senate Bill 13-283, data sources and the data collection methods used, the history of marijuana laws in Colorado, and the federal response. Section Two focuses on the public safety impacts of marijuana legalization while Section 3 presents information concerning public health. Section 4 presents impacts on youth, Section 5 provides additional information, and Section 6 summarizes the challenges involved in measuring the impact of legalization.

Purpose of this Report

The structure and data elements in this report are derived from Senate Bill 13-283, codified as C.R.S. 24-33.4-516. The bill instructed the Colorado Department of Public Safety, Division of Criminal Justice to assess the impact of retail marijuana legalization by studying specific topics enumerated in the legislation, and listed in the table below.

After the passage of SB 13-283 the Governor's Office of Marijuana Coordination commissioned a study to understand "the legislative requirements for recreational marijuana reporting" and "the existing data

management capabilities within the State of Colorado." The *Marijuana Data Discovery and Gap Analysis Summary Report*, prepared by Rebound Solutions in 2014,[2] identified the data required by the legislative mandate, assessed the current state of the data available to meet the requirements, made recommendations for modifying current data sources, and identified strategic priorities and recommendations for improving the state's data management capabilities.

The gap analysis identified issues with the data required in S.B. 13-283 and classified the problems based on two criteria: current capability to collect the data, and the strategic value of each element. A number of limitations were identified including the following: a complete lack of data, lack of data specific to marijuana, lack of trend data, lack of statewide data, lack of definitive information on impairment from marijuana, and data silos that do not allow for tracking an individual across systems. Additionally, the difficulties in meeting the S.B. 13-283 requirement for data specifically from 2006–2008 and 2014–2016 were identified.

Data collection requirements of S.B. 13-283

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

[2]Rebound Solutions (2014), *Marijuana data discovery and gap analysis summary report*. Prepared for the Governor's Office of Marijuana Policy Coordination. Available at https://cdpsdocs.state.co.us/ors/docs/resources/MarijuanaDataDiscoveryandGapAnalysis.pdf

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*. https://cdpsdocs.state.co.us/ors/docs/resources/MarijuanaDataDiscoveryandGapAnalysis.pdf, retrieved 2/24/2016.	

The report also made two enterprise recommendations. First, establish a data governance authority to implement the recommendations in the report. This authority would prioritize, collect, and manage coordinated data collection efforts while fostering strong cross-departmental collaboration. The streamlined data collection process would be facilitated by the creation of a data warehouse. The second recommendation called for clarifying legislative definitions for the terms marijuana-initiated law enforcement contacts, drug endangered children, and probation data. Thus far, these terms have not

been defined. There have been attempts to define "drug endangered children," but consensus has not been reached by stakeholders. However, the legislature continues to work on defining this term. "Marijuana-initiated law enforcement contacts" has not been defined and, more importantly, contact data of any kind (marijuana-related or otherwise) is not routinely collected by law enforcement agencies. Thus far, there has not been an attempt to have the term "probation data" clarified.

Short- and Long-term Plan Regarding Data Reporting

The reporting requirements of SB 13-283 specify a report due at an undetermined time after the data collection period ends in 2016. The Governor's Office of Marijuana Coordination and the Division of Criminal Justice have agreed to two additional near-term reporting goals. This report represents the first near-term goal, presenting baseline data so that stakeholders and members of the public will have an idea of the starting points for many of the required data elements. The second near-term goal is the creation of a web-based data portal that will allow users to interact dynamically with the available data. This portal will allow for updated data to become available to stakeholders and the public in advance of the more expansive written report. The Governor's Office of Information Technology is currently working on obtaining the funds required to build a data warehouse that will feed the data to the portal.

Data Sources

This report would not be possible without the collaboration and cooperation of officials from many different entities including the following:

<u>Colorado State Government</u>

- 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, 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 Revenue, Marijuana Enforcement Division
- Colorado Department of Revenue, Taxation Division
- Colorado Department of Transportation
- Colorado State Judicial Branch

<u>Municipal and Private</u>

- Chematox Laboratory

- City and County of Denver, Office of Marijuana Policy
- Colorado Hospital Association
- Denver Police Department
- Rocky Mountain Poison and Drug Center

Federal

- 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 in this report were collected in several ways. First, many sources provide public information on agency websites in the form of reports, briefing papers, and spreadsheets available for download. When this is the case, links to the original source material are provided. Second, several sources provided individual-level, nonpublic data for analysis. Third, summary data not published elsewhere were provided. The data presentations in this report were sent to the original data sources for comment to ensure the original information is accurately represented.

Brief History of Marijuana Laws in Colorado

Federal Law

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

The Schedule I classification puts state laws legalizing medical or recreational marijuana at odds with the CSA. As of December 2015, there were 23 states plus the District of Columbia allowing medical marijuana, 17 states allowing cannabidiol[4] exclusively, and four states plus the District of Columbia allowing for the sale of recreational marijuana.[5] The widespread growth of medical marijuana legalization over the past 20 years has put an increasing number of states, including Colorado, in conflict with the CSA. The potential for more states to legalize recreational marijuana is currently heightening this conflict.

[3] 21 U.S.C. § 811.
[4] Cannabidiol (CBD) is a nonpsychoactive substance derived from cannabis with potential medical uses. For a review of some relevant research, see Scuderi, C. et al. (2009). Cannabidiol in medicine: a review of its therapeutic potential in CNS disorders, *Phytotherapy Research*, *23* (5), 597-602.
[5] National Conference of State Legislatures, *State Medical Marijuana Laws* (2016), http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx, retrieved 2/3/2016.

Colorado Law

There have been five general eras of marijuana law in Colorado, including strict prohibition (pre-2000), medical without commercialization (2000–2009), medical with commercialization (2010–2012), recreational without commercialization (2013), and recreational with commercialization (2014-present).[6] These represent distinct eras in both the legal status and commercial availability of marijuana.

- 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 issues registry identification cards to individuals who have received recommendations from a doctor that it will help a debilitating medical condition. It is legal to possess up to two ounces and grow six 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: Recreational and medical marijuana fully regulated and commercialized. Licensed retail stores open on January 1, 2014.

Amendment 20

In 2000, Colorado passed Amendment 20 which allows 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.[7] 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 current list of conditions eligible for a card includes cachexia, cancer, glaucoma, HIV/AIDS, muscle spasms, seizures, severe nausea, or 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.

A caregiver was initially limited to growing medical marijuana for five patients and themselves if a medical marijuana cardholder. The justification for this limit was challenged in Denver District Court and

[6] 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.

[7] 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), retrieved 2/3/2016. 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, retrieved 1/29/2016.

was overturned.[8] In 2009, the Colorado Board of Health rejected the five-patient limit for caregivers. The U.S. Department of Justice also issued what is known as the Ogden Memo (see Appendix A), which gave guidance to U.S. Attorneys that where prosecution for marijuana was concerned, 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." [9] 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 HB 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 SB 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.[10]

The commercialization of medical marijuana followed and the number of patients registered with CDPHE increased dramatically, from about 5,000 in 2009 up to almost 119,000 in 2011.

Amendment 64

Prior to the passage of Amendment 64 in 2012, Initiative 44 was put 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 possession and use.[11] 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.[12]

Amendment 64 allows for individuals 21 years or older to grow up to six plants (three mature and three immature) and keep all of marijuana produced on the same premises, possess up to one ounce of marijuana, and give away 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 in the world 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.[13]

[8] *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).
[9] U.S. Department of Justice (2009). Ogden memo: Investigations and prosecutions in states authorizing the medical use of marijuana, http://www.justice.gov/sites/default/files/opa/legacy/2009/10/19/medical-marijuana.pdf, retrieved 2/1/2016.
[10] 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.
[11] Ballotpedia, Colorado Marijuana Possession, Initiative 44 (2006), available at https://ballotpedia.org/Colorado_Marijuana_Possession,_Initiative_44_(2006), retrieved 1/29/2016.
[12] Ballotpedia, Colorado Marijuana Legalization Initiative, Amendment 64 (2012), https://ballotpedia.org/Colorado_Marijuana_Legalization_Initiative, Amendment_64_(2012), retrieved 1/29/2016.
[13] Retail Marijuana Code: C.R.S. 12-43.4-101 *et seq*. and https://www.colorado.gov/pacific/enforcement/laws-constitution-statutes-and-regulations-marijuana-enforcement.

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.[14]

Additional rule-making has been 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.[15] Examples include issues regarding pesticide application, testing for mold and solvents, THC homogeneity in manufactured products, and many others.

Federal Response

In the wake of Amendment 64 and other recreational legalization efforts throughout the country, the United States Department of Justice (USDOJ) issued what is known as the Cole Memo (see Appendix B).[16] This gave guidance to U.S. Attorneys across the country. The Cole Memo set forth USDOJ's enforcement priorities, including:

1. Preventing distribution of marijuana to minors
2. Preventing revenue from going to criminal enterprises, gangs, and cartels
3. Preventing diversion of marijuana from states where it is legal under state law in some form to other states
4. Preventing state-authorized marijuana activity from being used as a cover or pretext for the trafficking of other illegal drugs or other illegal activity
5. Preventing violence and the use of firearms in the cultivation and distribution of marijuana
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) reports that USDOJ's Office of the Deputy Attorney General is monitoring the effects of marijuana legalization in two ways.[17] First, "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

[14] 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,* available at https://drive.google.com/file/d/0B8bNvcf083ydSlh4NWtHTjFoa2s/view, retrieved 2/4/2016.
[15] A compendium of amendments, statutes, and rules is available in the *Colorado marijuana laws and regulations 2014* (2015). LexisNexis: Charlottesville, VA. This publication is updated annually to reflect changes in statutes and rules.
[16] U.S. Department of Justice (2013). *Cole memo: Guidance regarding marijuana enforcement*, available at http://www.justice.gov/iso/opa/resources/305201382913275685746 7.pdf, retrieved 1/29/2016.
[17] 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, retrieved 2/3/2016.

indicates that the USDOJ has not documented its monitoring approach, leading to a gap in their knowledge about state-level adherence to the Cole memo. In Colorado, the Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA), which is funded by the Office of National Drug Control Policy, is tracking the impact of marijuana legalization in the state and has produced three reports of its findings.[18]

In sum, this report presents data from many sources in an effort to provide a baseline for preliminarily assessing the impact of the commercialization of marijuana on public safety, public health, and youth in Colorado, drawing from a myriad of data sources. The 2014 data gaps analysis report by the Rebound Solutions first identified problems with some of the data elements enumerated in S.B. 13-283, and these issues are discussed throughout this 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.

[18] RMHIDTA (2016). *The Legalization of Marijuana in Colorado: The Impact,* http://www.rmhidta.org/default.aspx/MenuItemID/687/MenuGroup/RMHIDTAHome.htm, retrieved 2/3/2016.

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, the public safety impacts were unknown. The Cole Memo 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 S.B. 13-183, some of which were influenced by the Cole Memo, included:

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

Data Collection Challenges

Meeting the reporting requirements of S.B. 13-183 was challenging. Obtaining data or even the number of years of data required by S.B. 13-283 was difficult, and in some cases the data do not exist. "Marijuana-initiated law enforcement contact," for example, 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 requires this contact data to be disaggregated by race/ethnicity, and it is not known how a law enforcement officer would determine race/ethnicity on 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 to 2014 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 are managed locally by the Colorado Bureau of Investigation. NIBRS has significantly more information than the Uniform Crime Reporting (UCR), including information about drug type, which is not available in UCR arrest data. However, Colorado only recently—in 2012-- became a "NIBRS state" 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 Denver began a process in 2012 to assess whether such crime was a significant problem, and we report this information 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 would become more aware of the issue and increase interdiction efforts, potentially resulting in an increase in seizures which may or may not be related to an actual increase in diversion.

The challenges faced in collecting information on traffic accidents and driving under the influence are significant. The current statute on impaired driving does not differentiate between driving under the influence of alcohol and driving under the influence of drugs. There is no central repository for toxicology results 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 results from three drugs detected in the driver's system.

S.B. 13-283 mandates the analysis of "probation data." Probation infractions associated with marijuana use are analyzed here, but these are also difficult to measure. The State Judicial Branch's database does not capture whether an infraction was marijuana-related or even related to drugs in general.

This report attempts to begin answering the important questions identified in SB 13-283. Despite significant challenges in meeting all of the statute's reporting requirements, this report examines the data that are available to help inform the stakeholders in Colorado about these issues.

Arrests and Offenses

Data on marijuana arrests and offenses for the period 2012–2014 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 summary reporting system did not allow. Colorado became fully NIBRS compliant in 2012, which limits the years of data available for this report.

Marijuana Arrests

Overall

The total number of marijuana arrests decreased by 46% between 2012 and 2014, from 12,894 to 7,004 (Table 1). Marijuana possession arrests, which make up the majority of all marijuana arrests, were nearly cut in half (-47%). Marijuana sales arrests decreased by 24%, while arrests for marijuana production did not change appreciably (-2%). Marijuana arrests that were unspecified, meaning the specific reason for the arrest was not entered by law enforcement, went down by 42%. As a share of all arrests in Colorado, marijuana was responsible for 6% of all arrests in 2012 and 3% in 2014.

Age Group

There was a 78% reduction in arrests for the 21 and older age group for whom marijuana possession is now legal. This compares with a 33% reduction in the 18- to 20-year-old group who may possess legally if they have a medical marijuana card. Juveniles between the ages of 10 and 17 showed a 5% increase in the number of marijuana arrests. In 2014, juveniles accounted for almost half (49%) of all marijuana arrests compared to 25% in 2012. (For details on arrest type, see Appendix C, Table 4.)

Race/Ethnicity

The decrease in the number of marijuana arrests by race is the greatest for White arrestees (-51%) compared to Hispanics (-33%) and African-Americans (-25%). The marijuana arrest rate for Whites and Hispanics is comparable, but the marijuana arrest rate for African-Americans is almost three times that of Whites (348/100,000 for Blacks and 123/100,000 for Whites)(Table 1). (For details on arrest type, see Appendix C, Table 4.)

Gender

The number of males arrested for marijuana showed a slightly larger decrease (-47%) than the number of females arrested (-39%). The distribution of arrests remained about the same, with males accounting for four out of five arrests. (For details on arrest type, see Appendix C, Table 4.)

County

Ten major Colorado counties (Adams, Arapahoe, Boulder, Broomfield, Douglas, El Paso, Jefferson, Larimer, Mesa, and Weld) all showed a decrease in arrests, ranging between -30% (El Paso) and -63% (Adams). The average decrease in these 10 counties was -46% (see Appendix C, Table 1). Denver's reported marijuana arrest data for 2012 and 2013 was incomplete due to separate jail arrest and citation systems. Cite and release data were not reported to the Colorado Bureau of Investigation until July 2013. Additionally, the 2014 arrest data reported by Denver include a non-criminal civil citation, which lead to an over-reporting of marijuana arrests for that year. See Appendix L, Table 16 for internal marijuana arrest data from the Denver Police Department.

Agency

The trends for each agency reporting marijuana arrests to the National Incident-Based Reporting System (NIBRS) are presented in Appendix C, Table 2. Nearly all other major departments reported decreases in marijuana arrests, ranging from a -77% decrease for the Adams County Sheriff's Office to a -13% decrease for the Lakewood Police Department (see Appendix C, Table 2). Also, please see the note regarding Denver in the previous paragraph.

Table 1. Marijuana arrests and rates in Colorado, 2012–2014

	Total marijuana arrests				Marijuana arrests per 100,000 population			
	2012	2013	2014	% change 2012–2014	2012	2013	2014	% change 2012–2014
Total	12,894	6,502	7,004	-46%	249	123	131	-47%
Arrest type								
Possession	11,370	5,435	5,998	-47%	219	103	112	-49%
Unspecified	1,038	726	600	-42%	20	14	11	-44%
Sales	301	225	230	-24%	6	4	4	-26%
Production	179	111	176	-2%	3	2	3	-5%
Smuggling	6	5	0	100%	<1	<1	0	--
Age group								
10 to 17 years old	3,235	3,125	3,400	5%	591	561	598	1%
18 to 20 years old	3,347	2,277	2,244	-33%	1490	997	978	-34%
21 years or older	6,312	1,100	1,360	-78%	170	29	35	-79%
Race/Ethnicity								
White	9,343	4,476	4,552	-51%	260	123	123	-52%
Hispanic	2,384	1,372	1,590	-33%	219	124	140	-36%
African-American	958	543	716	-25%	468	275	348	-26%
Other	209	111	146	-30%	71	35	44	-37%
Gender								
Male	10,474	5,269	5,517	-47%	403	200	206	-49%
Female	2,420	1,233	1,487	-39%	93	47	56	-40%

Note: Denver under-reported marijuana arrests in 2012 and 2013, due to an issue with different arrest and citations systems. Denver over-reported arrests in 2014 due to including a non-criminal civil citation. See Appendix L, Table 16 for internal marijuana arrest data from the Denver Police Department.

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

Marijuana Offenses

Overall

The number of marijuana offenses reported to or that become known to law enforcement decreased at around the same rate as arrests (Table 2). The number of offenses went down 44%, from 19,346 in 2012 to 10,814 in 2014. The biggest decrease was for possession, down 45% from 2012 to 2014. Offenses for producing were down 24% and sales were down 23% from 2012 to 2014.

Age Group

The difference in the offense trend by age group is similar to the trend for arrests. There was a substantial decrease in adult arrests, down 76%, and a somewhat smaller decrease in the 18 to 20 age group, down 36%. The number of youth cited for marijuana offenses increased by 6%. Additionally, youth under 18 accounted for nearly half (48%) of marijuana offenses known to law enforcement in 2014, compared to 25% in 2012.

Gender

A decrease in offenses occurred across both genders, with a 45% reduction in male offenses and a 40% reduction in female offenses. Females accounted for 15% of all offenses in 2012, rising to 22% of all offenses in 2014.

Table 2. Marijuana offenses and offense rates in Colorado, 2012–2014

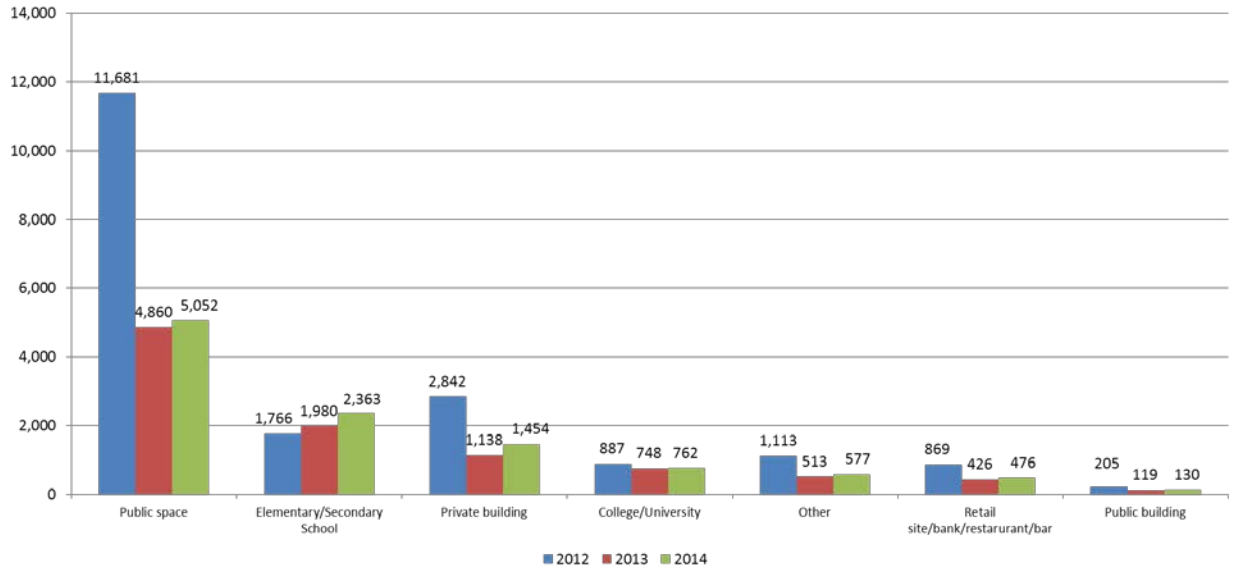
	Total marijuana offenses				Marijuana offenses per 100,000 population			
Age group	2012	2013	2014	% change 2012-2014	2012	2013	2014	% change 2012-2014
Total	19,346	9,784	10,814	-44%	373	186	202	-46%
Offense type								
Possession	18,278	9,068	9,983	-45%	352	172	187	-47%
Producing	434	176	331	-24%	8	3	6	-26%
Sales	612	500	474	-23%	12	9	9	-25%
Smuggling	22	40	26	18%	0	1	0	15%
Age group								
10 to 17 years old	4,886	4,522	5,158	6%	394	362	409	4%
18 to 20 years old	5,237	3,365	3,363	-36%	2,331	1,473	1,466	-37%
21 years or older	9,049	1,781	2,214	-76%	243	47	57	-76%
Gender								
Male	15,344	7,788	8,428	-45%	591	295	315	-47%
Female	3,926	1,935	2,337	-40%	152	74	87	-42%

Note: Race/ethnicity of suspect is not captured accurately for offenses and is not reported in this table.
Source: Colorado Bureau of Investigation, National Incident-Based Reporting System data.

Location

NIBRS captures information on the place an offense was reported to have occurred. There are 57 categories, including places like public transportation, bars, convenience stores, homes, parks/playgrounds, parking lots, primary/secondary schools, colleges, etc. Data for offenses grouped by place are presented in Figure 1 and data for all places individually are in Appendix D, Table 6. The place with the biggest numeric increase is elementary/secondary schools, where offenses increased from 1,766 offenses in 2012 to 2,363 offenses in 2014 (+34%).

Figure 1. Marijuana offenses, by location type, 2012–2014



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

Marijuana Court Filings

The Colorado State Judicial Branch's data system[19] was queried for marijuana filings[20] occurring between 2006 and 2015. The State Judicial data system captures information from the County and District Courts throughout the state, with the exception of Denver County Court. The data include information on statute, charge description, charge classification, judicial district, defendant age, and defendant race.[21] The charges were categorized according to the text entered into the charge description field.

The total number of marijuana-related filings declined 81% between 2012 and 2015, from 10,340 to 1,954 (Table 3). The number of felony filings declined 45% (1,023 to 566), misdemeanors declined 1% (586 to 409), and petty offenses dropped 89% (8,728 to 979) between 2012 and 2015.

The charge of marijuana possession dropped 88% (9,130 to 1,068), possession with intent to distribute dropped 4% (329 to 315), distribution dropped 23% (304 to 235), manufacture dropped 68% (314 to 102), and conspiracy dropped 48% (50 to 26) between 2012 and 2015. Filings for public consumption increased in 2013 and 2014 but dropped in 2015, resulting in no real change between 2012 and 2015.

The age of defendants is grouped into three categories. Between 2012 and 2015, filings declined 69% in the 10- to 17-year-old group; in the 18- to 20-year-old group, filings declined 78%; in the 21 and older age group, filings declined 86%.

In the second half of 2015 there were 29 filings for manufacturing concentrate (i.e., hash oil, wax, shatter) using an inherently hazardous substance, such as butane (C.R.S. 18-18-406.6, effective date July 1, 2015).

[19] Misdemeanor and petty offense charges from the City and County of Denver are not entered in the State Judicial database and are therefore presented in a separate table. Felony charges from Denver are included.
[20] This includes charges under C.R.S. 18-18-406, excluding the subsections for synthetics and salvia.
[21] The race category does not consistently capture whether a defendant's ethnicity is Hispanic and will not be used in this report. Upon examining the data, only 7% of defendants were characterized as Hispanic compared to 21% of the general population and 23% of the marijuana arrestee population.

Table 3. Marijuana court filings, by classification, category, and age group, 2006–2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total	11,903	12,368	11,460	11,099	10,502	10,276	10,340	4,089	3,268	1,954
Charge classification										
Felony	1,652	1,641	1,481	1,483	1,404	1,064	1,023	645	426	566
Misdemeanor	1,383	1,072	804	668	646	615	586	408	537	409
Petty offense	8,866	9,650	9,175	8,942	8,449	8,594	8,728	3,036	2,304	979
Charge category										
Possession	10,284	10,740	10,006	9,605	9,010	8,984	9,130	3,160	2,400	1,068
Possession with intent to sell	702	692	661	649	519	387	329	256	242	315
Distribution	391	377	344	359	350	294	304	286	226	235
Manufacture	323	376	285	284	366	346	314	95	82	102
Public consumption	102	129	106	144	176	214	204	257	288	206
Conspiracy	56	40	34	50	60	46	50	32	29	26
Other	45	14	24	8	21	5	9	3	1	2
Age group										
10 to 17 years old	1,777	1,888	1,676	1,619	1,688	1,583	1,665	1,530	1,180	519
18 to 20 years old	2,702	2,911	2,875	2,859	2,648	2,695	2,599	1,561	1,324	560
21 years or older	7,410	7,551	6,883	6,603	6,151	5,983	6,057	988	757	868

Note: The City and County of Denver do not report misdemeanors or petty offenses to the Colorado State Judicial Branch.
Source: Data provided by the Colorado State Judicial Branch.

The Denver County Court, which processes petty offenses and misdemeanors, operates separately from the State Judicial data system. The number of marijuana filings remained relatively stable, increasing by just 18 from 2014 to 2015 (Table 4). The types of filings did change, with an increase in public consumption and offenses within 1,000 feet of schools, and a decrease for minor in possession and offenses around the 16th Street Mall.[22]

Table 4. Misdemeanor and petty offense filings for marijuana in Denver County Court, by charge, 2014–2015[a]

Offense Charge	2014	2015
Total	1,174	1,192
Minor in possession	371	297
Public consumption	484	548
Offenses within 1,000 feet of schools[b]	24	120
Offenses on/within one block of 16th St. Mall[b]	138	48
Offenses in public space/park/recreational facility[b]	157	179

[a]The month of April has a disproportionate share of filings, with 199 in 2014 and 319 in 2015.
[b]Offenses include consumption, use, display, transfer, distribution, sale, or growth of marijuana.
Source: Data provided by City and County of Denver, Office of Marijuana Policy.

Organized Crime and Money Laundering

The number of filings in which the Colorado Organized Crime Control Act (COCCA) is charged in conjunction with a marijuana charge is presented in Table 5. There was no identifiable trend in the number of filings from 2006 to 2015. The most common marijuana filings were for distribution (54% of

[22] The 16th Street Mall is an open-air pedestrian mall located in downtown Denver that has a substantial number of restaurants and shops.

total) and conspiracy (22% of total). In 2015, there were 40 COCCA filings in conjunction with a distribution of marijuana charge, an increase from previous years.

Table 5. Colorado Organized Crime Control Act filings associated with a marijuana charge, 2006–-2015

		Filed in conjunction with:				
Year	Total filings	Distribution	Conspiracy	Manufacture	Possession with intent	Possession
2006	10	5	4	0	1	0
2007	1	0	0	1	0	0
2008	3	1	0	1	1	0
2009	8	2	1	0	2	3
2010	18	10	4	3	0	1
2011	15	3	7	3	1	1
2012	31	9	11	7	4	0
2013	16	7	5	3	1	0
2014	1	0	0	0	1	0
2015	40	40	0	0	0	0

Note: These data reflect cases in which a defendant is charged with violating the Colorado Organized Crime Control Act (C.R.S. 18-17.104) in conjunction with a filing for a marijuana charge (C.R.S. 18-18-406).
Source: Colorado State Judicial Branch.

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 and determine if there is a clear connection or relationship to marijuana. Additionally, it codes whether the crime is related to the marijuana industry or not.

The total number of industry-related crimes has remained stable and makes up a very small portion of overall crime in Denver (Table 6). The most common industry-related crime is burglary, which accounts for 62% of all industry-related crime. There has been concern that, due to the cash-only nature of the industry, robbery would be prevalent but this has not proven to be the case.

The number of nonindustry-related marijuana crimes is small and has remained stable. Robbery accounted for 33% of nonindustry-related crime in 2015, followed by burglary at 30%, and larceny/theft at 20%.

Table 6. Marijuana-related crime in Denver, 2012–2015

	2012	2013	2014	2015
Industry	170	156	175	183
Assault	1	3	3	2
Robbery	2	4	7	5
Burglary	130	102	115	114
Larceny/theft	12	17	24	22
Criminal mischief	20	18	14	13
Other crimes	5	12	12	27
Nonindustry	50	85	97	69
Assault	4	8	9	8
Robbery	19	22	26	23
Burglary	15	30	38	21
Larceny/theft	10	13	18	14
Criminal mischief	0	4	0	0
Other crimes	2	8	6	3

Source: Denver Open Data Catalog, Crime Marijuana, http://data.denvergov.org/dataset/city-and-county-of-denver-crime-marijuana, retrieved 1/15/2016.

Traffic Safety

Driving Under the Influence

Detection Issues

The issue of driving under the influence of drugs (DUID), particularly marijuana, is one that is receiving increased attention due to legalization. It is difficult to gauge the scope of the DUID problem for a number of reasons. First, there is no criminal charge that specifies 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.[23] Second, there is no central repository of toxicology results that would allow for an analysis of trends. Information is available from some laboratories but those results cannot be linked with court cases at this time. Third, law enforcement may choose not to pursue additional toxicology testing if the driver's blood alcohol content (BAC) is above .08, which is the per se limit above which a driver is considered to be under the influence in Colorado statute. 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 level.

Colorado has 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."[24] After an arrest, if the officer has probable cause to believe the suspect is impaired by drugs and/or alcohol,[25] the officer may transfer the suspect to a location where blood can be drawn for further toxicology screening. During this

[23] C.R.S. 42-4-1301.
[24] C.R.S. 42-4-1301 (6)(a)(IV).
[25] An officer may also transport a suspect for blood screening in cases where alcohol is the only substance suspected. There are evidentiary breath alcohol testers available to law enforcement which are easier to administer and available in jails and some police stations.

time, the officer must also obtain a warrant to draw the suspect's blood. The delta-9 THC level in blood decreases rapidly in the first hour after use, then gradually thereafter, making prompt testing critical.[26]

The Colorado Task Force on Drunk and Impaired Driving[27] is working to improve the data available to conduct research on this topic. Additionally, the Colorado State Patrol began a pilot program in 2015 to test oral fluid devices that detect THC in saliva. The program's outcomes are being evaluated by comparing outcomes of the oral fluid testing and blood testing results. The results will be published after analysis by researchers at the University of Colorado, Denver.

Finally, 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 129 peace officers statewide trained as Drug Recognition Experts (DREs) and by November 2015 there were 228. Hundreds of additional peace officers have also received training in Advanced Roadside Impaired Driving Enforcement (ARIDE).

Colorado State Patrol

The Colorado State Patrol (CSP) accounts for about 20% of all arrests for driving under the influence in Colorado. It 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 65 (9% of all sworn personnel) as of December 2015. These factors combine to make CSP the best 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 18% between 2014 (5,546) and 2015 (4,546) (Table 7). Summons in which alcohol was the only substance decreased by 988 (-18%). The number of summons in which marijuana or marijuana-in-combination was recorded decreased by nine (-1%) between 2014 and 2015. The prevalence of marijuana or marijuana-in-combination (marijuana only, marijuana and alcohol, and marijuana and other drugs) as the perceived impairing substance increased from 12% of all DUIs in 2014 to 15% in 2015.

Table 7. DUI summons issued by the Colorado State Patrol, by substance, 2014–2015

	2014		2015	
	N	%	N	%
Total DUI citations	5,546	100%	4,546	100%
Alcohol only	4,672	84%	3,684	81%
Marijuana only	354	6%	347	8%
Marijuana and alcohol	209	4%	209	5%
Marijuana and other drugs	111	2%	109	2%
Other drugs only	200	4%	197	4%

Note: Substance is based on trooper perception and may not reflect results from toxicology tests.
Source: Data provided by the Colorado State Patrol.

[26] Atha, M. (2000). *Blood and urine drug testing for cannabinoids*, available at: http://www.idmu.co.uk/pdfs/drugtest.pdf.
[27] For more information on the CTFDID, please see https://www.codot.gov/about/committees/DUI-taskforce.

Denver Police Department

The Denver Police Department began collecting data on DUID in 2013 (Table 8). The number of cases of driving under the influence of marijuana or marijuana-in-combination is small but has been increasing, from 33 in 2013 to 73 in 2015. In 2014, it accounted for 2.5% of all DUI citations in Denver and in 2015 it accounted for 3.0% of all DUI citations.

Table 8. Driving under the influence in Denver, by impairment reason, 2013–2015

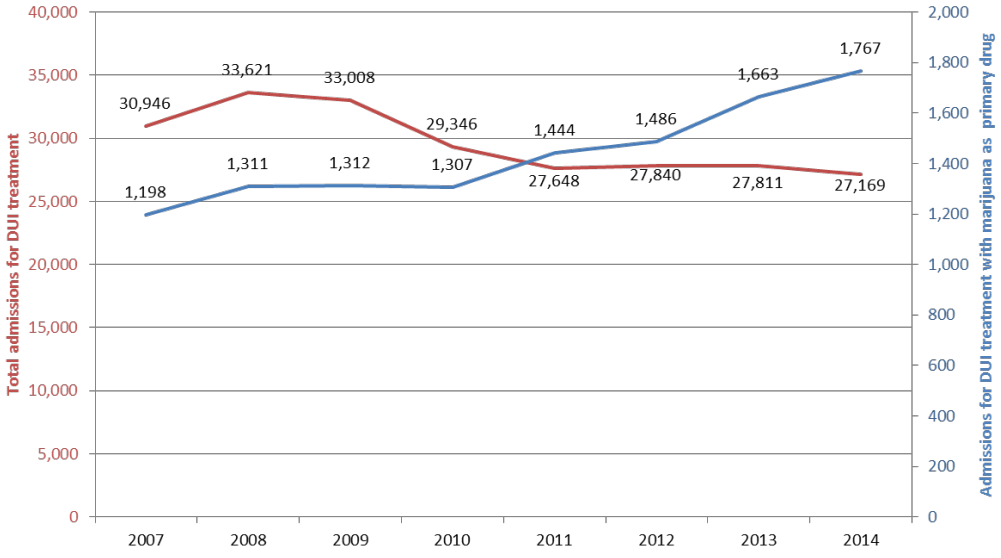
	2013	2014	2015
DUI Total	2,896	2,619	2,532
DUID	84	129	148
Marijuana	33	66	73
Other	51	63	75

Marijuana includes marijuana alone or in combination with alcohol or other drugs.
Other includes other drugs alone or in combination with alcohol.

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 privilege can be reinstated. When they are admitted into treatment, the primary drug of abuse is captured in the Drug/Alcohol Coordinated Data System (DACODS). Overall, admissions for DUI treatment dropped 12% from 2007 to 2014 (Figure 2). In that same period, admissions in which marijuana was listed as the primary drug increased by 48%.

Figure 2. DUI treatment admission trends



Source: Colorado Department of Human Services, Office of Behavioral Health, Drug/Alcohol Coordinated Data System.

Toxicology

A total of 11 labs are currently certified by the CDPHE to perform toxicology testing for DUI/DUID purposes. Only four of the 11 labs routinely perform blood drug analysis for DUI/DUID where a fatality has not occurred: the Colorado Bureau of Investigation, Colorado State University, Rocky Mountain Instrumental Labs, and Chematox.

Chematox is a private lab based in Boulder that performs a large number of screenings for more than 160 law enforcement agencies. In 2014, Chematox performed 4,371 toxicology screenings (Table 9). Of those 4,371, 65% tested positive on the initial cannabinoid screen for metabolites of THC, which can be present for weeks after consumption. Of those that tested positive on the initial screen, 67% tested positive for psychoactive Delta-9 THC at 2ng/ml or greater. The trend for positive initial cannabinoid screens was stable from 2010 to 2013 (approximately 58%) and then jumped to 65% in 2014. The trend for detecting active THC at 2ng/ml or higher in whole blood has been moving upward since 2009. The 2 ng/ml threshold was used to detect probable recent use and not necessarily impairment.

Table 9. Toxicology screening for cannabinoids and active THC by Chematox Lab, 2009–2014

Year	Total screens	% positive cannabinoid screens	% active THC 2ng/ml or higher
2009	1,514	52%	28%
2010	2,809	58%	38%
2011	3,987	59%	49%
2012	4,263	57%	52%
2013	4,333	58%	63%
2014	4,371	65%	67%

Source: Sara Urfer, Chematox Laboratory.

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 nonmotorist) within 30 days of the crash.

The FARS database includes 143 coded data elements that characterize the crash, the vehicles, and the people involved.[28] FARS includes information from toxicology testing of drivers and others involved in the crash when it is available. The percentage of drivers tested for drugs has remained between 45% and 50% for the past three years, according to information provided by CDOT. The status of the driver

[28] National Highway Traffic Safety Administration (2014), Fatality Analysis Reporting System, http://www-nrd.nhtsa.dot.gov/Pubs/811992.pdf, retrieved 1/14/2016.

has an impact on testing prevalence, with 81% of deceased drivers tested compared to 14% of living drivers in 2014. This limits any 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.[29] It is not possible to tell in the FARS data if the test detected psychoactive Delta-9-THC or the other metabolites of THC. The results reported here only indicate the presence of THC and are not statements about driver impairment.

The number of fatalities in which the driver tested positive for THC-only or THC-in-combination increased from 55 in 2013 to 79 in 2014 (Table 10). The number of fatalities in which the driver tested positive for THC-only increased from 23 in 2013 to 37 in 2014. Fatalities in which the driver tested positive for THC-in-combination increased from 32 in 2013 to 42 in 2014. The percentage of all fatalities with a THC positive (alone or in combination) driver increased from 12% in 2013 to 15% in 2014.

Table 10. Fatalities from motor vehicle crashes in Colorado, by driver toxicology results, 2013–2014

	2013		2014	
	N fatalities	%	N fatalities	%
Total fatalities	481	100%	488	100%
No alcohol or drugs	141	29%	153	32%
Alcohol only	78	16%	107	22%
THC only	23	5%	37	7%
THC and alcohol	18	4%	31	6%
THC and other drugs	9	2%	5	1%
THC, alcohol, and other drugs	5	1%	6	1%
Other drugs only	44	9%	27	6%
Alcohol and other drugs	20	4%	17	3%
Unknown	143	30%	105	22%

Source: Colorado Department of Transportation, Fatality Analysis Reporting System.

[29] 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, retrieved 1/15/2016.

The number of drivers testing positive for THC-only or THC-in-combination increased from 47 in 2013 to 67 in 2014 (Table 11). The number testing positive for THC-only increased from 18 to 29. The percentage of drivers who tested positive for THC (alone or in combination) increased from 8% in 2013 to 10% in 2014. However, only about half of all drivers involved in fatal crashes are tested for drugs.

Table 11. Drivers in fatal motor vehicle crashes in Colorado, by toxicology results, 2013-2014

	2013		2014	
	N drivers	%	N drivers	%
Total drivers	627	100%	684	100%
No alcohol or drugs	150	24%	140	21%
Alcohol only	87	14%	95	14%
THC only	18	3%	29	4%
THC and alcohol	16	3%	28	4%
THC and other drugs	8	1%	5	1%
THC, alcohol, and other drugs	5	1%	5	1%
Other drugs only	36	6%	25	4%
Alcohol and other drugs	20	3%	16	2%
Unknown	287	46%	341	50%

Source: Colorado Department of Transportation, Fatality Analysis Reporting System.

Law Enforcement Training to Detect Impairment

Three training programs were administered in fiscal year 2015 using the marijuana tax revenue funds allocated to Peace Officer Standards and Training (POST) for law enforcement training from Senate Bill 14-215. Training data are provided by the State of Colorado's Department of Law for the period July 1, 2014, through June 30, 2015.

A Drug Recognition Expert (DRE) is a peace officer trained to recognize, document and articulate impairment in drivers 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 2015 training was completed for 56 DREs, 17 DRE instructors, and 160 DREs attended the required update training (Table 12). As of December 2015, a total of 228 DREs were certified statewide (Figure 3), an increase from 32 in 2006. The Colorado State Patrol (65) and Denver Police Department (31) have 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 2015 ARIDE training was completed for 562 peace officers (Table 12).

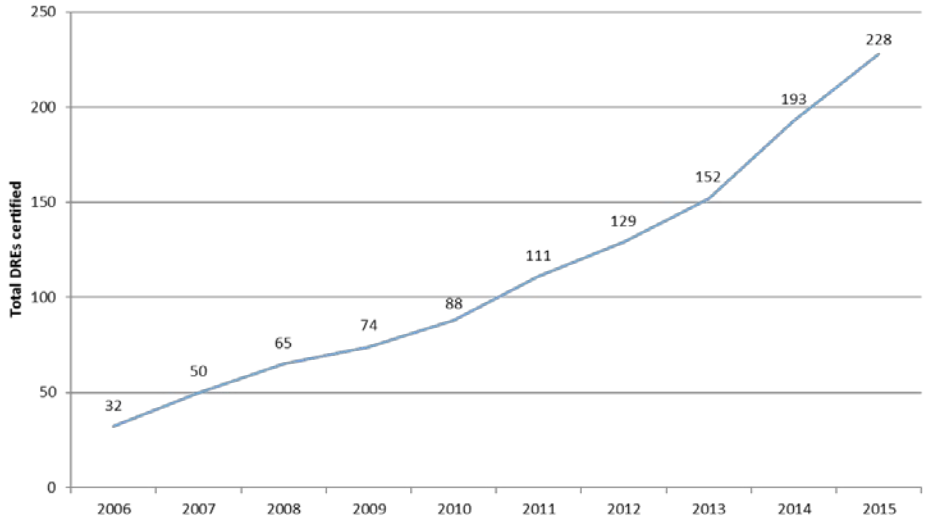
The Introduction to Marijuana for Law Enforcement (Marijuana 101) course is designed to clarify legal issues for peace officers. Topics covered are potential lawsuits, the difference between Amendments 20 and 64, changes to possession charges and limits, the meaning of being a caregiver and medical marijuana patient, how marijuana has changed the way law enforcement conducts and develops probable cause for a search, how to query a medical marijuana card on the Colorado Crime Information Center database, and investigations. This course allows the peace officers attending to participate in scenario-based training and gain an understanding of marijuana laws. In fiscal year 2015 this training was provided to 2,256 peace officers, 40 civilians, 70 school resource officers, and 14 "train the trainers" (Table 12).

Table 12. POST Training Funded by marijuana tax revenue, July 2014–June 2015

Training	Hours required	Number of classes	Number officers trained
Drug Recognition Expert			
Operator	56	3	56
Instructor	24	2	17
Annual update	8	2	160
ARIDE	16	35	562
Marijuana for Law Enforcement			
Law enforcement	4	103	2,256 officers/ 40 civilians
School Resource Officers	2	1	70
Train the Trainer	8	2	14

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

Figure 3. Cumulative drug recognition experts in Colorado, 2006–2015



Source: Data provided by 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 currently between probationer drug testing results and their probation status so it is not known if changes in drug

use patterns are affecting probation violations. Table 13 presents information on the percentage of probationers tested who are positive for THC, categorized by the number of times they tested positive in a year. The percent of the 18- to 25-year-old group who tested positive for THC one or two times decreased from 20% in 2012 to 17% in 2014. The percent testing positive three or more times increased from 13% to 15%. The 26- to 35-year-old group showed a similar trend, from 21% in 2012 to 20% in 2014. The percent testing positive just one or two times decreased from 13% to 11%, while those testing positive three or more times increased from 8% to 9%. The 36 and older group went from 15% testing positive in 2012 to 13% in 2014. The percent testing positive just one or two times decreased from 9% to 7%, while those testing positive three or more times held steady at 6%.

Table 13. Adult probationer drug test results for THC, 2012–2014

		Percent of probationers testing positive		
Age Group	Times tested positive	2012	2013	2014
18–25 years old				
	N probationers	17,349	17,245	15,869
	0 times	67%	68%	68%
	1–2 times	20%	18%	17%
	3 or more times	13%	14%	15%
26–35 years old				
	N probationers	15,221	16,794	17,003
	0 times	79%	80%	80%
	1–2 times	13%	11%	11%
	3 or more times	8%	8%	9%
36 years or older				
	N probationers	16,314	18,598	19,300
	0 times	86%	87%	87%
	1–2 times	9%	8%	7%
	3 or more times	6%	5%	6%

Note: Percentages may not sum to 100 due to rounding.
Source: Data provided by Colorado State Judicial Department.

The percent of all drug tests that are positive for THC has remained stable for all adult age groups (Table 14). For 18- to 25-year-olds, 12% of their tests were positive in both 2012 and 2014. For 26- to 35-year-olds, 7% of their tests were positive in both 2012 and 2014. The percent of drug tests for those 36 years or older dropped slightly, from 5% to 4%.

Table 14. Adult probationer drug test results: percent of tests that are positive for THC, 2012–2014

Age group	2012	2013	2014
18–-25 years old	12%	12%	12%
26–35 years old	7%	7%	7%
36 years or older	5%	4%	4%

Source: Data provided by Colorado State Judicial Department.

Illegal Cultivation on Public Land

The issue of marijuana being grown illegally on public land was of concern to the legislature. Contact was made with the National Forest Service, Bureau of Land Management, and the National Park Service

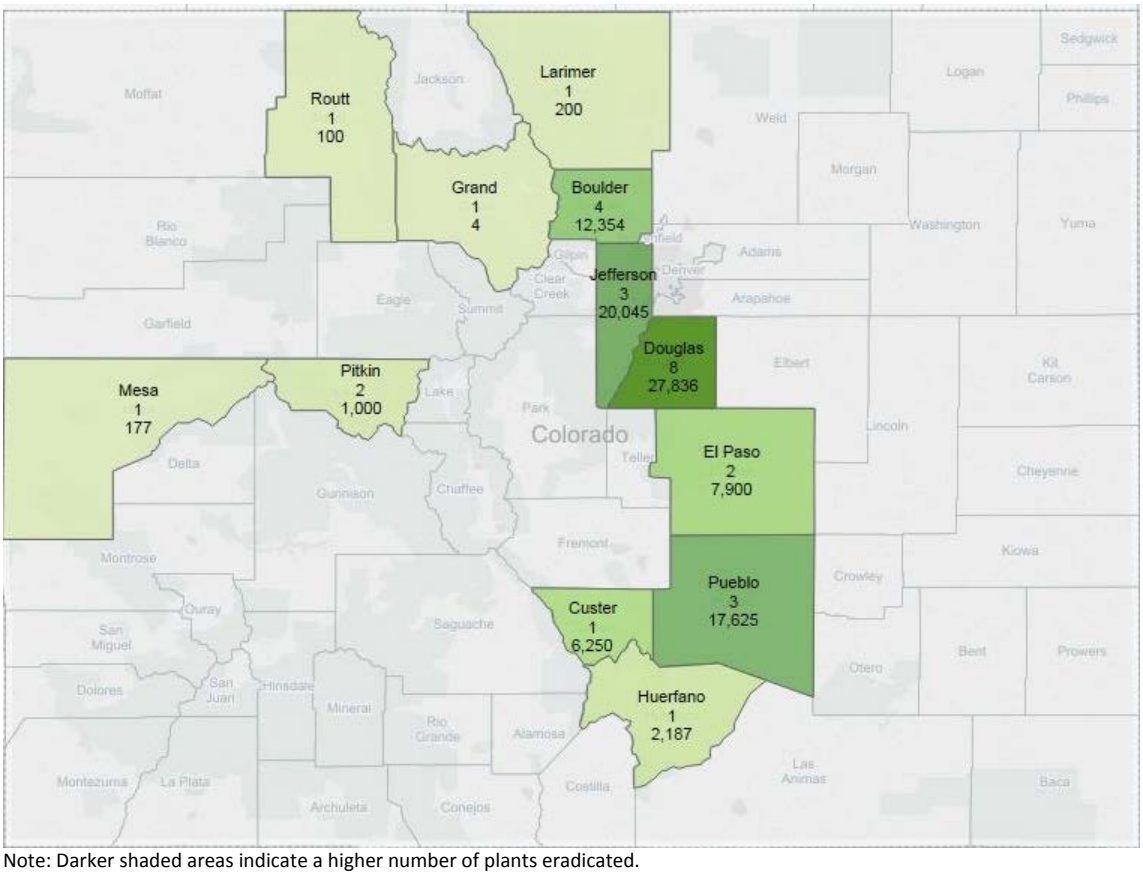
to determine what enforcement action had been taken in the last seven years. The number of growing operations and plants seized shows no discernible trend (Table 15). The year with the greatest activity was 2012, with 11 grow operations seized, accounting for approximately 46,622 plants. Two maps, Figures 4 and 5, show the number of grow operations and plants seized from 2009–2012 and 2013–2015.

Table 15. Marijuana plants seized on public land, by agency, 2009–2015

		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

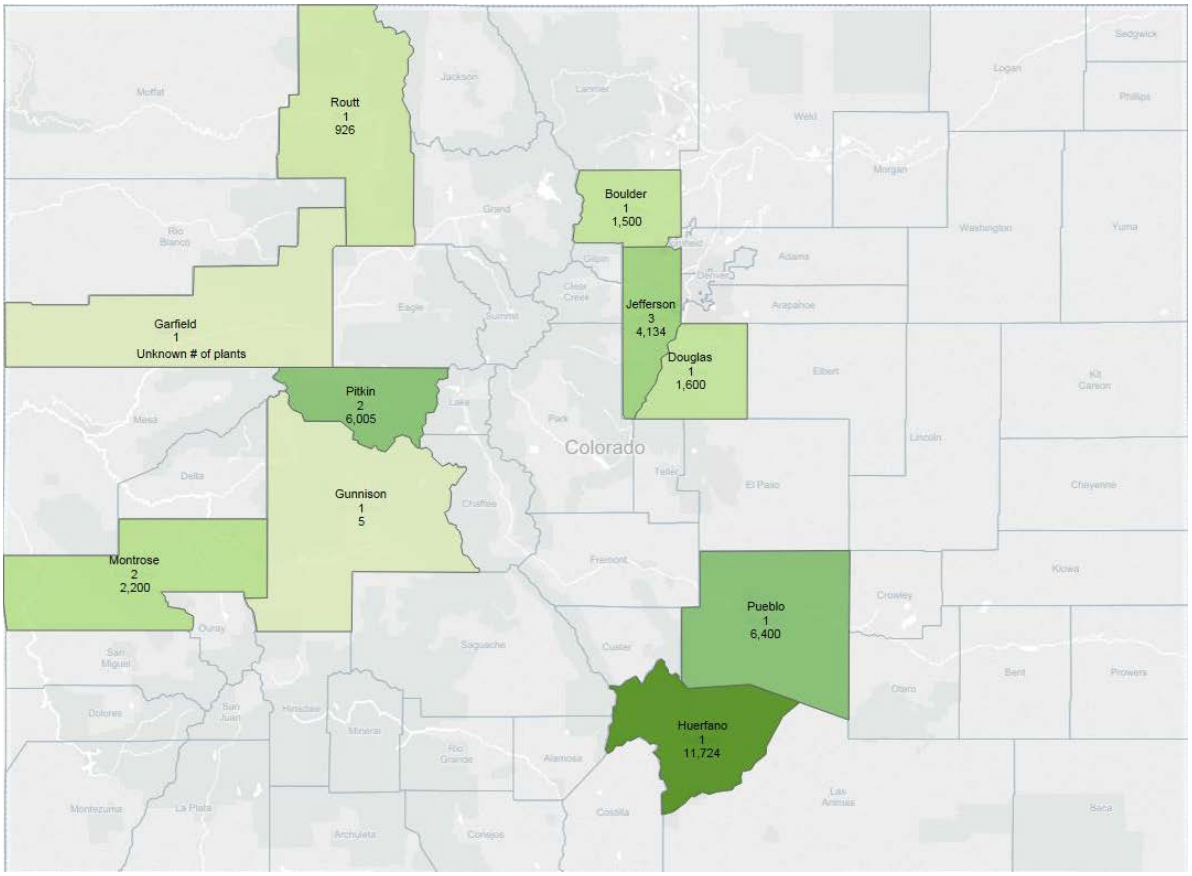
Source: Data provided by National Forest Service, National Park Service, and Bureau of Land Management.

Figure 4. Marijuana on public lands, by county, number of seizures, and number of plants seized, 2009–2012



Note: Darker shaded areas indicate a higher number of plants eradicated.
Source: Data provided by National Forest Service, National Park Service, and Bureau of Land Management.

Figure 5. Marijuana on public lands, by county, number of seizures, and number of plants seized, 2013–2015



Note: Darker shaded areas indicate a higher number of plants eradicated.
Source: Data provided by National Forest Service, National Park Service, and Bureau of Land Management.

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 (Table 16). 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 grow sites eradicated in Colorado went down from 16 in 2011 to 3 in 2012 and remained low through 2014 (Table 16). The number of outdoor plants destroyed has also decreased each year since 2011, from 26,020 in 2011 down to 2,630 in 2014. The trend in number of indoor grows and plants seized have not shown a consistent pattern. The number of arrests decreased from 60 in 2010 to 11 in 2011 and has stayed low since then. The number of weapons seized has gone up however, from 0 in 2011 to 47 in 2012, 11 in 2013, and 23 in 2014.

Table 16. Drug Enforcement Administration cannabis eradication/suppression program in Colorado, 2006–2014

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

Source: U.S. Department of Justice, Drug Enforcement Administration. Cannabis Eradication, http://www.justice.gov/dea/ops/cannabis.shtml, retrieved 4/20/2015;
Sourcebook of Criminal Justice Statistics, URL: http://www.albany.edu/sourcebook, retrieved 9/16/2014.

Diversion Out of State

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. CIAC has compiled data from a service called Black Asphalt, an online forum for law enforcement drug interdiction that has more than 20,000 active online members from almost all states. Nationally, between January 1, 2014 and August 30, 2015 there were 261 drug-related interdiction submissions[30] in which Colorado was the originating state. Of these 261 submissions, 169 (65%) were for marijuana/hashish. Almost all of the marijuana seizures (166 of 169) were destined for states outside of Colorado, most commonly Oklahoma, Illinois, Kansas, and Missouri. It is unknown whether that marijuana is coming from licensed businesses, caregivers, personal growers, or the general black market, thus a conclusion that it is related to legalization of marijuana is premature.

Locally, CIAC received data from the Wyoming Division of Criminal Investigation. Between January 1, 2015 and December 15, 2015, Wyoming reported 48 submissions in which Colorado was the originating state and 47 of them were for marijuana/hashish. CIAC is expanding its marijuana diversion data collection capabilities and future reports will include data from a wider variety of data sources and longer periods of time.

In a study published in 2015, researchers from the University of Nebraska, Omaha[31] compared marijuana arrests for the period 2000–2004 (prior to medical commercialization) to 2009–2013 (after

[30] A submission can include seizures of drugs, cash, or weapons.
[31] Ellison, J. & Spohn, R. (2015). Borders up in smoke: Marijuana enforcement in Nebraska after Colorado's legalization of medicinal marijuana, *Criminal Justice Policy Review*, available at Online First, http://cjp.sagepub.com/content/early/2015/11/23/0887403415615649.abstract.

medical commercialization). They focused on comparing arrest trends in Nebraska counties bordering Colorado, counties along the I-80 corridor, and all other counties in Nebraska (control group) to determine if proximity to Colorado or a major transportation artery was associated with an increase in marijuana arrests. They found that the "rate of marijuana arrests and jail admissions is quite low (i.e., less than 2.5 arrests per 1,000 residents)" (p.10) and were most commonly for possession. They also found that for both 2000–2004 and 2009–2013, border counties and counties along the I-80 corridor had higher arrest rates for marijuana possession. Additionally, border counties experienced a significant increase in both possession and sales arrest rates after commercialization when compared to other counties in the control group. Counties along the I-80 corridor did not show a significant increase in arrest rates for either possession or sales after commercialization compared to the control group.

Transfer Using Parcel Services

CIAC is working to gather data from the United States Postal Inspection Service, UPS, and FedEx. These data should be available for future reports.

Summary

The public safety data provided in this report will act as baseline measurements for future reports. Not enough time has elapsed after legalization to allow for any definitive statements about impacts, but the attention being paid to this topic has enhanced the efforts to collect information. This enhanced attention has the potential to change patterns of enforcement independent of any change in the behavior of Colorado residents and visitors alike. The long-term public safety impacts of legalization will not be clear for several years and, even then, separating out marijuana legalization as the cause of any change will be difficult.

SECTION THREE

IMPACT ON PUBLIC HEALTH

Overview

The impacts of marijuana legalization on public health in Colorado are still being assessed. This section summarizes several sources of epidemiological data. The Colorado Department of Public Health and Environment (CDPHE) regulates environmental health and safety for the state and is required to measure and report on the public health impacts of marijuana legalization. CDPHE has produced a report, *Monitoring Health Concerns Related to Marijuana in Colorado: 2014,*[32] which should be reviewed to gain a more in-depth understanding of the public health concerns in the state.

CDPHE is measuring marijuana use patterns by county and race/ethnicity, as is required by statute. There are two primary sources of data on this topic. The first comes from the National Survey of Drug Use and Health (NSDUH), a long-term survey conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA). The second is from CDPHE's version of the Behavioral Risk Factor Surveillance System (BRFSS). These are discussed below.

Trends in admissions to emergency departments and hospitalizations with an indication of marijuana exposure, billing code, or diagnosis code are also examined below. This information comes from Colorado Hospital Association data analyzed by CDPHE. The limitations of these data are also discussed. Trends in marijuana exposure calls to the Rocky Mountain Poison and Drug Center from 2006 to 2014 that were analyzed from CDPHE are also detailed below.

Data provided by the Colorado Department of Human Services, Office of Behavioral Health provide information on 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 looks at trends in frequency of use by clients in treatment for marijuana abuse.

Adult Usage

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).[33] 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 substate levels. NSDUH is state-based, with an independent, multistage area probability sample within each state and the District of Columbia. SAMHSA produces

[32] Colorado Department of Public Health and Environment, *Monitoring marijuana-related health effects,* https://www.colorado.gov/pacific/cdphe/monitoring-marijuana-related-health-effects.
[33] Descriptions of NSDUH derived from information available at http://www.samhsa.gov/data/population-data-nsduh/reports.

state-level estimates from a two-year rolling average. This means that each year presented in this report actually represents two years of data. For purposes of reporting, only the second year is presented in these tables and figures.[34] The two-year prevalence rates for Colorado residents 18 and older are based on weighted estimates from between 1,200 and 1,300 survey respondents.[35]

Figures 6, 8, 10 and 12 have additional information that needs explanation. First, there are bars above and below each estimate which represent the 95% confidence intervals of that estimate. These intervals show that there is a 95% chance that the true value is found within the upper and lower bounds of the confidence interval. These intervals are affected by the standard error of the mean and the number of people in the sample. The standard error of the mean is a measure of how different the sample mean is likely to be from the true population mean. Additionally, the more people that are in the sample, assuming they are chosen at random from the population of interest, the more precise the measurement, resulting in a smaller confidence interval.

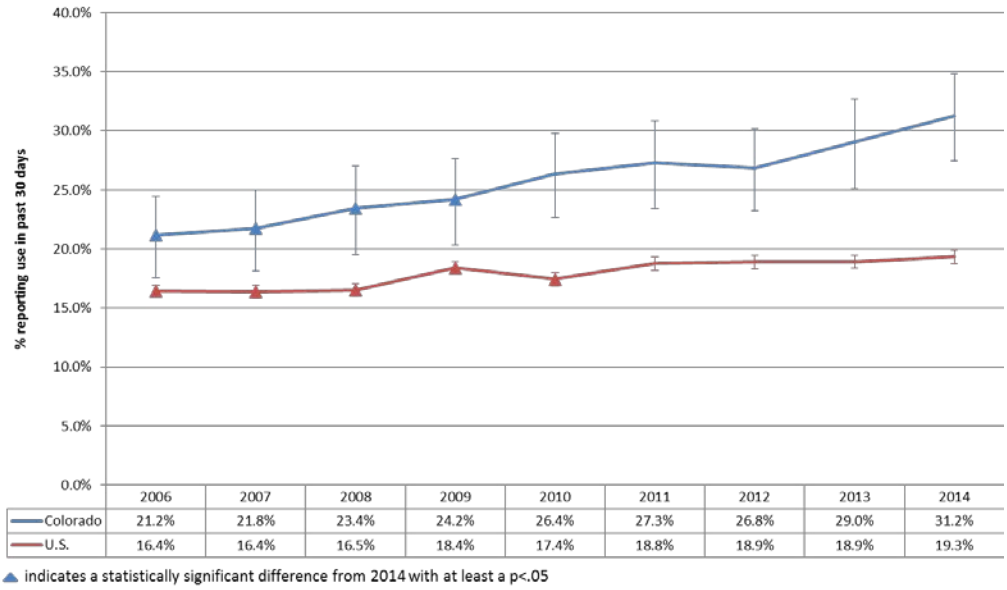
Further, the triangles in these figures represent the results of a statistical comparison between the estimate for that particular year and 2014. The Welch's unpaired t-test was used to test a statistically significant difference between the means because the years have different variance estimates. The standard deviation for each year was calculated using the values from the confidence intervals and number of people in the sample. If a year is marked with a triangle it indicates a statistically significant difference from 2014 with a two-tailed probability (p) value less than .05. This means that if 100 samples are drawn from a population, a similar difference between the two means would occur 95 times.

Young Adult Trends (18–25 Years Old)

The current prevalence rates for marijuana usage have increased significantly for young adults (18–25 years old), from 21% in 2006 to 31% in 2014 (Figure 6). This change contrasts with a decline in cigarette use (down from 40% to 32%) and other illicit drug use (down from 10% to 8%) during this same period (Figure 7). Alcohol use has not changed appreciably, with current usage rates staying around 69% during this period.

[34] For example, data indicated as 2014 is actually the average of 2013 and 2014.
[35] Estimates for smaller substate regions are based on three-year averages and the most recent results only cover the 2010–2012 period. The updated estimates will be presented once data for the 2013-2015 period become available.

Figure 6. Past 30-day marijuana use, 18–25 years old, 2006–2014: NSDUH

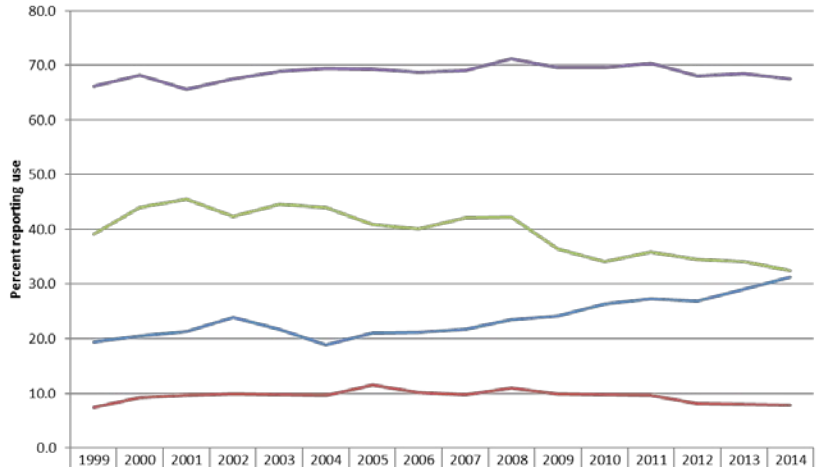


	2006	2007	2008	2009	2010	2011	2012	2013	2014
Colorado	21.2%	21.8%	23.4%	24.2%	26.4%	27.3%	26.8%	29.0%	31.2%
U.S.	16.4%	16.4%	16.5%	18.4%	17.4%	18.8%	18.9%	18.9%	19.3%

▲ indicates a statistically significant difference from 2014 with at least a p<.05

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015. Please see Page 40 for an explanation of confidence intervals and the statistical tests used for this analysis.

Figure 7. Past 30-day substance use, 18–25 years old, 1999–2014: NSDUH



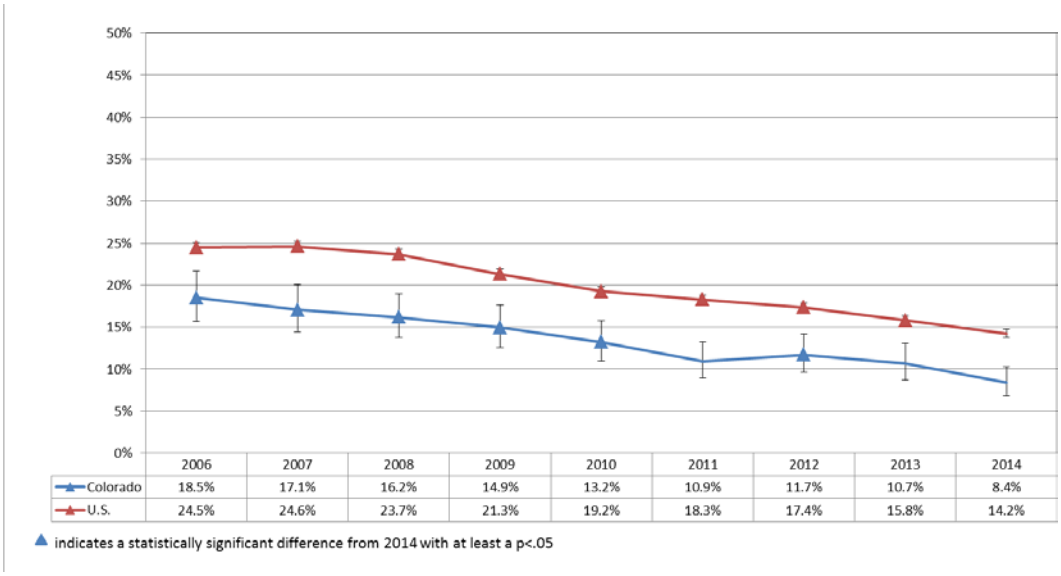
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Any alcohol	66.1	68.2	65.7	67.5	68.9	69.4	69.3	68.7	69.0	71.3	69.5	69.6	70.4	68.1	68.5	67.5
Cigarettes	39.1	44.0	45.5	42.3	44.6	44.0	40.9	40.1	42.1	42.2	36.4	34.0	35.8	34.5	34.1	32.4
Marijuana	19.4	20.5	21.3	23.8	21.7	18.9	21.0	21.2	21.8	23.4	24.2	26.4	27.3	26.8	29.0	31.2
Illicit drugs, non-marijuana	7.4	9.2	9.6	9.9	9.8	9.6	11.5	10.2	9.8	11.0	9.9	9.8	9.6	8.1	8.0	7.8

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015.

The perception of a great risk from once-per-month marijuana use has decreased significantly in young adults in Colorado, from 19% to 8% in the period from 2006 to 2014 (Figure 8). The national average

went down significantly, from 25% to 14%. The perception of risk for Colorado residents has been lower than the national average and both have decreased over time. The gap between the nation and Colorado for perceived risk has remained relatively stable at between 5% and 6%. The perception of great risk for smoking a pack of cigarettes a day or regular binge drinking has remained stable (Figure 9).

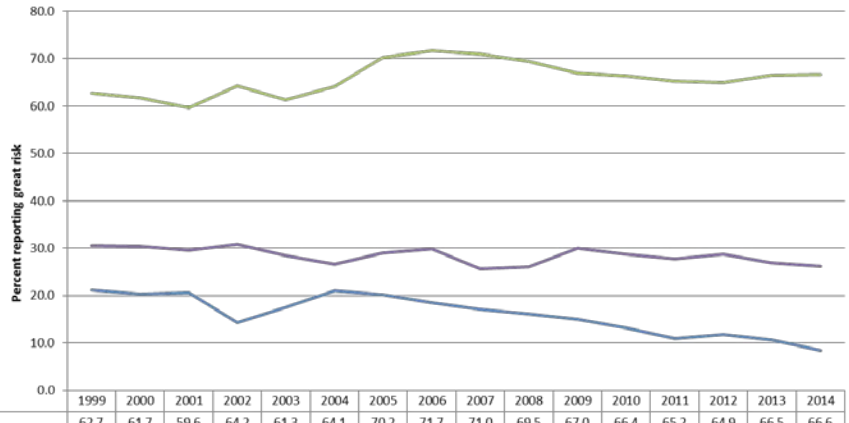
Figure 8. Perception of great risk for using marijuana once a month, 18–25 years old, 2006–2014: NSDUH



	2006	2007	2008	2009	2010	2011	2012	2013	2014
Colorado	18.5%	17.1%	16.2%	14.9%	13.2%	10.9%	11.7%	10.7%	8.4%
U.S.	24.5%	24.6%	23.7%	21.3%	19.2%	18.3%	17.4%	15.8%	14.2%

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015. Please see Page 40 for an explanation of confidence intervals and the statistical tests used for this analysis.

Figure 9. Perception of great risk for using various substances, 18–25 years old, 1999–2014: NSDUH



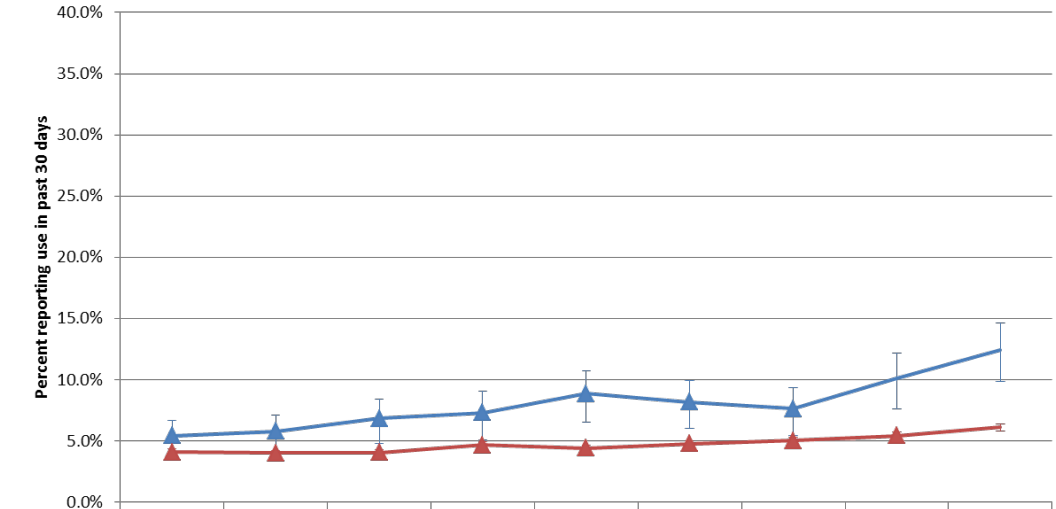
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Risk of smoking a pack a day	62.7	61.7	59.6	64.2	61.3	64.1	70.2	71.7	71.0	69.5	67.0	66.4	65.2	64.9	66.5	66.6
Risk of drinking 5+ drinks a couple times a week	30.5	30.4	29.5	30.8	28.4	26.6	29.0	29.7	25.6	26.1	29.9	28.8	27.7	28.7	26.9	26.1
Risk of smoking marijuana once a month	21.2	20.3	20.6	14.3	17.5	21.0	20.2	18.5	17.1	16.2	14.9	13.2	10.9	11.7	10.7	8.4

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015.

Adult Trends (26 Years or Older)

Reported current marijuana use by adults increased from 5% in 2006 to 12% in 2014 (Figure 10). The 2014 usage rate is significantly higher than the rate from any other time from 2006 to 2013. When compared to current national marijuana usage, Colorado shows a consistently higher rate. Adult usage has also increased significantly at the national level, but the gap between the two rates has widened from about 1% difference in 2006 to more than a 6% difference in 2014. The prevalence trends for alcohol, cigarette, and other illicit drug use show no appreciable changes over this same period (Figure 11).

Figure 10. Past 30-day marijuana use, 26 years or older, 2006–2014: NSDUH

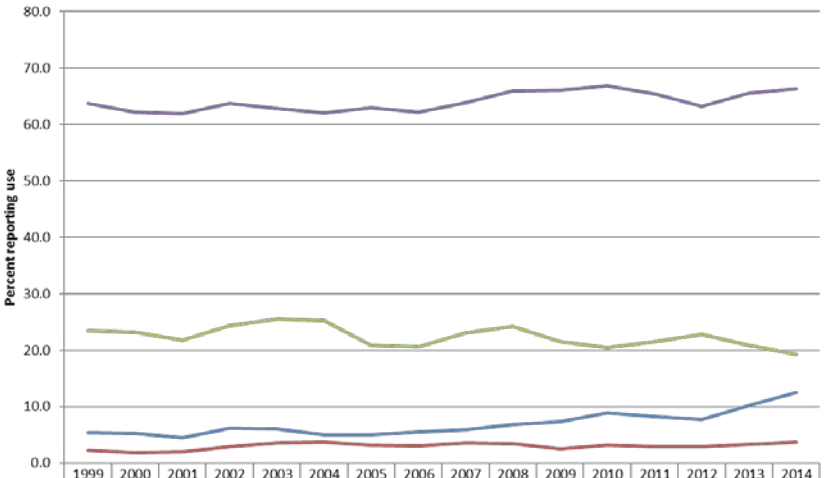


	2006	2007	2008	2009	2010	2011	2012	2013	2014
Colorado	5.4%	5.8%	6.8%	7.3%	8.9%	8.2%	7.6%	10.1%	12.4%
U.S.	4.1%	4.0%	4.1%	4.7%	4.4%	4.8%	5.1%	5.5%	6.1%

▲ indicates a statistically significant difference from 2014 with at least a p<.05

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015. Please see Page 40 for an explanation of confidence intervals and the statistical tests used for this analysis.

Figure 11. Past 30-day substance use, 26 years or older, 1999–2014: NSDUH

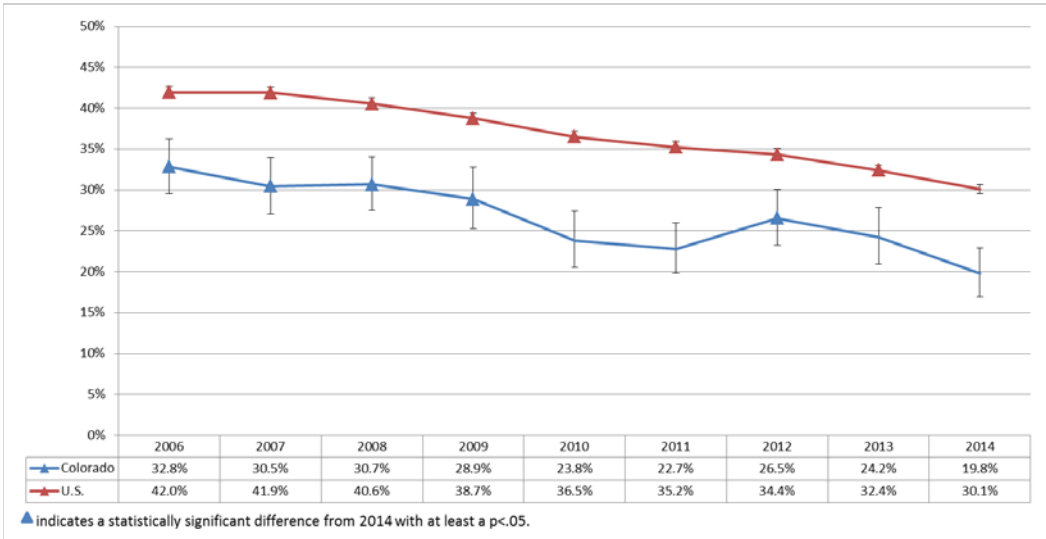


	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Any alcohol	63.7	62.2	61.9	63.7	62.8	62.0	63.0	62.2	63.8	66.0	66.1	66.9	65.4	63.2	65.5	66.2
Cigarettes	23.4	23.2	21.7	24.3	25.4	25.2	20.8	20.6	23.0	24.2	21.5	20.4	21.5	22.7	20.9	19.3
Marijuana	5.4	5.2	4.5	6.2	6.0	5.0	4.9	5.4	5.8	6.8	7.3	8.9	8.2	7.6	10.1	12.4
Illicit drugs, non-marijuana	2.2	1.8	2.0	2.9	3.5	3.7	3.1	3.0	3.5	3.4	2.5	3.2	2.9	2.8	3.3	3.7

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015.

The perceived risk in adults from using marijuana once a month shows a significant decrease for marijuana, from 33% in 2006 down to 20% in 2014 (Figure 12). The perception of great risk at the national level has also decreased, from 42% in 2006 to 30% in 2014. 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 has remained stable (Figure 13).

Figure 12. Perception of great risk for using marijuana once a month, 26 years or older, 2006–2014: NSDUH

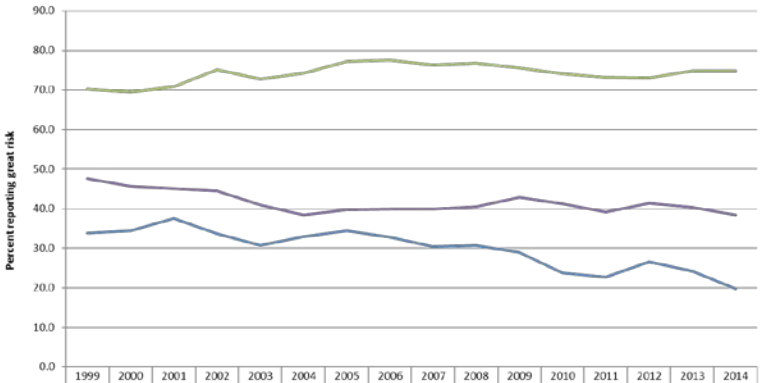


	2006	2007	2008	2009	2010	2011	2012	2013	2014
Colorado	32.8%	30.5%	30.7%	28.9%	23.8%	22.7%	26.5%	24.2%	19.8%
U.S.	42.0%	41.9%	40.6%	38.7%	36.5%	35.2%	34.4%	32.4%	30.1%

▲ indicates a statistically significant difference from 2014 with at least a p<.05.

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015. Please see Page 40 for an explanation of confidence intervals and the statistical tests used for this analysis.

Figure 13. Perception of great risk for using various substances, 26 years or older, 1999–2014: NSDUH



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Risk of smoking a pack a day	70.3	69.6	70.9	75.2	72.8	74.2	77.3	77.4	76.3	76.8	75.6	74.1	73.2	73.0	74.8	74.9
Risk of drinking 5+ drinks a couple times a week	47.6	45.7	45.1	44.5	40.9	38.5	39.8	40.0	40.0	40.5	42.8	41.2	39.2	41.4	40.4	38.5
Risk of smoking marijuana once a month	33.9	34.4	37.5	33.7	30.7	33.0	34.5	32.8	30.5	30.7	28.9	23.8	22.7	26.5	24.2	19.8

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015.

Behavioral Risk Factor Surveillance System

The Colorado Behavioral Risk Factor Surveillance System (BRFSS) is a system of telephone surveys sponsored by the Centers for Disease Control and Prevention to monitor 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 the role of such lifestyle factors as cigarette smoking, being overweight, sedentary lifestyle, and the nonuse of seat belts in contributing to injury, illness, and death.[36]

Questions regarding marijuana use and other marijuana-related behaviors were added to the Colorado BRFSS in 2014. These results will act as baseline measurements for adult usage rates and other behaviors based on a sample that is larger than the one that produces estimates for the NSDUH. In the 2014 administration, the BRFSS questions regarding marijuana were asked in two of the three sample splits, resulting in a final sample size of 7,708.[37] CDPHE is conducting additional analyses of these data that will be presented in future reports.

Overall, 14% of Colorado adults (age 18 and over) reported current use of marijuana and 49% reported use at some time in their life (Table 17). The average age at first use was 18 years old. According to the BRFSS, 33% of current users report using daily. Additionally, 19% of current users report driving after using.

Age group and gender were both significant predictors of current marijuana use. Males were more likely to report current use of marijuana (17%) than females (10%). Residents under 25 were much more likely

[36] Additional information on the Colorado BRFSS can be accessed here: http://www.chd.dphe.state.co.us/topics.aspx?q=Adult_Health_Data.
[37] The survey for the BRFSS is split into three sample groups that may have questions regarding different topics. The questions about marijuana were asked in two of the three sample splits.

to report current use (29%) than those 25–44 years old (17%), 45–64 (10%), or those 65 and older (3%).[38]

Individuals who attended college reported lower current usage rates (12%) than those who did not receive a high school diploma (17%) or were high school graduates (16%). Interestingly, this trend was reversed when the question concerned lifetime usage.

Income level was also related to marijuana use, with 20% of those earning less than $25,000 per year reporting current use, while 12% of those earning $25,000–$49,999 and 11% of those earning $50,000 or more reported use in the past 30 days.

Sexual orientation was also related to current marijuana use. Those who reported their sexual orientation as gay, lesbian, or bisexual reported current use 30% of the time compared to 13% of those who identified as heterosexual.

Race was not a significant predictor of marijuana use. However, there were differences between African-Americans reporting current use (19%) and Whites (14%) and Hispanics (12%).

Table 17. Reported marijuana use among Colorado adults, by demographic characteristics, 2014: BRFSS

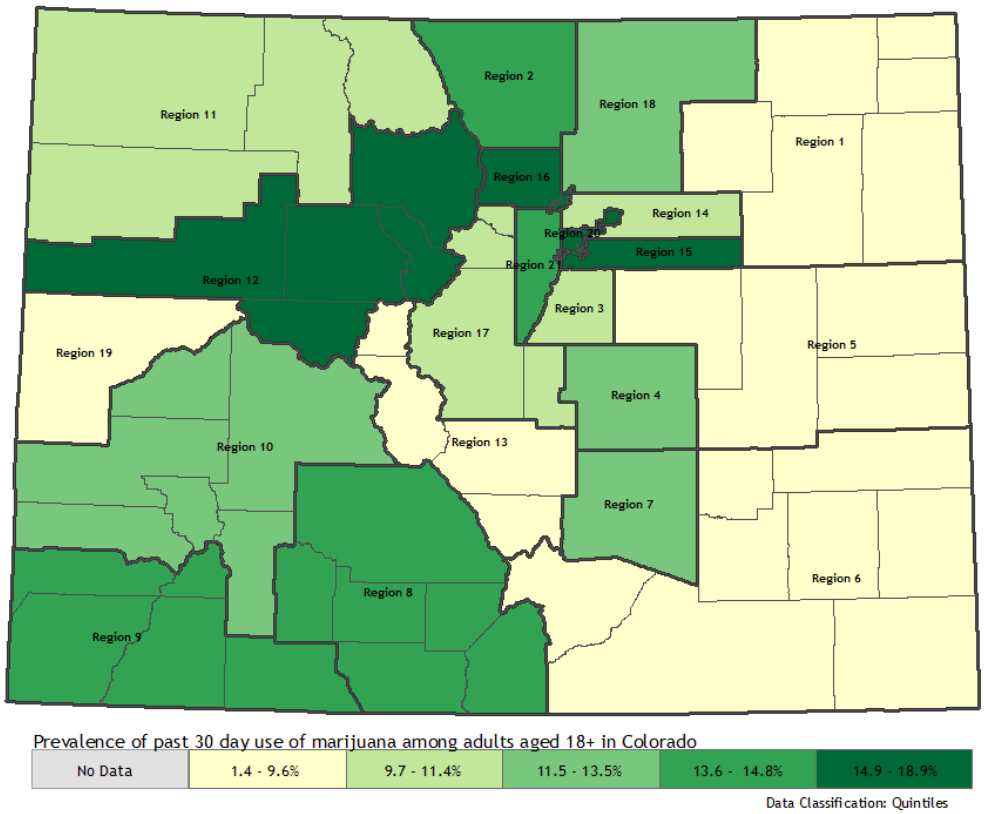
	Current use	Lifetime use	Age at first use
Colorado	13.6%	48.9%	18.1 years
Gender[a]			
Male	17.2	54.7	17.5
Female	10.0	43.0	18.8
Age group[a]			
18–24 years old	28.8	52.1	16.0
25–44 years old	16.6	53.5	17.2
46–64 years old	10.3	56.1	18.0
65 years or older	3.0	23.3	26.8
Education level[a]			
Less than high school	16.8	36.9	17.1
High school graduate	16.3	45.5	17.5
Some college or more	12.3	52.0	18.4
Income level[a]			
< $25,000	19.8	46.6	17.8
$25,000–$49,999	12.3	46.3	18.6
$50,000+	11.1	53.4	18.0
Race/ethnicity			
White	14.1	51.7	18.2
Black	19.2	56.8	18.0
Hispanic	11.7	36.9	17.5
Other	8.0	44.8	17.9
Sexual orientation[a]			
Heterosexual	12.9	48.7	18.1
Gay, lesbian, or bisexual	30.0	64.4	17.5

[a] Groups showed significant difference at $p < .05$.
Source: Colorado Department of Public Health and Environment, Behavioral Risk Factor Surveillance System data.

[38] The differences in current usage rates were significantly different ($p < .05$) level for these categories.

The BRFSS results for Colorado are grouped into 21 Health Statistics Regions (HSRs). Larger counties act as their own regions, while smaller counties are combined into larger regions so there are enough cases to make valid estimates for those areas. Figure 14 shows the variation in usage rates across Colorado. The highest current usage is reported in Region 16 (Boulder and Broomfield) at 19%. The lowest rate was reported in Region 5 (Cheyenne, Elbert, Kit Carson, and Lincoln) at 1%. Detailed data on each region's usage is presented in Appendix G, Table 12.

Figure 14. Reported marijuana use by Colorado adults in past 30 days, by region, 2014: BRFSS



Source: Colorado Department of Public Health and Environment, Behavior Risk Factor Surveillance System.

Hospitalizations and Emergency Department Visits

CDPHE analyzed data from the Colorado Hospital Administration and categorized visits according to their International Classification of Diseases, Volume 9 ICD-9-CM codes to determine if the visit indicated possible marijuana exposure or used a diagnosis/billing code indicating marijuana. Use of these codes does not mean that the visit is motivated by marijuana exposure but simply that it is a possibility.

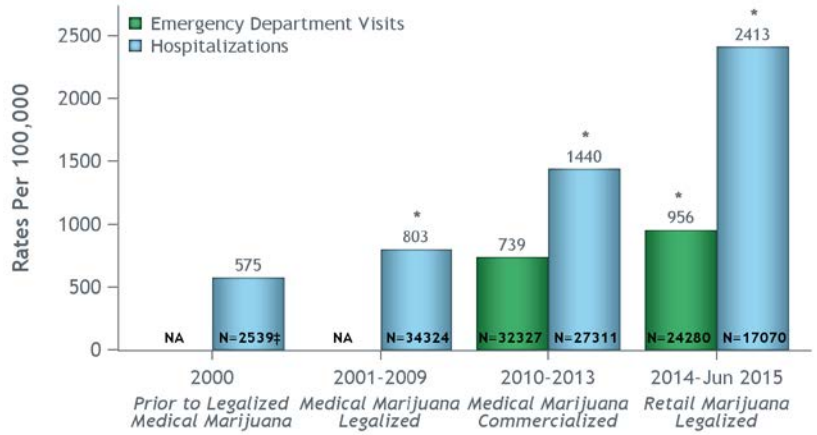
The four codes used include: 305.2-Marijuana (Cannabis Abuse); 304.3-Marijuana (Cannabis Dependence); 969.6-Poisoning by psychodysleptics (hallucinogens); and E854.1-Accidental poisoning by psychodysleptics (hallucinogens). For the purposes of 969.6 and E854.1, hallucinogens can include cannabis, LSD, mescaline, and psilocybin (mushrooms).

The data reflect four different eras of legalization in Colorado (Figure 15). In 2000 (prior to medical legalization), the rate was 575 hospitalizations per 100,000. This increased significantly during the era when medical marijuana was legalized but not commercialized (2001–2009), rising to 803 hospitalizations per 100,000. The era of medical marijuana commercialization (2010–2013) saw another significant jump, to 1,440 hospitalizations per 100,000. Finally, the most recent era of retail

commercialization (2014–June 2015) has shown another significant increase, to 2,413 hospitalizations per 100,000.

The data on Emergency Department (ED) visits is more limited due to changes in reporting. The period of retail commercialization showed a significant increase in ED visits, from 739 per 100,000 (2010–2013) to 956 per 100,000 ED visits (2014–June 2015).

Figure 15. Rates of hospitalizations (HD) and emergency department (ED) visits with possible marijuana exposures, diagnoses, or billing codes per 100,000 HD and ED visits, by legalization eras in Colorado



*Rate significantly increased from previous time period with a p-value <0.001.
†ICD-9-CM codes 305.2, 304.3, 969.6, and E854.1 were used to determine HD and ED visits with possible marijuana exposure, diagnoses, or billing codes.
‡The Ns are the total number of HD or ED visits with possible marijuana exposures, diagnoses, or billing codes in the specified time period.

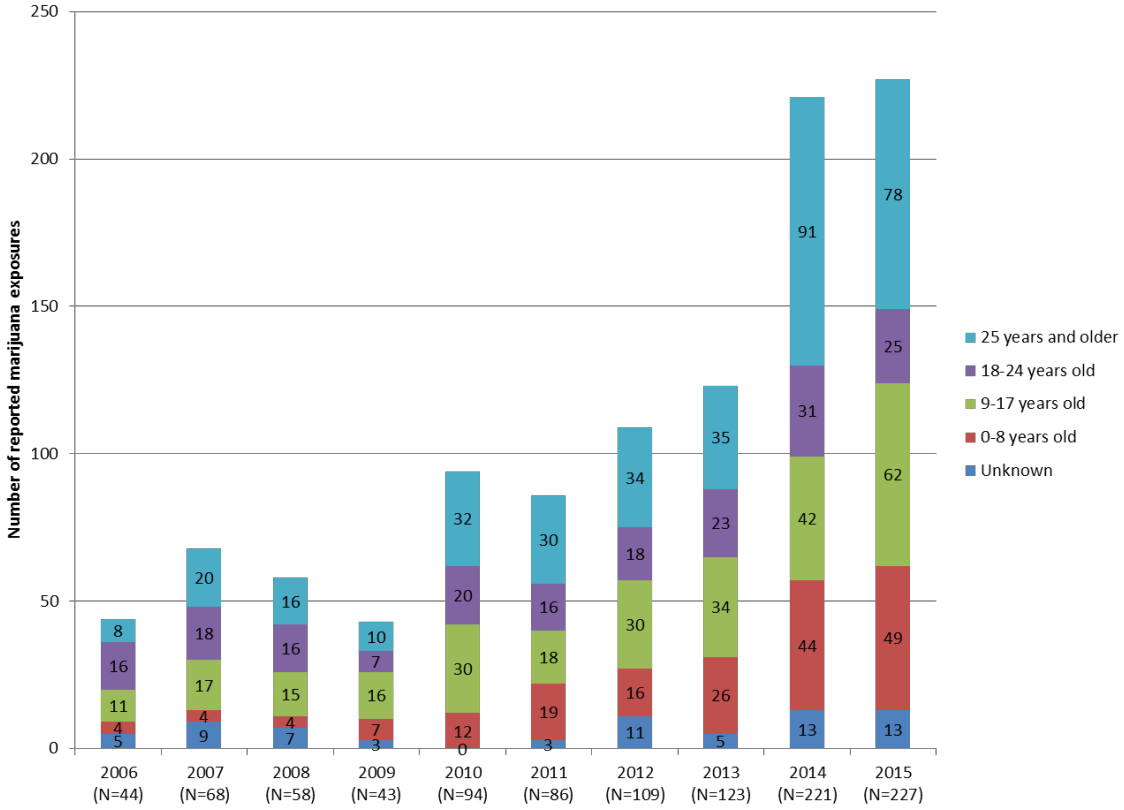
Source: Data provided by Colorado Hospital Association with analysis provided by CDPHE.
Note: Data for 2015 covers January 1, 2015, through June 30, 2015. NA = Data not available. An individual can be represented more than once in the data; therefore, the rate is HD or ED visits with marijuana codes per 100,000 total HD or ED visits.

The most recent information on monitoring health-related effects can be found at CDPHE's website on this topic: https://www.colorado.gov/pacific/cdphe/monitoring-marijuana-related-health-effects.

Poison Control

The Rocky Mountain Poison and Drug Center (RMPDC) provided data to CDPHE for analysis. The number of calls to poison control mentioning human marijuana exposure has increased over the past 10 years (Figure 16). There were 44 calls in 2006 and 227 in 2015. The increases occurred across all age groups, with the biggest jumps in the 8-year-old and younger age group (4 in 2006 to 49 in 2015) and the 25 and older group (8 in 2006 to 78 in 2015). There were two years in which the total increases are most notable, in 2010 (+51 from 2009) and again in 2014 (+98 from 2013).

Figure 16. Human marijuana exposure calls to Rocky Mountain Poison and Drug Center, by age group, 2006–2015



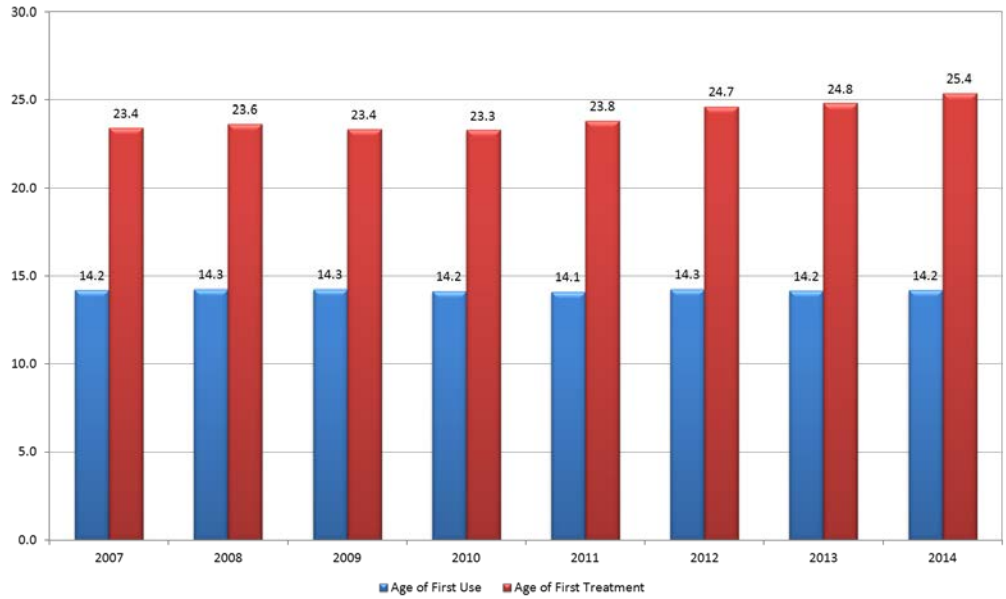
Note: Human marijuana exposure calls to RMPDC were determined by the presence of the generic code 'Marijuana-0083000' from the National Poison Data System.
Source: Data provided by Rocky Mountain Poison and Drug Center with analysis provided by CDPHE.

Treatment Trends

The Colorado Department of Human Services, Office of Behavioral Health (OBH) requires licensed drug and alcohol treatment centers to submit information on all individuals admitted to treatment. The data are entered into OBH's Drug/Alcohol Coordinated Data System (DACODS) and are the source of the information provided in this section. These data include the top three drugs of abuse, demographic characteristics, referral source, referral reason, time in treatment, client residence, and much more.

The age at first use for those seeking treatment for marijuana abuse has remained stable at around 14.2 years (Figure 17) during the period of 2007–2014. The age at first treatment has increased since 2010, from 23.3 years up to 25.4 years. The time from first usage to first treatment is increasing, from around nine years in 2010 to 11.2 years in 2014. The reasons behind this change are unknown at this time, but OBH is tracking this development.

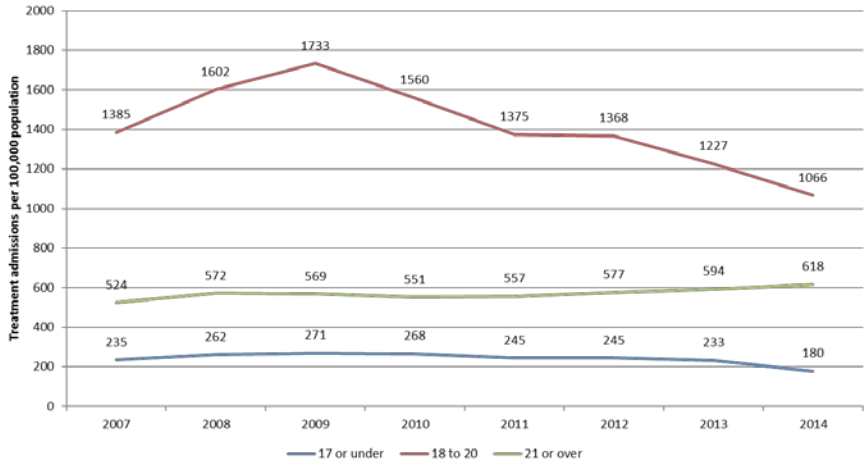
Figure 17. Age at first use of marijuana and age at first treatment, 2007–2014



Source: Colorado Department of Human Services, Office of Behavioral Health, Drug/Alcohol Coordinated Data System.

Treatment admission rates (per 100,000 population) with marijuana as one of the three reported drugs of abuse are detailed in Figure 18. The rate has decreased since 2009 for those under 18, from its peak at 271 to 180 admissions per 100,000 population in that age group. The admission rate has also decreased for those in the 18–20 age group, from 1,733 to 1,066 admissions per 100,000. The one group showing an increase are those 21 or over, from 569 to 618 per 100,000. This is an interesting finding, because this oldest age group is the only one for whom marijuana use is considered legal.

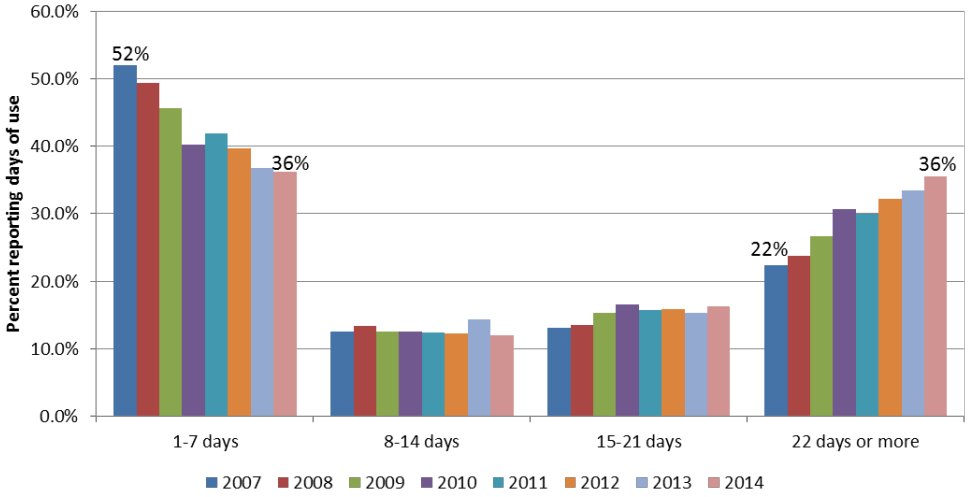
Figure 18. Treatment admission rate reporting marijuana as drug of abuse, by age group, 2007—2014



Source: Colorado Department of Human Services, Office of Behavioral Health, Drug/Alcohol Coordinated Data System.

The DACODS also collects information on frequency of drug use in the 30 days prior to treatment (Figure 19). In 2007, 52% of clients seeking treatment were occasional users (1–7 days of use in the past 30 days) and 22% were heavy users (22 days or more). By 2014, this distribution changed and the same percentage of occasional users (36%) and heavy users (36%) were admitted to treatment. This indicates that those seeking treatment were more likely to be heavy users prior to admission. The most common method of marijuana use was smoking (91%), followed by inhalation (5%), and oral (4%).

Figure 19. Reported marijuana use in past 30 days, by number of reported days of use, 2007–2014



Source: Colorado Department of Human Services, Office of Behavioral Health, Drug/Alcohol Coordinated Data System.

In sum, the impacts of marijuana legalization on public health in Colorado are still being assessed. Surveys of marijuana use show that, among young adults (18-25), past 30-day use increased from 21% in 2006[39] to 31% in 2014. Past 30-day use among adults ages 26 and older increased from 5% in 2006 to 12% in 2014. Since 2000, rates of hospitalizations and emergency department visits possibly related to marijuana have increased, as have the number of calls to poison control. Drug treatment admission rates for marijuana increased somewhat between 2007 and 2014 for those over the age of 21.

[39] Note that the 2006 NSDUH survey for Colorado showed the lowest past 30-day use since 1999.

SECTION FOUR

IMPACT ON YOUTH

Overview

This section focuses on the impact of marijuana legalization on youth. The general questions concern youth use, diversion of marijuana to youth, youth arrests, comprehensive school information, drug-endangered children, and other potential impacts. These topics will be addressed using two surveys that ask about drug use and other risky behavior. The first is the Healthy Kids Colorado Survey, which is a biannual survey administered to high school and middle school youth by CDPHE. The second is the National Survey on Drug Use and Health, a national survey administered annually to those 12 and older by the Substance Abuse and Mental Health Services Administration.

The public safety impacts are examined by using official arrest and offense 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 is gathered using discipline data from the Colorado Department of Education. These data include trends on suspensions, expulsions, and law enforcement referrals for drugs. The data system in place from 2004–2015 did not capture whether marijuana was the specific drug that led to the discipline as it was grouped with all other drugs. However, since the most commonly used illicit drug in the youth population is marijuana, changes in discipline trends can logically be linked to changes in marijuana use. Discussions with school administrators also support this assumption.

The question about legalization's impact on drug-endangered children is difficult to answer. The term "drug-endangered children" has not been defined by the legislature, and choosing what data elements to gather is problematic. The Department of Human Services does not currently collect specific information on whether drug use or abuse is a contributing factor in at-risk families. With that in mind, a few data elements may act as proxies for the time being. The Colorado Behavioral Risk Factor Surveillance System (BRFSS) is a group of health-related telephone surveys that collect data about 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 about various behaviors, including parental marijuana usage and marijuana storage in the home. Questions about marijuana were first added in 2014, meaning that the data presented in this report will act as baseline measures. A second proxy for drug-endangered children will be reports from persons entering substance abuse treatment regarding how many children they are responsible for. While seeking treatment does not necessarily equate to endangering one's children, it is one of the few proxies available and it may provide useful information.

Youth Usage

Survey Data

Healthy Kids Colorado Survey

The Healthy Kids Colorado Survey (HKCS) collects health information biennially (every odd year) from Colorado public school students.[40] 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[41]) and public middle schools (2013). The HKCS and other sample-based surveys use 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 224 randomly selected schools and 40,206 randomly selected students participated in the 2013 HKCS. The sample includes 25,197 students in 106 public high schools, 14,187 students in 110 public middle schools, and 822 students in eight alternative high schools. The overall response rate is the product of the school participation rate and the student response rate. Overall response rates in 2013 were 63% for middle schools, 58% for high schools, and 24% for alternative high schools. The high school student response rates for 2005–2013 are presented in Table 18.

It should be noted that the 2013 survey administration changed compared to previous years. CDPHE partnered with the Colorado Department of Human Services and the Colorado Department of Education and the sampling design and frames were also changed. The sample was stratified and sampled by region for the first time. Also, regular and alternative high schools were sampled separately rather than together as done in the past. These types of methodological changes have potential effects on prevalence estimates. Therefore, careful interpretation should be used to prevent misrepresentation of the data.

Table 18. Sample information for Healthy Kids Colorado Survey (HKCS)

	High school		Middle school[a]	
Year	N Responses	Response rate	N Responses	Response rate
2005	1,498	60%	--	--
2007[b]	734	29%	--	--
2009	1,511	62%	--	--
2011	1,523	67%	--	--
2013	25,197	58%	14,187	63%

[40] More detailed information about the Healthy Kids Colorado Survey can be accessed here: https://www.colorado.gov/cdphe/hkcs.

[41] The response rate from the 2007 survey was too low to allow for accurate weighting.

Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey, http://www.chd.dphe.state.co.us/topics.aspx?q=Adolescent_Health_Data.
[a]The middle school survey was not conducted prior to 2013.
[b]The response rate from the 2007 survey was too low to allow for accurate weighting of the data and these data are not presented.

The trend for students reporting ever using marijuana has shown a gradual decline in the past two surveys, going down by about three percentage points in each survey (Table 19). The trend for students reporting past 30-day marijuana use has remained relatively stable, with no significant change from 2005 to 2013. Finally, the percentage of students trying marijuana before the age of 13 has not changed significantly over the last four survey administrations.

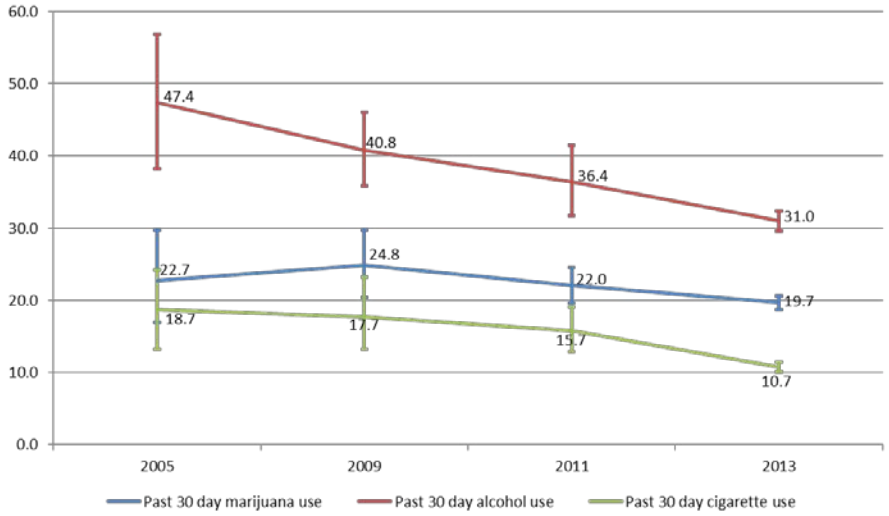
Table 19. High school student marijuana usage trends, 2005–2013: HKCS

	2005	2009	2011	2013
Ever used marijuana (one or more times during their life)	42.4%	42.6%	39.5%	36.9%
Currently used marijuana (one or more times during the 30 days before the survey)	22.7	24.8	22.0	19.7
Tried marijuana before age 13 years (for the first time)	9.9	8.3	9.0	8.1

Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey, http://www.chd.dphe.state.co.us/topics.aspx?q=Adolescent_Health_Data.

The prevalence trends for the three most commonly used substances are presented in Figure 20. The three trends are all downward, with the biggest reduction being for current alcohol use, down from 47% in 2005 to 31% in 2013.

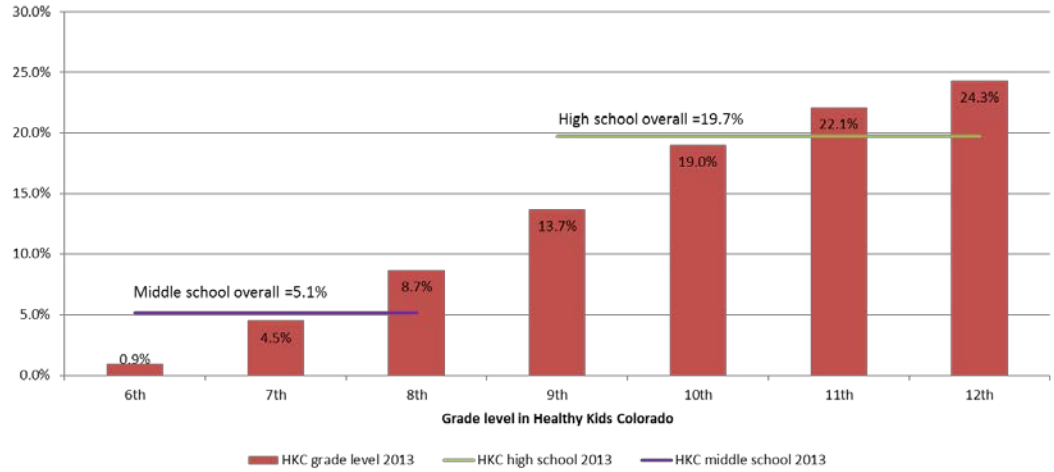
Figure 20. Past 30-day substance use among high school students, 2005–2013: HKCS



Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey, http://www.chd.dphe.state.co.us/topics.aspx?q=Adolescent_Health_Data.

The results for past 30-day marijuana use by grade level are presented in Figure 21. There are increases in reported use for each grade, with the biggest jumps being from eighth to ninth grade (+5.0 percentage points) and from ninth to tenth grade (+5.3 percentage points).

Figure 21. Past 30-day marijuana use, by grade level, 2013: HKCS



Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey, http://www.chd.dphe.state.co.us/topics.aspx?q=Adolescent_Health_Data.

The number of times high school students reported using marijuana in the past 30 days is presented in Table 20. In 2013, the most common number of times used is one to two (6.6%), followed by three to nine (4.7%), and then 40 or more (4.1%). That is, students were more likely to be either light users or heavy users, with fewer in the intermediate range. This distribution of usage frequency is similar to that reported in the NSDUH.

Table 20. High school students reporting number of times used marijuana in past 30 days, 2005–2013: HKCS

Usage frequency category	2005	2009	2011	2013
0	77.3%	75.2%	78.0%	80.3%
1 or 2	6.9%	7.6%	7.1%	6.6%
3 to 9	5.5%	6.0%	4.7%	4.7%
10 to 19	3.9%	3.0%	2.6%	2.4%
20 to 39	2.6%	2.2%	2.3%	1.9%
40 or more	3.8%	6.0%	5.3%	4.1%

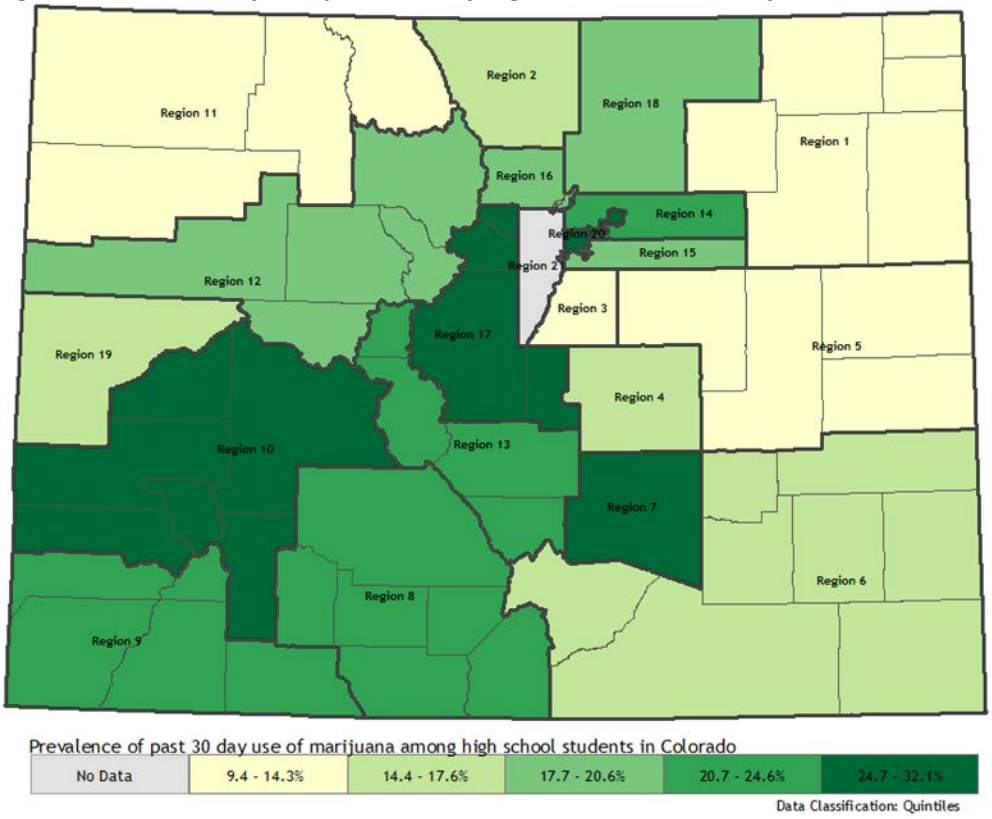
Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey, http://www.chd.dphe.state.co.us/topics.aspx?q=Adolescent_Health_Data.

In 2013, the HKCS began reporting data for the 21 health statistics regions (HSRs) in Colorado. Large counties represent their own HSR, while smaller counties are grouped together. This grouping allows estimates to be produced for areas with small student populations. A table with results for all HSRs is available Appendix G, Table 12.

The area with the highest reported past 30-day usage by high school students is Region 7 (Pueblo County), where 32.1% of high school students reported using marijuana in the past 30 days (Figure 22). This is followed by Region 10 (Delta, Gunnison, Hinsdale, Montrose, Ouray, and San Miguel Counties) at 26.7%, and Region 20 (Denver) at 26.6%. The areas with the lowest usage include Region 5 (Cheyenne,

Elbert, Kit Carson, and Lincoln) at 9.4%, Region 1 (Logan, Morgan, Philips, Sedgwick, Washington, and Yuma) at 11.4%, and Region 3 (Douglas) at 13.2%.

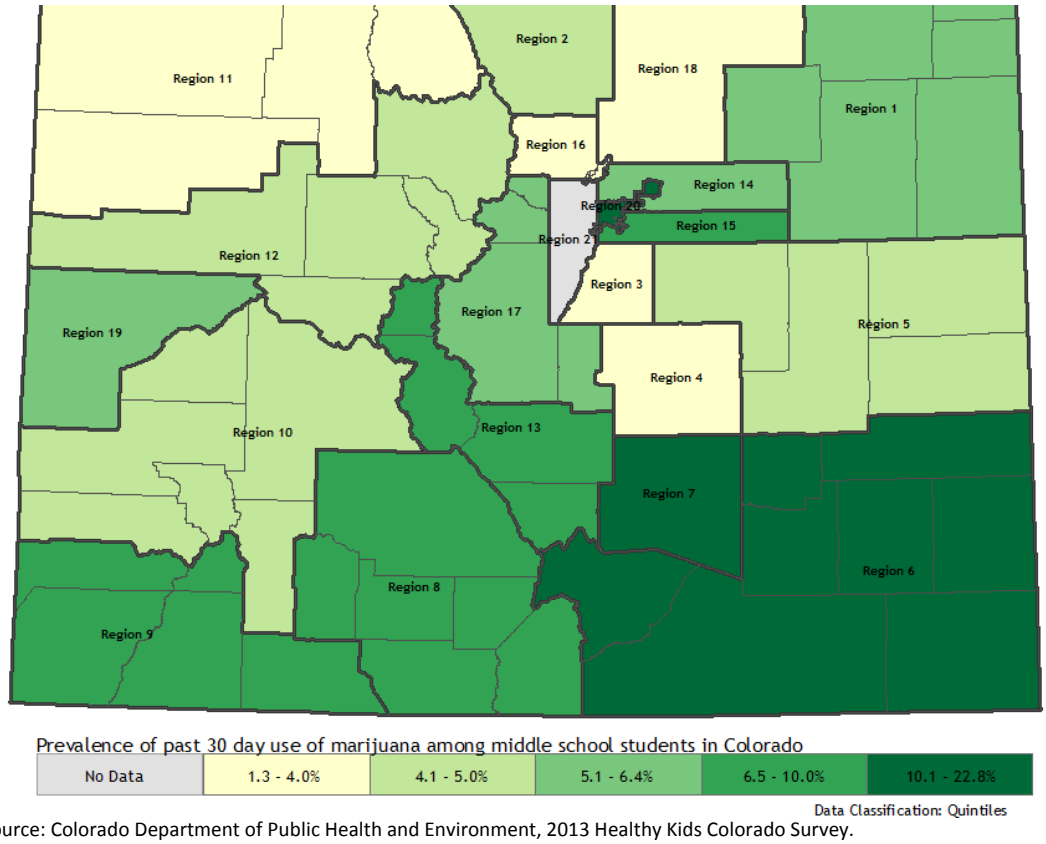
Figure 22. Past 30-day marijuana use by high school students, by health statistics region, 2013



Source: Colorado Department of Public Health and Environment, 2013 Healthy Kids Colorado Survey.
Note: Jefferson County (Region 21), Colorado's second largest school district with 29,042 high school students, did not participate in the 2013 Healthy Kids Colorado Survey.

For the middle school sample, Region 7 (Pueblo) has the highest 30-day prevalence rates at 22.8%, followed by Region 20 (Denver) at 19.2%, and then Region 6 (Baca, Bent, Crowley, Huerfano, Kiowa, Las Animas, Otero, and Powers) at 12.3% (Figure 23). The areas with the lowest middle school rates are Region 3 (Douglas) at 1.3%, Region 11 (Jackson, Moffat, Rio Blanco, and Routt) at 2.1%, and Region 4 (El Paso) at 2.5%.

Figure 23. Past 30-day marijuana use by middle school students, by health statistics region, 2013: HKCS



Source: Colorado Department of Public Health and Environment, 2013 Healthy Kids Colorado Survey.
Note: Jefferson County (Region 21), Colorado's second largest school district with 16,491 middle school students, did not participate in the 2013 Healthy Kids Colorado Survey.

The HKCS also asks about various student opinions and behaviors concerning marijuana (Table 21). The perception of moderate/great risk of using marijuana regularly[42] was reported by 76.4% of middle school students and 54.0% of high school students. The judgment of how easy it would be to get marijuana is very different as students age, with 16.2% of middle school students reporting that it would be sort of/very easy to get marijuana, and 54.9% of high school students expressing this belief. Student perceptions about the wrongness of marijuana use also vary by age, with 89.3% of middle school students believing use is wrong/very wrong and 60.2% of high school students expressing this opinion.

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

Table 21. Student opinions regarding marijuana, by school level, 2013: HKCS

Question	Middle school	High school
Percentage of students who think people who use marijuana regularly have moderate/great risk of harming themselves	76.4%	54.0%
Percentage of students who feel it would be sort of easy or very easy to get marijuana if they wanted	16.2	54.9
Percentage of students who think it is wrong/very wrong for someone their age to use marijuana	89.3	60.2
Percentage of students who think their parents would feel it is wrong/very wrong if they used marijuana	96.3	86.4
Percentage of students who rode one or more times during the past 30 days in a car or other vehicle driven by someone who had been using marijuana	NA	19.7
Among students who drove a car or other vehicle during the past 30 days, the percentage who drove one or more times when they had been using marijuana	NA	10.9

Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey, http://www.chd.dphe.state.co.us/topics.aspx?q=Adolescent_Health_Data.

National Survey on Drug Use and Health

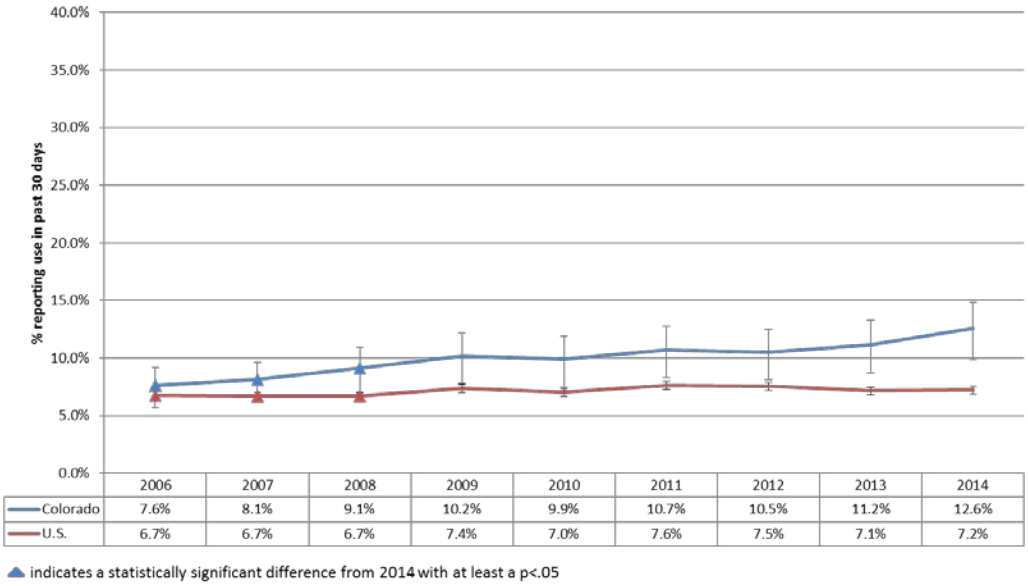
The Substance Abuse and Mental Health Services Administration (SAMHSA) conducts the annual National Survey on Drug Use and Health (NSDUH).[43] The NSDUH is the primary source of information on the prevalence, patterns, and consequences of alcohol, tobacco, and illegal drug use and abuse and mental disorders in the U.S. civilian, noninstitutionalized population, age 12 and older. The survey generates estimates at the national, state, and substate 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. For purposes of reporting, only the second year is presented in these tables and figures.[44] The two-year usage prevalence rates for Colorado residents 12 to 17 years old are based on weighted estimates from between 575 to 650 survey respondents. For a full explanation of the confidence intervals and tests for difference of means see Section 2, page 40.

The 30-day marijuana usage prevalence for Colorado youth was significantly above the national average for the period 2009–2014 (Figure 24).[45] The 2014 30-day usage prevalence within Colorado is significantly higher than the period from 2006 to 2008. However, the prevalence increase within Colorado since 2009, from 10.2% to 12.6%, was not statistically significant. The recent upward trend in Colorado usage differs from the national trend, which shows a relatively flat usage rate, fluctuating between 6.7% and 7.6% for the last eight years.

[43] Descriptions of the NSDUH derived from information available at http://www.samhsa.gov/data/population-data-nsduh/reports.
[44] For example, data indicated as 2014 is the combination of 2013 and 2014.
[45] Means tests were conducted comparing 2014 with each other year. If the term "significant" is used, it denotes a 5% probability ($p < .05$) that the difference identified is by chance.

Figure 24. Past 30-day marijuana use, 12–17 years old, 2006–2014: NSDUH



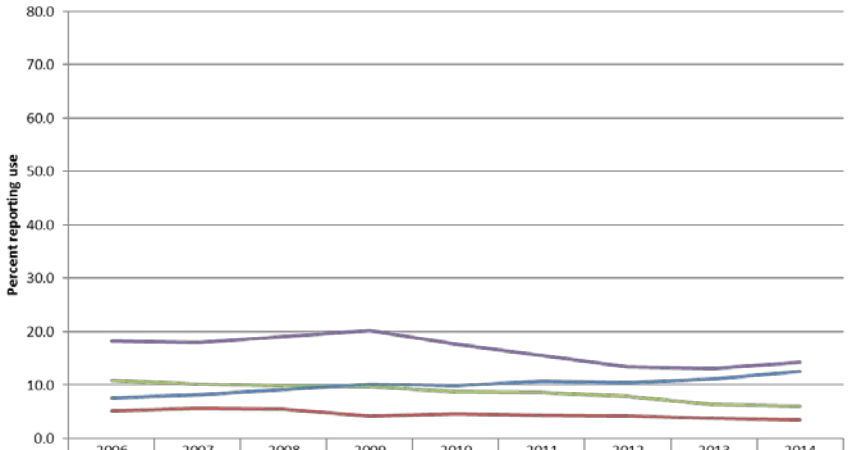
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Colorado	7.6%	8.1%	9.1%	10.2%	9.9%	10.7%	10.5%	11.2%	12.6%
U.S.	6.7%	6.7%	6.7%	7.4%	7.0%	7.6%	7.5%	7.1%	7.2%

▲ indicates a statistically significant difference from 2014 with at least a p<.05

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015.

This increase in Colorado youth's marijuana usage is in contrast to the general downward trends in usage of alcohol, cigarettes, and other illicit drugs (Figure 25).

Figure 25. Past 30-day substance use, 12–17 years old, 2006–2014: NSDUH



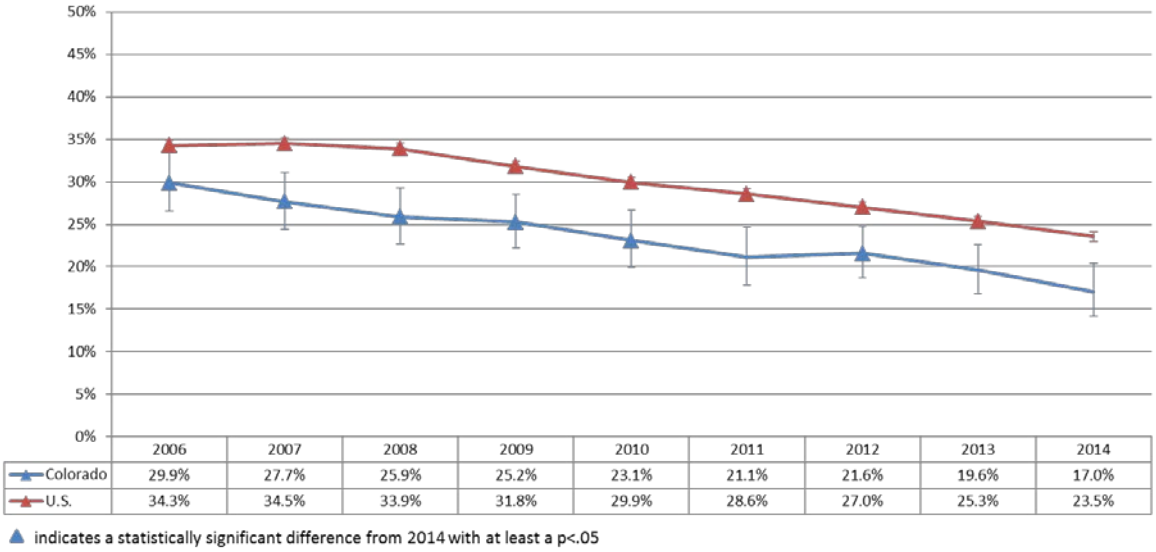
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Any alcohol	18.2	18.0	19.0	20.2	17.7	15.5	13.4	13.1	14.3
Cigarettes	10.8	10.2	9.9	9.7	8.8	8.6	7.9	6.3	6.0
Marijuana	7.6	8.1	9.1	10.2	9.9	10.7	10.5	11.2	12.6
Illicit drugs, non-marijuana	5.1	5.6	5.4	4.2	4.6	4.4	4.1	3.7	3.4

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015.

Colorado youth's perception of great risk for using marijuana once per month has been consistently lower than the national average (Figure 26). Both the Colorado and national trends have shown steep

declines in perception of risk. The perception of great risk from using marijuana once a month among Colorado youth declined from 29.9% in 2006 to 17.0% in 2014. The perception of great risk in Colorado for 2014 is significantly lower than for the period 2005–2010 and for 2012. The national rate went from 34.3% in 2006 down to 23.5% in 2014. The gap between the two rates has remained relatively consistent, at five to six percentage points.

Figure 26. Perception of great risk for using marijuana once a month, 12–17 years old, 2006–2014: NSDUH



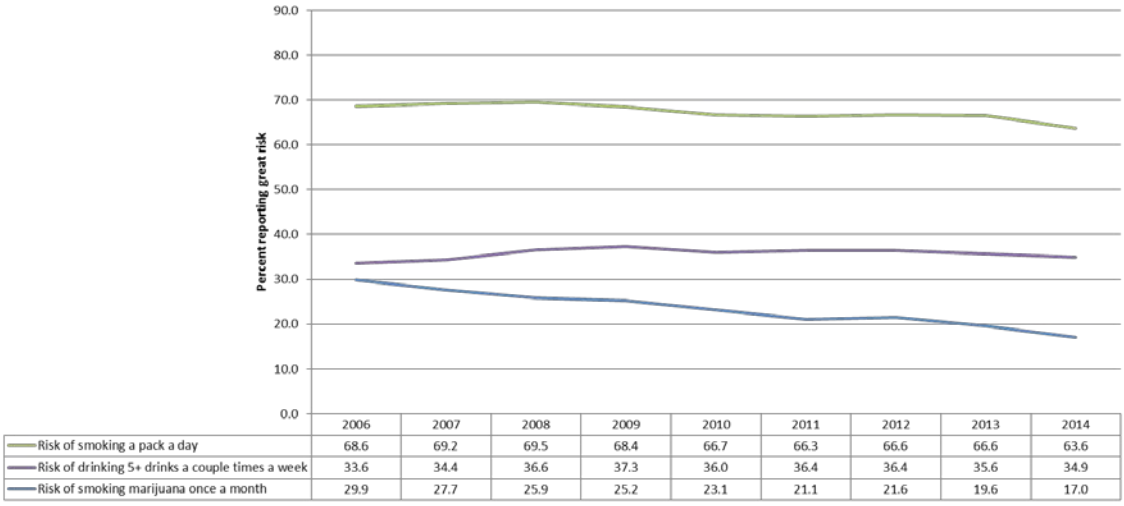
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Colorado	29.9%	27.7%	25.9%	25.2%	23.1%	21.1%	21.6%	19.6%	17.0%
U.S.	34.3%	34.5%	33.9%	31.8%	29.9%	28.6%	27.0%	25.3%	23.5%

▲ indicates a statistically significant difference from 2014 with at least a p<.05

Note: The 95% confidence intervals are represented by the bars above and below the estimate for each year. These indicate that 95 times out of 100 the true value should fall within that range.
Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015.

The reduced perception of risk for marijuana use contrasts with almost no change in the perception of great risk for regular cigarette smoking or binge drinking (Figure 27). The difference in the frequency of behavior under question should be noted and taken into consideration when interpreting this disparity.

Figure 27. Perception of great risk for using various substances, 12–17 years old, 2006–2014: NSDUH



	2006	2007	2008	2009	2010	2011	2012	2013	2014
Risk of smoking a pack a day	68.6	69.2	69.5	68.4	66.7	66.3	66.6	66.6	63.6
Risk of drinking 5+ drinks a couple times a week	33.6	34.4	36.6	37.3	36.0	36.4	36.4	35.6	34.9
Risk of smoking marijuana once a month	29.9	27.7	25.9	25.2	23.1	21.1	21.6	19.6	17.0

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, http://www.samhsa.gov/data/population-data-nsduh, retrieved 12/17/2015.

In sum, data on youth use is available from two sources, the Healthy Kids Colorado Survey, with 40,000 students responding in 2013 and the National Survey on Drug Use and Health, with fewer than 1,000 respondents. The HKCS results indicate a slight decline in "past 30 day use" of marijuana while the NSDUH shows a gradual increase over time. The HKCS shows that marijuana use increases by grade level, and the NSDUH shows that youth use of marijuana in Colorado is above the national average, and the perception of risk of using marijuana is declining among youth in Colorado.

Criminal Justice Involvement

Arrest Trends

The total rate (+2%) and number (+5%) of juvenile marijuana arrests increased from 2012 to 2014 (Table 22). The demographic characteristics of this change reveal some differences in trends based on gender and race/ethnicity. The percentage increase in the rate (+23%) and number (+26%) of female juvenile arrests contrasts with the decrease in the rate (-3%) and number (-1%) of male juvenile arrests between 2012 and 2014.

The rate (-9%) and number (-8%) of White juvenile arrested decreased during this period. The rate and number of arrests for the largest minority populations increased: the rate (+22%) and number (+29%) of Hispanic juvenile arrests increased, and the rate (+52%) and number (+58%) of African-American juvenile arrests increased markedly.

Table 22. Juvenile marijuana arrest trends, by gender and race/ethnicity, 2012–2014

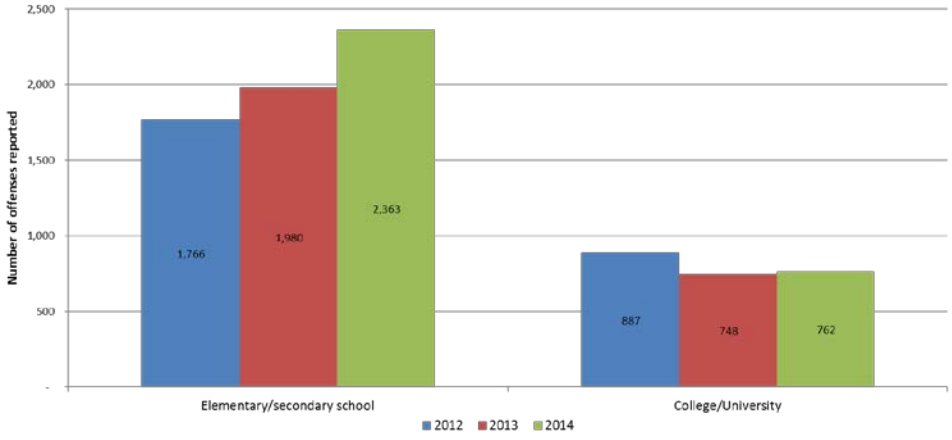
	Arrest total				Arrest rate (per 100,000)			
	2012	2013	2014	% change 2012–14	2012	2013	2014	% change 2012–14
Total	3,235	3,125	3,400	+5%	598	571	611	+2%
Gender								
Female	712	736	900	+26%	269	275	331	+23%
Male	2,523	2,389	2,500	-1%	911	854	880	-3%
Race/Ethnicity								
White	2,198	2,019	2,016	-8%	686	628	624	-9%
Hispanic	778	808	1,006	+29%	489	495	598	+22%
African-American	205	260	324	+58%	904	1,133	1,376	+52%
Asian	28	24	29	+4%	182	150	174	-4%
Native American	18	8	7	-61%	521	236	206	-61%
Pacific Islander	0	0	1	--	0	0	122	--
Unknown	8	6	17	+113%	--	--	--	--

Note: Colorado arrest records do not include juveniles under the age of 10; therefore, juvenile arrest rates are based on Colorado population aged 10–17. Approximately 3% of the juvenile population is classified as multiracial and is not included in the racial breakdown.
Source: Colorado Bureau of Investigation, National Incident-Based Reporting System; U.S. Census Bureau, Population Estimates, available from http://www.census.gov/popest/data/state/asrh/2014/SC-EST2014-ALLDATA6.html.

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 places like public transportation, bars, convenience stores, homes, parks, parking lots, primary/secondary schools, colleges, etc. The only place where marijuana offenses have increased is elementary/secondary schools, up 34% from 2012 to 2014 (Figure 28).

Figure 28. Marijuana offenses in Colorado schools, 2012–2014



Source: Colorado Bureau of Investigation, National Incident-Based Reporting System database.
Note: "Elementary/secondary school" means that the offense occurred within an elementary or secondary school.
"College/University" means that the offense occurred within a college or university.In 2012 there were 43 offenses where the type of school could not be determined.

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 23 presents information on the percentage of juvenile probationers who test positive for THC. The percent of 10- to 14-year-old group testing positive for THC one or two times increased from 19% in 2012 to 23% in 2014, while the percentage testing positive three or more times went from 18% to 25%. The percentage of 15- to 17-year-olds testing positive one or two times went down slightly, from 26% in 2012 to 25% in 2014, while those testing positive three or more times increased from 23% to 25%. There is no link currently between probationer drug testing results and their probation status so it is not known if changes in drug use patterns are affecting probation violations.

Table 23. Juvenile probationer test results for THC, 2012–2014

		Percent of probationers testing positive for THC		
Age Group	Times tested positive	2012	2013	2014
10 to 14 years old	N probationers	660	528	425
	0 times	63%	58%	52%
	1-2 times	19%	18%	23%
	3 or more times	18%	25%	25%
15 to 17 years old	N probationers	3,244	2,671	2,193
	0 times	50%	51%	49%
	1-2 times	26%	24%	25%
	3 or more times	23%	26%	25%

Note: The number of active juvenile clients decreased from 5,156 in 2012 to 4,061 in 2014.
Source: Colorado State Judicial Branch.

The percentage of total tests with positive results for THC is presented in Table 24. For 10 to 14 year olds, the percentage of tests positive for THC increased from 31% in 2012 to 39% in 2014. There are similar results for the 15 to 17 year old group, with 28% of tests coming back positive in 2012, then increasing to 33% in 2014.

Table 24. Juvenile drug test results, percent of tests that are positive for THC, 2012–2014

Age Group	Times tested	2012	2013	2014
10 to 14 years old	N tests	2,587	2,301	1,655
	% positive	31%	35%	39%
15 to 17 years old	N tests	24,221	19,993	15,180
	% positive	28%	31%	33%

Note: The number of active juvenile clients decreased from 5,156 in 2012 to 4,061 in 2014.
Source: Colorado State Judicial Branch.

In sum, arrest rates per 100,000 juveniles for marijuana-related offenses increased 2% overall between 2012 and 2014, but for certain groups, the arrest rate increased substantially: females, Blacks and Hispanics. Additionally, since 2012 there has been an increase in marijuana offenses on school property. Finally, more juveniles on probation are testing positive for marijuana.

School Data

School Discipline Data Trends

There is concern that marijuana legalization may 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.[46]

The Colorado Department of Education reports disciplinary data on suspensions, expulsions, and law enforcement referrals for each school year.[47] 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, changes in trends are likely to be related to changes in use and possession of marijuana. In 2015, legislation was passed instructing the Department of Education to begin collecting discipline data about marijuana separately from other drugs. The first marijuana-specific data are expected in fall 2016.

Prior to the 2012 school year, legislation (S.B. 12-046/H.B. 12-1345) modified some zero-tolerance policies that had resulted in what some considered "unnecessary expulsions, suspensions, and law enforcement referrals."[48] *This change in the law should be taken into account when examining disciplinary trends.*

The school-level data for suspensions, expulsions, and law enforcement referrals were provided by the Colorado Department of Education. These raw numbers were transformed into rates per 100,000 students to take the increased number of students into account.[49] In the 2008–2009 school year, 818,443 students were enrolled in Colorado schools and by 2014–2015 that number had increased to 889,006.[50] A student may be involved in more than one disciplinary incident, so these rates should not be equated to the percentage of students receiving disciplinary action in any given year.

[46] 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.

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

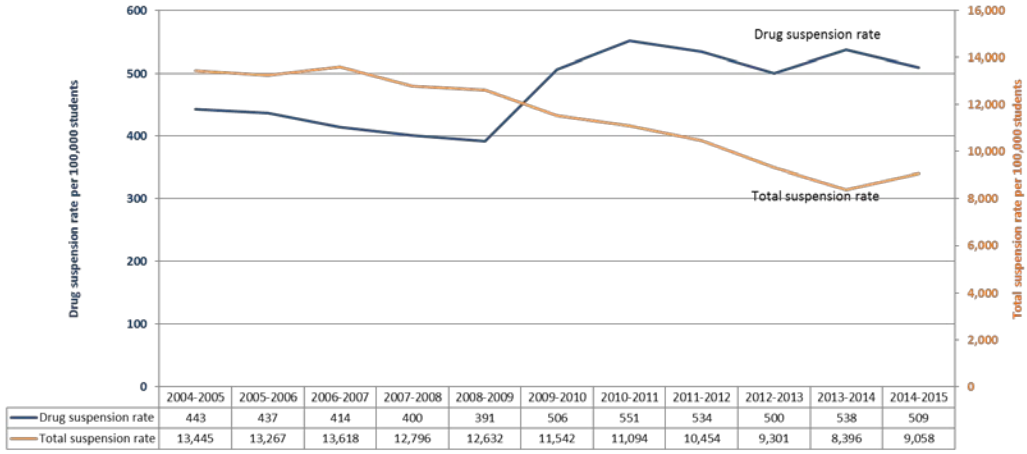
[48] Colorado School Safety Resource Center, Discipline in Schools, available at https://www.colorado.gov/pacific/cssrc/discipline-schools.

[49] The raw numbers are included in Appendix F, Table 12.

[50] Colorado Department of Education, pupil membership, available at http://www.cde.state.co.us/cdereval/pupilcurrent.

The drug suspension rate decreased 12% from 2004–2005 to 2008–2009 (Figure 29). The drug suspension rate began to increase in 2009–2010, up 29% from 2008–2009. Since that increase, the drug suspension rate has remained relatively stable. This increase is in contrast to a decrease in the overall suspension rate.

Figure 29. Total and drug suspension rates per 100,000 students, 2004–2015

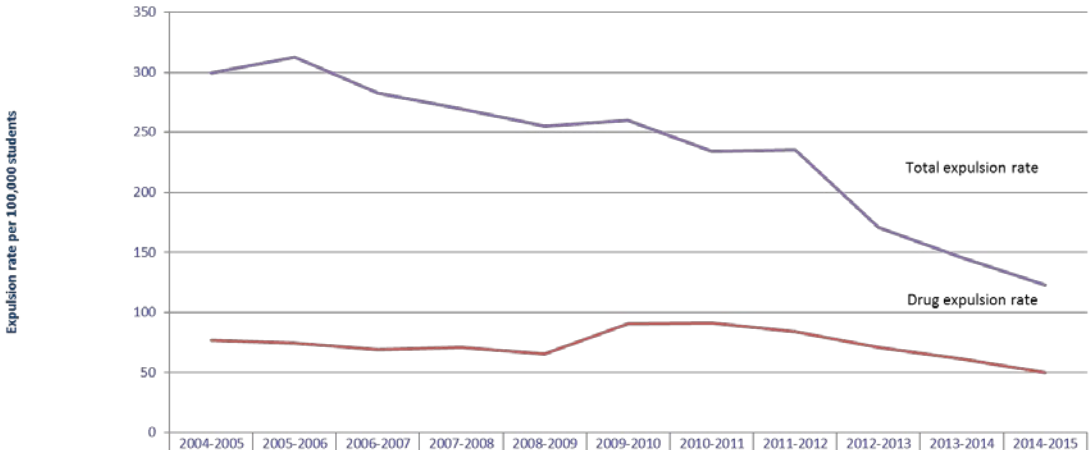


	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Drug suspension rate	443	437	414	400	391	506	551	534	500	538	509
Total suspension rate	13,445	13,267	13,618	12,796	12,632	11,542	11,094	10,454	9,301	8,396	9,058

Source: Colorado Department of Education, http://www.cde.state.co.us/cdereval/suspend-expelcurrent, retrieved 12/15/2015.

The drug expulsion rate decreased 16% from 2004–2005 to 2008–2009 (Figure 30). The drug expulsion rate increased 39% in 2009–2010, plateaued in 2010–2011, and has been decreasing since then. This decrease occurred in conjunction with a decrease in the total expulsion rate.

Figure 30. Total and drug expulsion rates per 100,000 students, 2004—2015



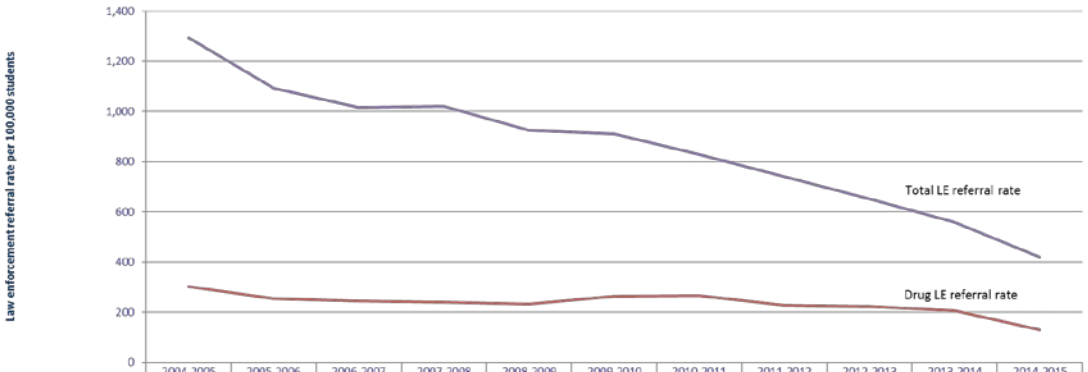
	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Total expulsion rate	299	313	283	270	255	260	234	235	171	145	123
Drug expulsion rate	77	74	69	71	65	90	91	84	71	61	50

Source: Colorado Department of Education, http://www.cde.state.co.us/cdereval/suspend-expelcurrent, retrieved 12/15/2015.

The law enforcement referral rate for drug-related behaviors has followed a trend similar to that for expulsions (Figure 31). There was a 13% increase in the referral rate from 2008–2009 to 2009–2010, a plateau in 2010–2011, and then a gradual decrease until 2013–2014. There was a marked decrease,

down 51%, from 2013–2014 to 2014–2015. The reasons for this decline are not entirely clear. Discussions with administrators point to changes in policies regarding referrals to law enforcement rather than a reduction in student possession or use.

Figure 31. Total and drug law enforcement referral rates per 100,000 students, 2004–2015

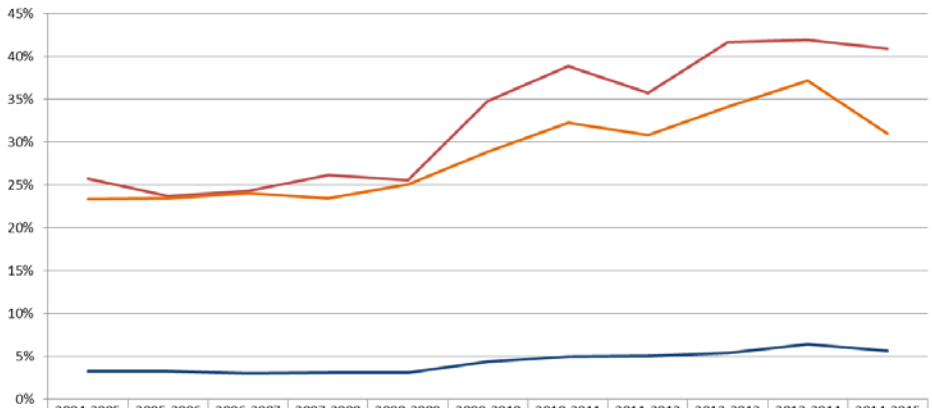


	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Total LE referral rate	1,295	1,092	1,016	1,021	924	911	829	741	652	559	421
Drug LE referral rate	302	256	244	240	232	263	267	228	222	208	130

Source: Colorado Department of Education.

The percentage of drug expulsions among all expulsions was stable from 2004–2005 to 2008–2009 at around 25% (Figure 32). It increased by nine percentage points, from 26% to 35%, in 2009–2010. In 2014–2015, 41% of all expulsions in Colorado were for drugs. The percentage of drug referrals among all law enforcement referrals follows a similar pattern. It was stable from 2004–2005 to 2008–2009 at around 23%, began to increase in 2009–2010, and then peaked in 2013–2014 at 37% of all law enforcement referrals. The 2014–2015 school year saw a decrease that coincides with the decrease in law enforcement referrals for drugs overall. The percentage of drug suspensions among all suspensions also increased, but it remains around 6% of all suspensions.

Figure 32. Percent of disciplinary incidents for drugs 2004–2015



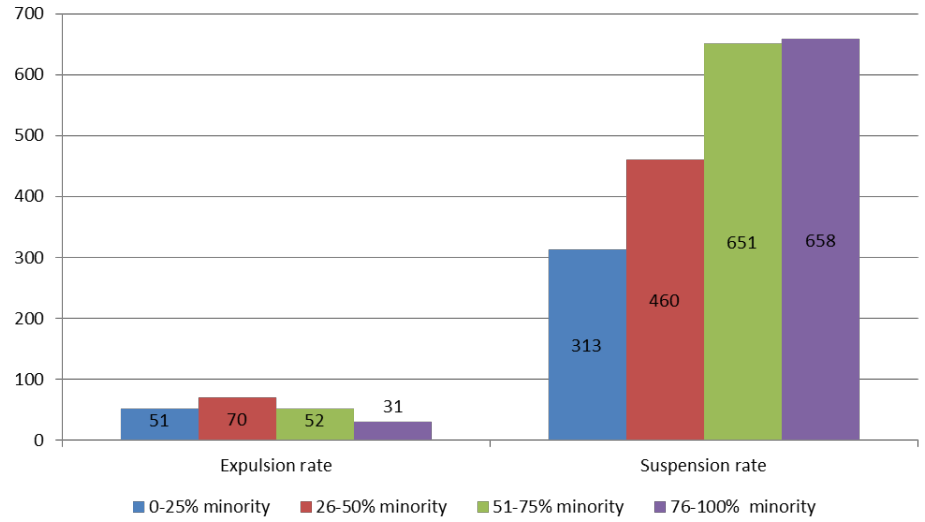
	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
% drug expulsions of all expulsions	26%	24%	24%	26%	26%	35%	39%	36%	42%	42%	41%
% drug LE referrals of all LE referrals	23%	23%	24%	23%	25%	29%	32%	31%	34%	37%	31%
% drug suspensions of all suspensions	3%	3%	3%	3%	3%	4%	5%	5%	5%	6%	6%

Source: Colorado Department of Education.

Drug suspension and expulsion rates for 2014–2015, categorized by percent minority representation in the school,[51] are presented in Figure 33. The drug expulsion rate is lowest in schools where more than 75% of the student population represents a minority population (31 expulsions per 100,000 students). The drug expulsion rate is highest in schools where 26% to 50% of the school population is minority (70 expulsions per 100,000 students).

The drug suspension rates are lowest in schools with a smaller proportion of minorities. In schools with a proportion of minorities 25% or lower, there are 313 drug suspensions per 100,000 students. The drug suspension rate in schools with 51% to 75% minority is 651 per 100,000 students, and in schools where the minority population is over three-quarters, the drug suspension rate is 658 per 100,000 students. Schools with the highest proportion of minorities have a drug suspension rate 110% higher than schools with the lowest proportion of minorities.

Figure 33. Drug suspension and expulsion rates, by minority representation in school, 2014-15 school year



Source: Colorado Department of Education.

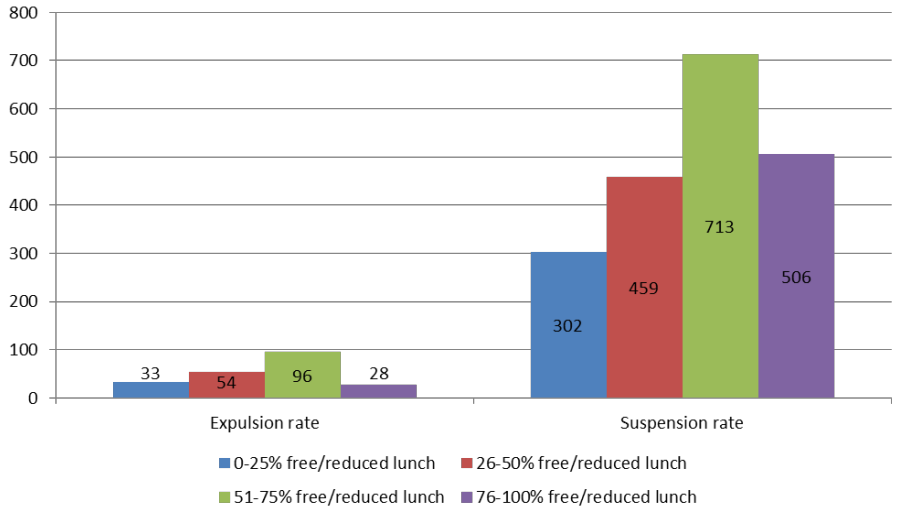
Drug suspension and expulsion rates, categorized by percent receiving free or reduced school lunch (FRSL),[52] are presented in Figure 34. The drug expulsion rates are lowest in the schools where more than 75% of students are receiving FRSL (28 FRSLs per 100,000 students) and highest in schools where between 51% and 75% of students are receiving FRSL (96 FRSLs per 100,000 students).

[51] Percent minority was calculated by adding the number of African-American, Hispanic, Asian, Native American, Native Hawaiian/Other Pacific Islander, and multiracial students, then dividing that by the total student population in the school. The percentages were collapsed into four categories for ease of display. Rates were calculated by using the formulas: (Number of suspensions*100,000/Number of students enrolled in school) and (Number of expulsions*100,000/Number of students enrolled in school).

[52] Percentages calculated by adding the number of students receiving free or reduced price school lunch and dividing by the total number of students in the school. Rates were calculated by using the formulas: (Number of suspensions*100,000/Number of students enrolled in school) and (Number of expulsions*100,000/Number of students enrolled in school).

Drug suspension rates are lowest in schools where one-quarter or less of the student body receives FRSL (302 per 100,000) and highest in schools where between 51% and 75% are receiving FRSL (713 per 100,000 students).

Figure 34. Drug suspension and expulsion rates, by percent receiving free/reduced lunch at school, 2014–2015 school year



Source: Colorado Department of Education.

In sum, over the last ten years, the overall suspension rate has declined while the drug-related suspension rate has increased, yet a decline occurred in the last year. The total expulsion rate has declined, as has the drug-related expulsion rate. In 2014-2015, drug related expulsions represented 41% of all expulsions. Drug-related suspensions and expulsion rates were highest in schools with large minority populations. Overall, referrals to law enforcement declined significantly in the last ten years, and drug-related referrals to law enforcement also declined somewhat in the last few years. It should be noted that recent declines in rates of suspension and expulsion, and fewer referrals to law enforcement, are likely to be associated with school reform efforts mandated in S.B. 12-046 and H.B. 12-1345.

Drug-Endangered Children

Senate Bill 13-283 requires that information be collected on the impacts of marijuana legalization on drug-endangered children. There is no agreement on the definition of that term, so there is no formal definition, which makes reporting difficult. The Colorado Department of Human Services does not have a method to track whether a child welfare case was prompted by any specific drug. There is also no way 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 this topic.

In an attempt to address the General Assembly's concern about drug- endangered children, this report uses information from two sources to examine the issue. First, data from a statewide survey of parents about their marijuana use and product storage at home is presented, followed by data from the

DACODS examining marijuana treatment trends for people reporting children under 18 who are dependent on their income.

Child Health Survey

The Child Health Survey[53] (CHS) is done as an adjunct to the annual Behavioral Risk Factor Surveillance Survey (BRFSS) conducted by CDPHE. Once respondents complete the BRFSS, the interviewer asks them 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. Approximately ten days later, the parent is called to complete the survey on a variety of topics, including their child's physical activity, nutrition, access to health and dental care, behavioral health, school health, sun safety, injury, and many others. Questions regarding parental marijuana use, storage, and consumption methods were added to the CHS in 2014.

Of parents with children ages 1–14 who participated in the 2014 BRFSS and the Child Health Survey, 4% reported using marijuana in the past month. The reported methods of use include smoking (76%), vaping (39%), and eating in food (14%).

Of parents with children ages 1–14, 7% have some type of marijuana product around the house. When asked about where it is kept, 92% report storing it in a location the child cannot access, 89% report using a childproof container/packaging, and 71% report using a locked container (data not presented).

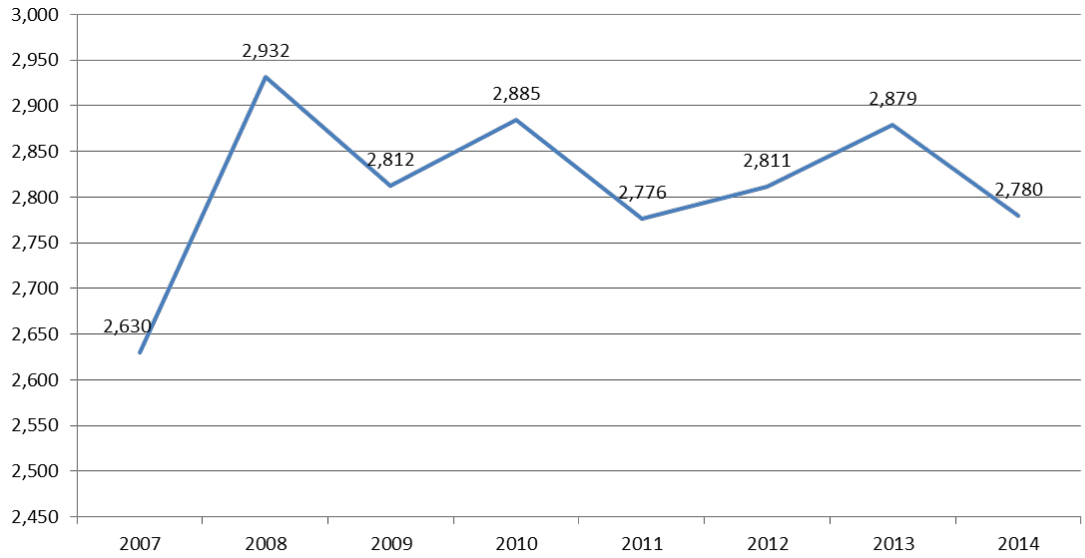
Parental Treatment Trends

At intake, the Office of Behavioral Health records in DACODS the number of children whom the client supports financially and otherwise. Seeking treatment for marijuana abuse does not necessarily indicate that the children dependent on the client for support are drug-endangered. However, if a person's drug usage has reached the point where treatment is required, there are several potential impacts, including the involvement of human services or the criminal justice system.

The number of people seeking treatment for marijuana as their primary substance of abuse who are also responsible for children shows no clear trend (Figure 35).

[53] Additional information about the Child Health Survey is available at http://www.chd.dphe.state.co.us/topics.aspx?q=Maternal_Child_Health_Data.

Figure 35. Number seeking treatment for marijuana abuse who are responsible for children, 2007–2014



Source: Colorado Department of Human Services, Office of Behavioral Health, Drug/Alcohol Coordinated Data System.

Future Possibilities for Data

Pregnancy Risk Assessment Monitoring System

CDPHE describes the Pregnancy Risk Assessment Monitoring System (PRAMS) as "a surveillance system designed to identify and monitor behaviors and experiences of women before, during, and after pregnancy. Information is collected by surveying a sample of women who have recently given birth."[54] PRAMS added questions about marijuana use beginning with its 2014 survey and these data will be available for inclusion in future reports.

Changes to Human Services Data System (Trails)

The Colorado Department of Human Services uses a data system known as Trails to track cases through the child welfare system. The current system does not allow case workers to capture information on whether the presence or use of specific drugs is putting a child at risk. Trails is currently undergoing an upgrade, and it is hoped that future versions will have the ability to track the impact of various drugs in the child welfare system.

In sum, in an effort to assess the impact of marijuana legalization on drug endangered children, two sources of information were explored. The Child Health Survey, administered by CDPHE, found that, of parents with children ages 1-14, 4% reported using marijuana in the past month, and 7% reported having marijuana in the household. Of those with marijuana in the household, 92% reported that they store it in a location that the child cannot access. Data from OBH shows that the number of people

[54] For more information, see https://www.colorado.gov/pacific/cdphe/pregnancysurvey.

seeking treatment for marijuana as their primary substance of abuse who are also responsible for children shows no clear trend in terms of increasing or decreasing over the past several years.

SECTION FIVE
ADDITIONAL INFORMATION

LICENSING AND REVENUE

Marijuana Enforcement Division

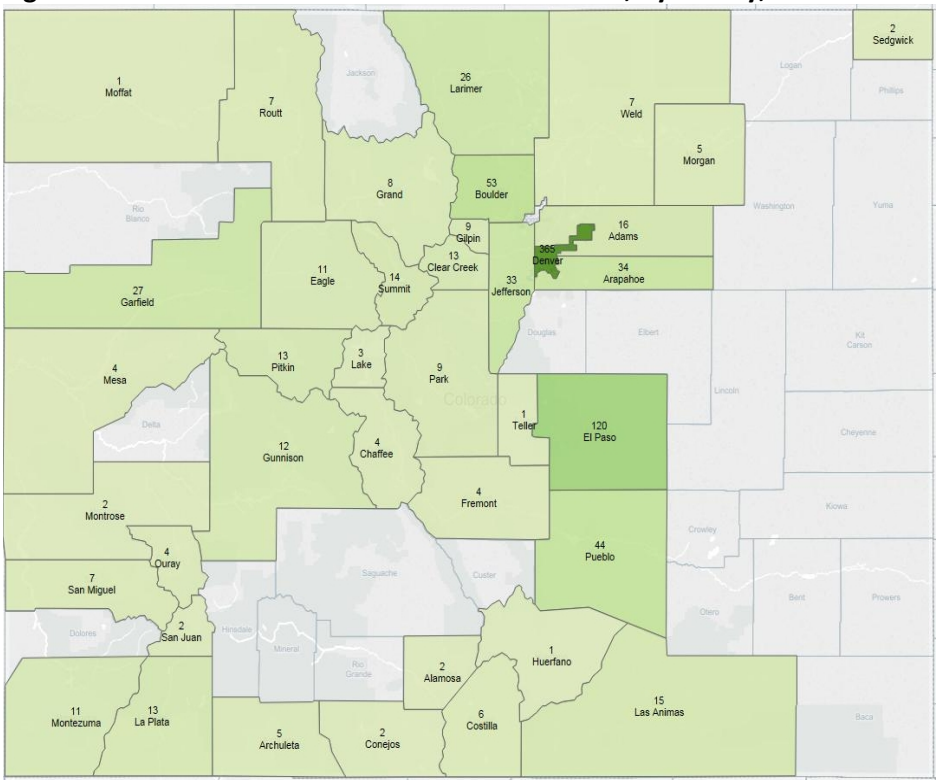
The Marijuana Enforcement Division[55] (MED) is tasked with licensing and regulating the medical and retail marijuana industries in Colorado. The Division implements legislation, develops rules, conducts background investigations, issues business licenses, and enforces compliance mandates in order to 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

Licenses for retail stores and medical centers (Figure 36) are concentrated in Denver County (365), El Paso County (120), and Boulder County (53). Licenses for retail or medical cultivations (Figure 37) are concentrated in Denver County (594), El Paso County (152), and Pueblo County (116). Licenses to manufacture products (Figure 38) are concentrated in Denver County (143), Pueblo County (42), and El Paso County (36). There are 17 labs certified to test retail marijuana[56] (Figure 39) and ten are located in Denver. Overall, the City and County of Denver accounts for 44% of all licensed marijuana businesses in Colorado.

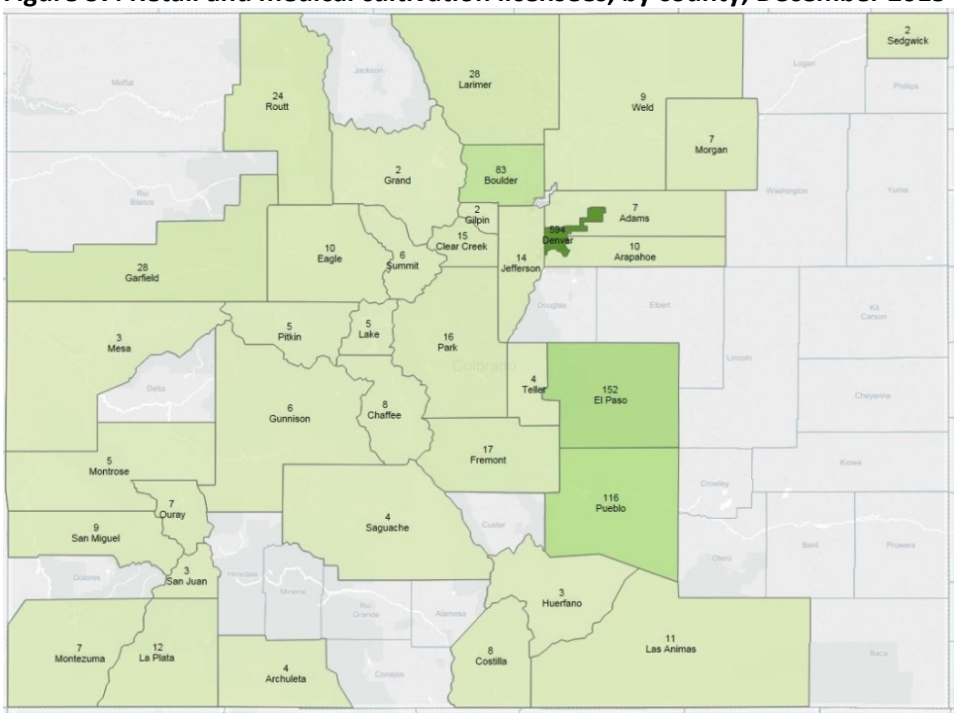
[55] Additional information on the MED can be obtained at https://www.colorado.gov/enforcement/marijuanaenforcement.
[56] Labs test for potency of products, homogeneity of THC throughout a product, solvents, and microbial contamination.

Figure 36. Retail store and medical center licensees, by county, December 2015



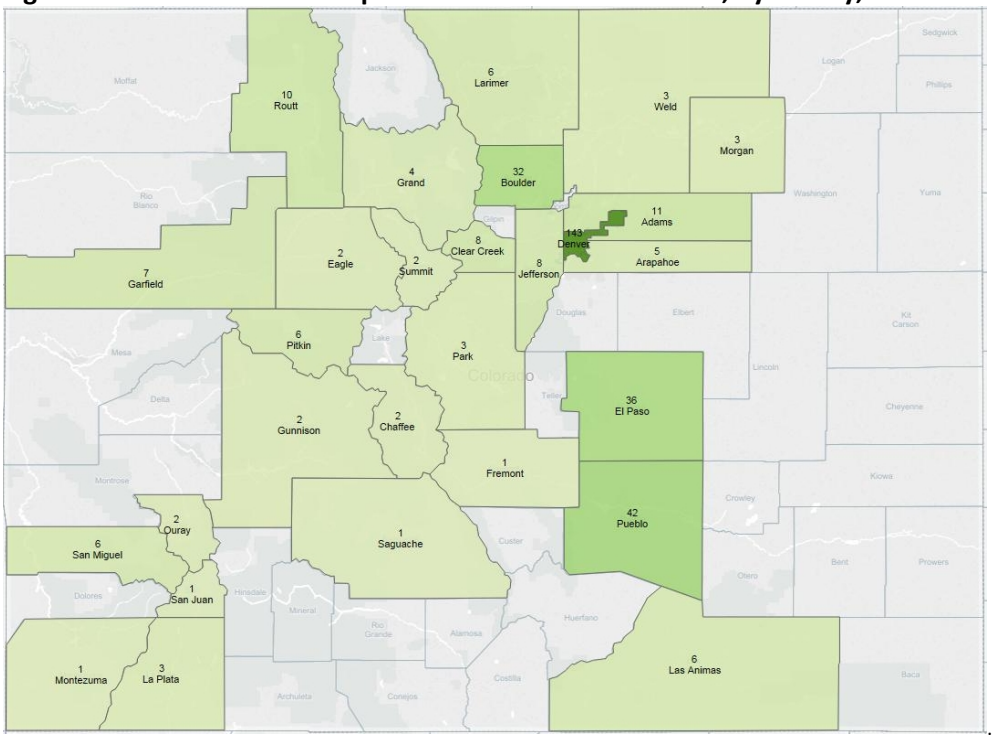
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, https://www.colorado.gov/pacific/enforcement/med-licensed-facilities, retrieved 12/20/2015.

Figure 37. Retail and medical cultivation licensees, by county, December 2015



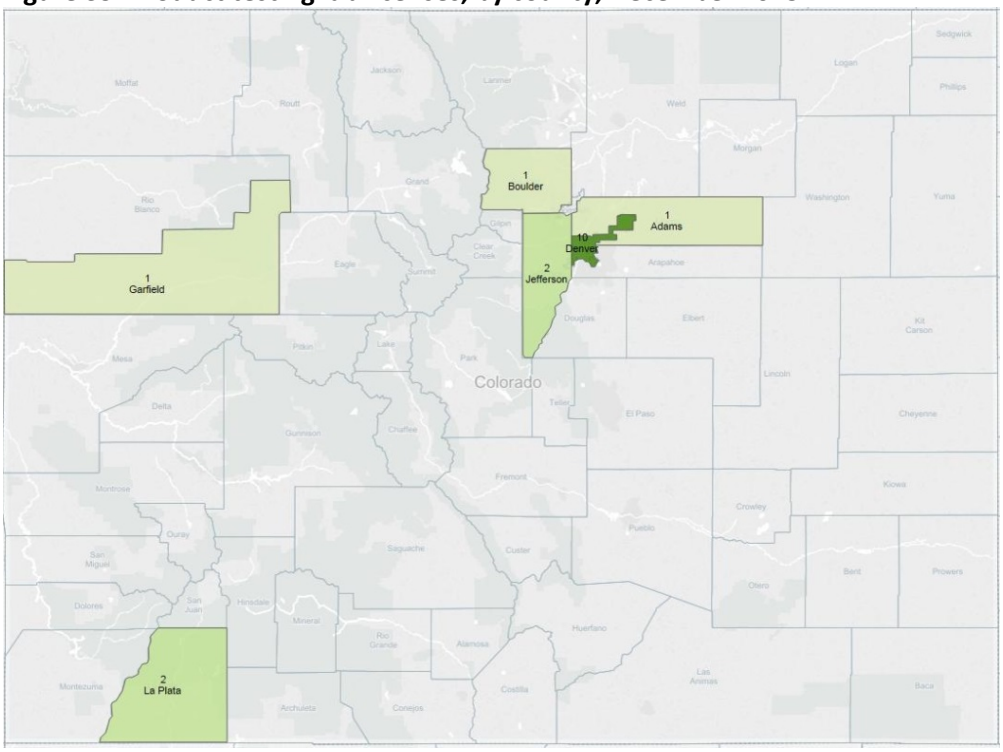
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, https://www.colorado.gov/pacific/enforcement/med-licensed-facilities, retrieved 12/20/2015.

Figure 38. Retail and medical product manufacture licenses, by county, December 2015



Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, https://www.colorado.gov/pacific/enforcement/med-licensed-facilities, retrieved 12/20/2015.

Figure 39. Product testing lab licenses, by county, December 2015



Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, https://www.colorado.gov/pacific/enforcement/med-licensed-facilities, retrieved 12/20/2015.

Tax Revenue Data

The total revenue from taxes, licenses, and fees increased 77% from calendar year 2014 to 2015, going from $76,152,468 up to $135,100,465 (Table 25). The revenue increase was driven primarily by the sales taxes, excise taxes, licenses, and fees for retail marijuana. In calendar year 2015, total revenue from retail marijuana accounted for $108,783,986, or 81% of all marijuana revenue.

The excise tax revenue collected to fund the public school capital construction assistance fund reached $35,060,590 in calendar year 2015, which is close to the $40 million estimated to result from Amendment 64. This represented a 163% increase from 2014. The taxes distributed to local governments increased 89%, from $4,553,122 to $8,626,922.

The tax revenue from marijuana should be put in context of all tax revenue collected in Colorado. In fiscal year 2015 (June 1, 2014, to May 31, 2015) gross collections for all tax revenue totaled $14.2 billion dollars.[57] Marijuana taxes make up about 0.95% of all tax revenue collected in the state. For a graphical depiction of the flow of marijuana revenue see Appendix K.

Table 25. Tax revenue, license, and application fees collected from marijuana licensees, calendar years 2014, 2015

	2014	2015	2014 to 2015 % change
TAXES			
Sales tax transfer to marijuana cash fund (2.9% rate)	$ 19,709,086	$ 27,936,012	42%
Medical marijuana	$ 10,886,966	$ 11,451,375	5%
Retail marijuana	$ 8,822,120	$ 16,484,635	87%
Retail marijuana sales tax (10% rate)	$ 30,364,796	$ 57,582,835	90%
Local government distribution	$ 4,553,122	$ 8,626,922	89%
Marijuana cash fund transfer	$ 25,798,923	$ 48,885,799	89%
Collections not yet allocated	$ 12,750	$ 60,115	371%
Retail marijuana excise tax	$ 13,341,001	$ 35,060,590	163%
Public school capital construction assistance fund transfer (15% rate)	$ 13,303,365	$ 35,027,041	163%
Marijuana cash fund transfer	$ -	$ -	-
Collections not yet allocated	$ 37,636	$ 33,549	-11%
Total marijuana tax transfers and distributions	$ 63,414,883	$ 120,579,434	90%
LICENSES AND FEES			
License and applications fees transfer to marijuana cash fund	$ 12,737,585	$ 14,521,031	14%
Medical marijuana	$ 9,032,155	$ 9,831,845	9%
Retail marijuana	$ 3,705,430	$ 4,689,186	27%
Total marijuana cash fund transfers	$ 58,245,594	$ 91,342,840	57%
Total all marijuana taxes, licenses, and fees	$ 76,152,468	$ 135,100,465	77%

Note: Annual data represent a calendar year and not a state fiscal year.
Source: Colorado Department of Revenue, Marijuana Enforcement Division. Colorado Marijuana Tax Data, https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data, retrieved 2/18/2016.

[57] Colorado Department of Revenue (2016). *Annual Report 2015*, https://www.colorado.gov/pacific/sites/default/files/2015%20Annual%20Report_1.pdf, retrieved 2/18/2016.

MEDICAL MARIJUANA CARDHOLDERS

Colorado Department of Public Health and Environment Process

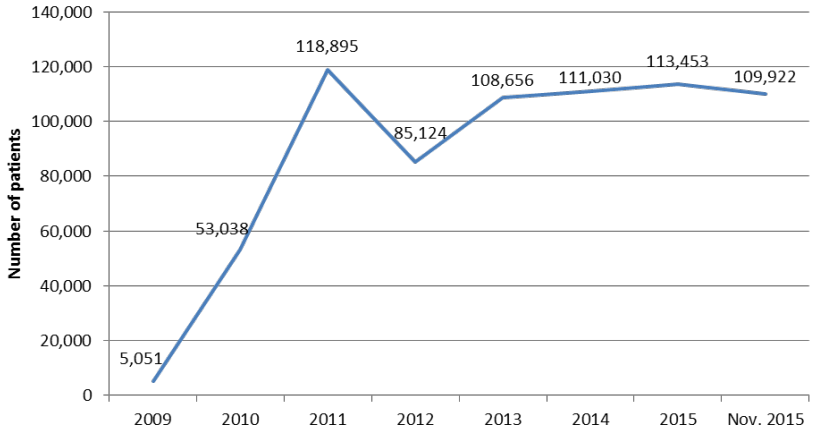
The Medical Marijuana Registry is administered by the Colorado Department of Public Health and Environment (CDPHE) pursuant to CRS 25-1.5-106. To apply for a medical marijuana registry card, a person must be a Colorado resident with a valid Social Security number, be receiving treatment for a qualifying 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.[58] Cardholders also have the choice of designating a private person as their caregiver.

Trend Data

The number of medical marijuana cardholders began to increase in 2009, after the commercialization of the caregiver market was allowed (Figures 40). From 2009 to 2011, more than 113,000 cardholders were added to the registry. The number of cardholders plateaued in 2011, and has remained relatively consistent since 2013 at around 111,000.

Figure 40. Number of medical marijuana cardholders, 2009–November 2015



Note: Data come from each January's report, except for November 2015.
Source: Colorado Department of Public Health and Environment, medical marijuana statistics and data, available at https://www.colorado.gov/pacific/cdphe/medical-marijuana-statistics-and-data.

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

As of November 2015, there were 109,922 registered cardholders in Colorado (Table 26). The average age of a cardholder was 42.5 years old. The majority are male (65%) and their average age is 41.4 years, while the average age of female cardholders (35%) is 45.0 years. The majority of cardholders are over 40 (51%). The three most common conditions reported are severe pain (93%), muscle spasms (20%), and severe nausea (12%). A cardholder can report more than one debilitating condition.

Table 26. Medical marijuana cardholder characteristics, November 2015

Patient characteristics	N	%
Total	109,922	100.0%
Gender		
Male	71,339	64.9%
Female	38,583	35.1%
Age group		
0-10	241	<1%
11-17	137	<1%
18-20	5,508	5.0%
21-30	25,451	23.2%
31-40	22,635	20.6%
41-50	17,517	15.9%
51-60	20,348	18.5%
61-70	15,135	13.8%
71 and older	2,942	2.7%
Reported condition[a]		
Cachexia	965	<1%
Cancer	3,926	3.6%
Glaucoma	1,290	1.2%
HIV/AIDS	612	<1%
Muscle spasms	21,526	19.6%
Seizures	2,585	2.4%
Severe nausea	12,599	11.5%
Severe pain	102,121	92.9%

[a]Does not sum to 100% because patients may report more than one debilitating medical condition.
Source: Colorado Department of Public Health and Environment, medical marijuana statistics and data, https://www.colorado.gov/pacific/cdphe/medical-marijuana-statistics-and-data.

OVERALL CRIME IN COLORADO

Offense rates for both property and violent crime remained relatively stable from 2008 to 2014, showing a slight decrease of about 5% over this period (Table 27).

Table 27. Offenses and offense rates in Colorado, by offense type, 2008–2014

	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

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, https://www.colorado.gov/pacific/dcj-ors/ors-crimestats.

The trends in arrests for violent crime and weapons remained relatively stable in the past several years (Table 28). The overall trend for drug arrest rates was downward, with a 22% drop between 2012 and 2014. This coincides with the drop in marijuana arrests. The arrest rate for property crime was stable from 2006 to 2012, but then jumped by 15% in 2013 and another 10% in 2014. An increase in the number of larceny arrests is primarily responsible.

Table 28. Arrests and arrest rates in Colorado, by crime type, 2006–2014

	Number of total arrests				Arrest rate, per 100,000 population			
Year	Drug	Property	Violent	Weapon	Drug	Property	Violent	Weapon
2006	19,893	24,606	7,183	2,421	486	601	176	59
2007	19,377	24,836	6,430	2,406	466	598	155	58
2008	18,763	26,664	6,849	2,207	444	631	162	52
2009	17,382	27,103	7,239	1,935	405	632	169	45
2010	16,946	24,813	6,806	1,831	389	570	156	42
2011	16,374	25,106	6,213	1,824	370	568	140	41
2012	16,804	24,707	5,578	1,809	374	550	124	40
2013	12,476	29,019	5,909	1,850	273	635	129	41
2014	13,521	32,643	6,064	2,178	290	701	130	47

Note: Violent crime includes murder/non-negligent manslaughter, rape, robbery, and aggravated assault. Property crime includes burglary, larceny/theft, motor vehicle theft, and arson. Drug and weapon crimes include crimes classified in those categories. 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, https://www.colorado.gov/pacific/dcj-ors/ors-crimestats.

In sum, licenses for retail and medical marijuana stores are concentrated in Denver, El Paso and Boulder counties. Overall, 44% of all licensed businesses are located in Denver County. Revenue from taxes, licenses and fees totaled $135,100,465 in 2015; retail establishments accounted for 81% of all marijuana revenue. Marijuana taxes make up about 1% of all tax revenue collected in the state. In addition, in November 2015, there were 109,922 medical marijuana card holders; 93% of card holders report severe pain as the debilitating condition. Finally, across the state, crime has remained fairly stable between 2008 and 2014; drug arrests declined 22% between 2012 and 2014.

SECTION SIX
SUMMARY OF CHALLENGES

OVERVIEW

The most fundamental challenge to collecting data related to marijuana over time stems from unmeasured changes in human behavior concerning marijuana. The decreasing social stigma around marijuana use could lead to individuals being more willing to report use on surveys. Legalization could result in reports of increased use, when it may actually be a function of the decreased stigma and legal consequences regarding use. Likewise, those reporting to poison control, emergency departments, or hospitals may feel more comfortable discussing their recent use or abuse of marijuana for purposes of treatment. The impact from this reduced stigma and legal consequences makes certain trends difficult to assess and will require additional time to measure post-legalization.

Legalization also is likely to change how law enforcement responds to crimes involving marijuana. There are still many statutes prohibiting production, distribution, and high quantity possession of marijuana and marijuana products.

Additionally, there are many challenges related to collecting the specific information required by S.B. 13-283. Law enforcement contact data is not collected so is unavailable for analysis, for example. Very little data is available to address the "drug-endangered children" mandate. Another challenge is that the amount of data on several topics is limited, and some was not collected prior to legalization of marijuana. For example, the diversion of marijuana out of Colorado is not tracked in any systematic way. While there is a reporting mechanism for these data its use is not required and the database only contains an unknown percentage of seizures. Additionally, there may be changes in enforcement patterns by agencies, particularly those in adjoining states, which increase the interdiction of marijuana independent of an actual increase in trafficking. It is also possible that there are co-occurring increases in trafficking and enforcement that are magnifying the interdiction amounts.

Systematic data on driving under the influence of marijuana are also not available at this time. Some agencies are tracking this issue, but their efforts are recent and do not allow for any kind of trend analysis. This limits both the geographic and temporal scope of the available data. Additionally, the increase in law enforcement officers who are trained in recognizing drug use, from 32 in 2006 to 288 in 2015, can increase detection rates apart from any changes in driver behavior.

Finally, there is also the issue of lag time between when data are collected and when they become available. For example, arrest and offense data become publicly available in June of the following year. Data on vehicle fatalities do not become available until October of the following year due to the time it takes to collect final information from coroners and law enforcement. Survey data on usage have significant lag time, sometimes up to a year after the data are finalized. These limitations are not ones that can be easily remedied due to the nature of the data cleaning, validation, and weighting that must occur before results can be made public.

NEXT STEPS

Two steps to improve reporting on the impact of marijuana legalization will be undertaken in the near term. First, the Division of Criminal Justice will work with the Governor's Office of Information Technology and the Governor's Office of Marijuana Coordination to create a data warehouse that can systematically hold all of the information currently being collected. This data warehouse can be used to drive a web-based portal that will enable public to access continually updated data. It will also allow for more in-depth analysis by creating a mechanism to link data sources.

Second, current data collection capabilities in different agencies will be improved. Several agencies are currently undergoing data infrastructure upgrades. This makes it an excellent time to work on improving the ability to collect information related to impacts of the legalization of marijuana. In sum, efforts are underway to expand data collection efforts and increase the availability of data to increase the ability to assess the impact of marijuana legalization in Colorado.

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

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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.

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.

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

Arrests by county, agency, judicial district, age, and race

Appendix C, Table 1. Number and rate of marijuana arrests, by county, 2012–2014

	Number of arrests				Arrest rate (per 100,000)			
County	2012	2013	2014	% change 2012-2014	2012	2013	2014	% change 2012-2014
Total	12,894	6,502	7,004	-46%	249	123	131	-47%
Adams	2,297	989	847	-63%	500	211	177	-65%
Alamosa	2	7	12	500%	13	44	75	488%
Arapahoe	1,467	699	818	-44%	246	115	133	-46%
Archuleta	17	3	6	-65%	141	25	49	-65%
Baca	17	7	1	-94%	455	191	27	-94%
Bent	0	1	0	--	0	18	0	--
Boulder	714	433	353	-51%	234	140	113	-52%
Broomfield	297	131	132	-56%	510	220	216	-58%
Chaffee	47	14	17	-64%	259	77	91	-65%
Cheyenne	2	1	0	-100%	107	53	0	-100%
Clear Creek	44	7	6	-86%	487	78	67	-86%
Conejos	2	0	0	-100%	24	0	0	-100%
Costilla	0	0	1	--	0	0	28	--
Crowley	0	0	0	--	0	0	0	--
Custer	1	1	2	100%	24	23	45	92%
Delta	15	15	8	-47%	49	50	26	-47%
Denver[a]	--	--	836	--	--	--	126	--
Dolores	0	1	1	--	0	50	49	--
Douglas	528	330	218	-59%	177	108	70	-60%
Eagle	274	130	96	-65%	529	248	181	-66%
Elbert	17	19	17	0%	133	79	90	-32%
El Paso	857	521	598	-30%	73	80	70	-4%
Fremont	38	11	5	-87%	81	24	11	-87%
Garfield	164	71	67	-59%	288	124	115	-60%
Gilpin	98	7	4	-96%	1,788	125	70	-96%
Grand	14	2	4	-71%	99	14	27	-72%
Gunnison	37	29	31	-16%	240	188	197	-18%
Hinsdale	0	0	0	--	0	0	0	--
Huerfano	13	0	4	-69%	198	0	62	-69%
Jackson	0	0	0	--	0	0	0	--
Jefferson	1,508	788	950	-37%	276	143	170	-38%
Kiowa	1	3	0	-100%	70	214	0	-100%
Kit Carson	19	14	4	-79%	234	174	49	-79%
Lake	27	3	3	-89%	105	99	150	43%
La Plata	55	53	82	49%	371	41	40	-89%
Larimer	899	468	456	-49%	290	148	142	-51%
Las Animas	7	5	1	-86%	47	35	7	-85%
Lincoln	1	0	0	-100%	18	0	0	-100%
Logan	41	3	28	-32%	186	14	127	-31%

Appendix C, Table 1. Number and rate of marijuana arrests, by county, 2012–2014

	Number of arrests				Arrest rate (per 100,000)			
County	2012	2013	2014	% change 2012-2014	2012	2013	2014	% change 2012-2014
Mesa	629	418	431	-31%	425	283	289	-32%
Mineral	0	0	0	--	0	0	0	--
Moffat	105	22	20	-81%	799	168	152	-81%
Montezuma	74	6	12	-84%	291	23	46	-84%
Montrose	133	50	46	-65%	327	123	112	-66%
Morgan	51	19	34	-33%	180	67	119	-34%
Otero	22	3	6	-73%	118	16	32	-73%
Ouray	0	0	4	--	0	0	85	--
Park	9	1	4	-56%	56	6	24	-57%
Phillips	2	1	0	-100%	46	23	0	-100%
Pitkin	7	0	10	43%	41	0	57	41%
Prowers	90	32	38	-58%	729	262	308	-58%
Pueblo	23	19	22	-4%	14	12	14	-5%
Rio Blanco	26	4	18	-31%	382	59	265	-31%
Rio Grande	28	5	2	-93%	236	43	17	-93%
Routt	92	36	60	-35%	397	154	251	-37%
Saguache	11	0	2	-82%	174	0	32	-82%
San Juan	0	1	0	--	0	146	0	--
San Miguel	0	0	0	--	0	0	0	--
Sedgwick	1	3	1	0%	42	128	43	1%
Summit	63	5	5	-92%	224	17	17	-92%
Teller	56	45	28	-50%	240	193	118	-51%
Washington	20	2	1	-95%	423	42	21	-95%
Weld	503	340	330	-34%	191	126	119	-37%
Yuma	2	4	0	-100%	20	40	0	-100%
Other[b]	1,261	272	322	-74%	--	--	--	--

[a] Denver's reported marijuana arrest data for 2012 and 2013 was incomplete due to separate jail arrest and citation systems. Cite and release data were not reported to the Colorado Bureau of Investigation until July 2013. Additionally, the 2014 arrest data reported by Denver includes a non-criminal civil citation, which lead to an over-reporting of marijuana arrests for that year. See Appendix K, Table 16 for internal data provided by the Denver Police Department's Data Analysis Unit.

[b] "Other" applies to arrests by agencies that are not in a fixed county, such as the Colorado State Patrol.
Source: Colorado Bureau of Investigation, National Incident-Based Crime Reporting System data.

Appendix C, Table 2. Number of marijuana arrests, by agency, 2012–2014

Agency	2012	2013	2014	% change 2012-2014
Total	**12,894**	**6,502**	**7,004**	**-46%**
Adams County SO	683	263	160	-77%
Adams State College	0	7	12	--
Aims Community College PD	2	0	0	-100%
Alamosa County SO	2	0	0	-100%
Arapahoe Community College	1	1	1	0%
Arapahoe County SO	77	39	50	-35%
Archuleta County SO	1	0	0	-100%
Arvada PD	482	235	263	-45%
Aspen PD	7	0	10	43%
Ault PD	2	0	4	100%
Auraria PD	5	0	0	-100%
Aurora PD	725	394	512	-29%
Avon PD	60	7	22	-63%
Baca County SO	4	3	0	-100%
Basalt PD	7	4	1	-86%
Bent County SO	0	1	0	--
Berthoud PD	4	5	0	-100%
Black Hawk PD	67	0	1	-99%
Boulder PD	135	75	72	-47%
Breckenridge PD	1	0	4	300%
Brighton PD	200	122	163	-19%
Broomfield PD	297	131	132	-56%
Brush PD	10	2	0	-100%
Buena Vista PD	1	2	2	100%
Burlington PD	8	6	1	-88%
Campo PD	13	4	0	-100%
Canon City PD	20	7	4	-80%
Carbondale PD	0	1	0	--
Castle Rock PD	112	63	38	-66%
Centennial PD	78	32	34	-56%
Center PD	4	0	1	-75%
Central City PD	0	4	2	--
Chaffee County SO	19	3	3	-84%
Cherry Hills Village PD	0	4	0	--
Cheyenne County SO	2	1	0	-100%
Clear Creek County SO	31	4	5	-84%
Colorado Mental Health Institute-Pueblo	0	0	1	--
Colorado School of Mines PD	7	6	7	0%
Colorado Springs PD	426	247	321	-25%
Colorado State Patrol	1,261	271	322	-74%

Appendix C, Table 2. Number of marijuana arrests, by agency, 2012–2014

Agency	2012	2013	2014	% change 2012-2014
Colorado State University-Fort Collins	84	53	41	-51%
Commerce City PD	188	148	94	-50%
Conejos County SO	2	0	0	-100%
Cortez PD	8	1	1	-88%
Costilla County SO	0	0	1	--
Craig PD	87	21	18	-79%
Crested Butte PD	2	4	5	150%
Cripple Creek PD	14	7	5	-64%
Custer County SO	1	1	2	100%
Dacono PD	4	0	1	-75%
De Beque PD	0	5	0	--
Del Norte PD	9	0	0	-100%
Delta County SO	0	2	0	--
Delta PD	14	10	4	-71%
Denver PD[a]	--	--	836	--
Division of Gaming Investigation	0	1	0	--
Dolores County SO	0	1	1	--
Douglas County SO	229	162	121	-47%
Durango PD	22	9	7	-68%
Eagle County SO	79	52	31	-61%
Eagle PD	17	3	7	-59%
Eaton PD	2	5	0	-100%
Edgewater PD	6	5	0	-100%
El Paso County SO	152	114	105	-31%
Elbert County SO	8	2	1	-88%
Elizabeth PD	9	17	16	78%
Empire PD	2	2	0	-100%
Englewood PD	250	94	94	-62%
Erie PD	26	22	43	65%
Estes Park PD	18	2	1	-94%
Evans PD	58	33	28	-52%
Federal Heights PD	78	14	4	-95%
Firestone PD	7	15	8	14%
Florence PD	11	3	0	-100%
Fort Collins PD	285	180	201	-29%
Fort Lewis College PD	33	42	68	106%
Fort Lupton PD	47	3	10	-79%
Fort Morgan PD	34	17	27	-21%
Fountain PD	152	90	71	-53%
Fowler PD	1	0	0	-100%
Frederick PD	17	8	16	-6%

Appendix C, Table 2. Number of marijuana arrests, by agency, 2012–2014

Agency	2012	2013	2014	% change 2012-2014
Fremont County SO	7	1	1	-86%
Frisco PD	15	0	0	-100%
Fruita PD	26	41	37	42%
Garden City PD	1	1	3	200%
Garfield (Rifle Co. Court)	0	9	2	--
Garfield County SO	14	8	0	-100%
Georgetown PD	0	1	0	--
Gilpin County SO	31	3	1	-97%
Glendale PD	3	2	0	-100%
Glenwood Springs PD	136	51	55	-60%
Golden PD	78	41	50	-36%
Granby PD	14	2	4	-71%
Grand Junction PD	500	308	309	-38%
Greeley PD	249	176	141	-43%
Greenwood Village PD	131	49	30	-77%
Gunnison PD	32	24	16	-50%
Gunnison County SO	0	1	2	--
Haxtun PD	0	0	4	--
Holyoke PD	2	1	0	-100%
Hotchkiss PD	1	1	4	300%
Hudson PD	2	0	4	100%
Huerfano County SO	1	0	1	0%
Idaho Springs PD	11	0	1	-91%
Jefferson County SO	421	214	203	-52%
Johnstown PD	9	1	0	-100%
Keenesburg PD	0	1	0	--
Kersey PD	0	6	2	--
Kiowa County SO	1	3	0	-100%
Kit Carson County SO	11	8	3	-73%
La Junta PD	20	3	6	-70%
La Plata County SO	0	2	7	--
Lafayette PD	125	26	36	-71%
Lake County SO	10	0	1	-90%
Lakeside PD	13	0	1	-92%
Lakewood PD	379	224	331	-13%
Lamar PD	71	27	28	-61%
Larimer County SO	223	66	65	-71%
LaSalle PD	4	0	0	-100%
Leadville PD	17	3	2	-88%
Lincoln County SO	1	0	0	-100%
Littleton PD	167	62	65	-61%

Appendix C, Table 2. Number of marijuana arrests, by agency, 2012–2014

Agency	2012	2013	2014	% change 2012-2014
Lochbuie PD	0	2	1	--
Logan County SO	37	2	12	-68%
Lone Tree PD	91	13	5	-95%
Longmont PD	74	49	73	-1%
Louisville PD	0	1	10	--
Loveland PD	285	162	147	-48%
Manitou Springs PD	66	43	68	3%
Mead PD	3	8	12	300%
Meeker PD	4	0	1	-75%
Mesa County SO	103	64	73	-29%
Milliken PD	0	3	10	--
Minturn PD	1	0	0	-100%
Moffat County SO	18	1	2	-89%
Monte Vista PD	19	3	2	-89%
Montezuma County SO	66	5	11	-83%
Montrose County SO	25	12	11	-56%
Montrose PD	108	38	35	-68%
Monument PD	17	5	1	-94%
Morgan County SO	7	0	7	0%
Morrison PD	2	0	0	-100%
Mountain View PD	1	0	1	0%
Mt Crested Butte PD	3	0	8	167%
Northglenn PD	214	100	110	-49%
Otero County SO	1	0	0	-100%
Ouray PD	0	0	4	--
Pagosa Springs PD	16	3	6	-63%
Palisade PD	0	0	12	--
Palmer Lake Marshal	1	0	0	-100%
Paonia PD	0	2	0	--
Parachute PD	13	2	10	-23%
Park County SO	9	1	4	-56%
Parker PD	96	92	54	-44%
Pikes Peak Community College PD	5	0	1	-80%
Prowers County SO	19	5	10	-47%
Pueblo County SO	1	15	16	1500%
Pueblo PD	22	4	5	-77%
Rangely PD	4	3	17	325%
Red Rocks PD	11	0	3	-73%
Rio Blanco County SO	18	1	0	-100%
Rio Grande County SO	0	2	0	--
Routt County SO	10	0	1	-90%

Appendix C, Table 2. Number of marijuana arrests, by agency, 2012–2014

Agency	2012	2013	2014	% change 2012-2014
Saguache County SO	7	0	1	-86%
Salida PD	27	9	12	-56%
San Juan County SO	0	1	0	--
Sedgwick County SO	1	3	1	0%
Severance PD	2	0	1	-50%
Sheridan PD	35	22	32	-9%
Silt PD	1	0	0	-100%
Silverthorne PD	5	0	1	-80%
Springfield PD	0	0	1	--
Steamboat Springs PD	82	36	55	-33%
Sterling PD	4	1	16	300%
Summit County SO	42	5	0	-100%
Teller County SO	19	1	6	-68%
Thornton PD	433	169	157	-64%
Tinmath PD	0	0	1	--
Trinidad PD	7	5	1	-86%
University of Colorado-Anschutz Campus	8	0	0	-100%
University of Colorado-Boulder	380	282	162	-57%
University of Colorado-Colorado Springs	38	22	31	-18%
University of Northern Colorado	0	16	16	--
Vail PD	110	64	35	-68%
Walsenburg PD	12	0	3	-75%
Washington County SO	20	2	1	-95%
Weld County SO	39	21	26	-33%
Westminster PD	501	173	159	-68%
Wheat Ridge PD	108	63	91	-16%
Windsor PD	29	19	4	-86%
Woodland Park PD	23	37	17	-26%
Yuma County SO	2	0	0	-100%
Yuma PD	0	4	0	--

[a] Denver's reported marijuana arrest data for 2012 and 2013 was incomplete due to separate jail arrest and citation systems. Cite and release data were not reported to the Colorado Bureau of Investigation until July 2013. Additionally, the 2014 arrest data reported by Denver include a non-criminal civil citation, which lead to an over-reporting of marijuana arrests for that year. See Appendix K, Table 16 for internal data provided by the Denver Police Department's Data Analysis Unit.

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

Appendix C, Table 3. Number and rate of juvenile (10–17 years old) marijuana arrests, by county, 2012–2014

	Number of arrests				Arrest rate			
	2012	2013	2014	% change 2012-14	2012	2013	2014	% change 2012-14
Total	**3,235**	**3,125**	**3,400**	**+5%**	**598**	**571**	**611**	**+2%**
Adams	624	526	509	-18%	1137	929	870	-23%
Alamosa	0	0	0	--	0	0	0	--
Arapahoe	392	334	392	0%	594	499	576	-3%
Archuleta	7	3	3	-57%	643	280	287	-55%
Baca	0	0	0	--	0	0	0	--
Bent	0	0	0	--	0	0	0	--
Boulder	123	88	117	-5%	414	288	376	-9%
Broomfield	112	70	81	-28%	1642	994	1112	-32%
Chaffee	20	7	9	-55%	1500	525	661	-56%
Cheyenne	0	0	0	--	0	0	0	--
Clear Creek	9	3	1	-89%	1329	449	146	-89%
Conejos	1	0	0	-100%	98	0	0	-100%
Costilla	0	0	0	--	0	0	0	--
Crowley	0	0	0	--	0	0	0	--
Custer	0	0	0	--	0	0	0	--
Delta	4	7	6	50%	135	242	210	56%
Denver[a]	--	--	364	--	--	--	646	--
Dolores	0	1	0	--	0	518	0	--
Douglas	200	181	114	-43%	480	418	254	-47%
Eagle	38	33	22	-42%	720	602	392	-46%
El Paso	269	286	267	-1%	362	381	352	-3%
Elbert	7	16	15	114%	238	556	531	124%
Fremont	6	6	1	-83%	158	163	28	-83%
Garfield	41	47	42	2%	626	706	619	-1%
Gilpin	5	0	0	-100%	1190	0	0	-100%
Grand	3	2	4	33%	232	154	298	28%
Gunnison	0	3	5	--	0	227	365	--
Hinsdale	0	0	0	--	0	0	0	--
Huerfano	0	0	0	--	0	0	0	--
Jackson	0	0	0	--	0	0	0	--
Jefferson	599	551	614	3%	1089	1003	1111	2%
Kiowa	0	0	0	--	0	0	0	--
Kit Carson	4	1	3	-25%	525	135	418	-20%
La Plata	12	4	8	-33%	258	84	164	-36%
Lake	2	0	1	-50%	264	0	125	-53%
Larimer	182	224	208	14%	623	754	681	9%
Las Animas	5	1	0	-100%	371	80	0	-100%
Lincoln	0	0	0	--	0	0	0	--

Appendix C, Table 3. Number and rate of juvenile (10–17 years old) marijuana arrests, by county, 2012–2014

	Number of arrests				Arrest rate			
	2012	2013	2014	% change 2012-14	2012	2013	2014	% change 2012-14
Logan	4	2	15	275%	205	104	779	280%
Mesa	150	203	209	39%	1007	1366	1403	39%
Mineral	0	0	0	--	0	0	0	--
Moffat	22	13	4	-82%	1397	815	251	-82%
Montezuma	18	1	8	-56%	675	37	296	-56%
Montrose	45	27	23	-49%	961	580	493	-49%
Morgan	23	13	27	17%	676	382	799	18%
Otero	3	1	0	-100%	151	50	0	-100%
Ouray	0	0	2	--	0	0	482	--
Park	0	0	2	--	0	0	145	--
Phillips	0	0	0	--	0	0	0	--
Pitkin	2	0	4	100%	144	0	272	90%
Prowers	18	11	18	0%	1250	771	1261	1%
Pueblo	1	1	5	400%	6	6	28	400%
Rio Blanco	2	0	4	100%	273	0	567	108%
Rio Grande	11	0	1	-91%	853	0	76	-91%
Routt	18	9	19	6%	810	397	818	1%
Saguache	4	0	1	-75%	667	0	162	-76%
San Juan	0	0	0	--	0	0	0	--
San Miguel	0	0	0	--	0	0	0	--
Sedgwick	0	3	0	--	0	1485	0	--
Summit	9	2	1	-89%	451	96	46	-90%
Teller	11	27	11	0%	472	1201	500	6%
Washington	0	1	1	--	0	203	199	--
Weld	143	187	214	50%	458	583	646	41%
Yuma	0	4	0	--	0	368	0	--

[a]Denver's reported marijuana arrest data for 2012 and 2013 was incomplete due to separate jail arrest and citation systems. Cite and release data were not reported to the Colorado Bureau of Investigation until July 2013. Additionally, the 2014 arrest data reported by Denver include a non-criminal civil citation, which lead to an over-reporting of marijuana arrests for that year. See Appendix K, Table 16 for internal data provided by the Denver Police Department's Data Analysis Unit.

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

Appendix C, Table 4. Number and rate of marijuana arrests, by type of arrest, age, race/ethnicity, and gender, 2012-2014

	Total marijuana arrests				Marijuana arrests per 100,000 population			
	2012	2013	2014	% change 2012-2014	2012	2013	2014	% change 2012-2014
Possession								
Age group								
10 to 17	2,859	2,731	3,127	9%	522	490	550	5%
18 to 20	3,009	2,008	1,963	-35%	1,339	879	856	-36%
21 or older	5,502	696	908	-83%	148	18	24	-84%
Race								
White	8,252	3,726	3,872	-53%	229	102	105	-54%
Hispanic	2,123	1,174	1,370	-35%	195	106	121	-38%
African-American	816	451	629	-23%	398	229	305	-23%
Other	179	84	127	-29%	61	26	39	-36%
Gender								
Male	9,227	4,368	4,699	-49%	355	166	176	-51%
Female	2,143	1,067	1,299	-39%	83	41	49	-41%
Unspecified								
Age group								
10 to 17	328	345	218	-34%	60	62	38	-36%
18 to 20	257	226	233	-9%	114	99	102	-11%
21 or older	453	155	149	-67%	12	4	4	-68%
Race								
White	778	538	406	-48%	22	15	11	-49%
Hispanic	181	140	155	-14%	17	13	14	-18%
African-American	60	39	30	-50%	29	20	15	-50%
Other	19	9	9	-53%	6	3	3	-58%
Gender								
Male	820	599	463	-44%	32	23	17	-45%
Female	218	127	137	-37%	8	5	5	-39%
Sales								
Age group								
10 to 17	41	44	52	27%	7	8	9	22%
18 to 20	69	36	39	-43%	31	16	17	-45%
21 or older	191	145	139	-27%	5	4	4	-30%
Race								
White	170	139	146	-14%	5	4	4	-16%
Hispanic	64	42	43	-33%	6	4	4	-36%
African-American	61	39	37	-39%	30	20	18	-40%
Other	6	5	4	-33%	2	2	1	-40%

Appendix C, Table 4. Number and rate of marijuana arrests, by type of arrest, age, race/ethnicity, and gender, 2012-2014

	Total marijuana arrests				Marijuana arrests per 100,000 population			
	2012	2013	2014	% change 2012-2014	2012	2013	2014	% change 2012-2014
Gender								
Male	270	205	204	-24%	10	8	8	-27%
Female	31	20	26	-16%	1	1	1	-19%
Production								
Age group								
10 to 17	5	4	3	-40%	1	1	1	-42%
18 to 20	10	6	9	-10%	4	3	4	-12%
21 or older	164	101	164	0%	4	3	4	-4%
Race								
White	137	70	128	-7%	4	2	3	-9%
Hispanic	16	15	22	38%	1	1	2	32%
African-American	21	13	20	-5%	10	7	10	-5%
Other	5	13	6	20%	2	4	2	8%
Gender								
Male	151	92	151	0%	6	3	6	-3%
Female	28	19	25	-11%	1	1	1	-13%
Smuggling								
Age group								
10 to 17	2	1	0	-100%	0	0	0	-100%
18 to 20	2	1	0	-100%	1	0	0	-100%
21 or older	2	3	0	-100%	0	0	0	-100%
Race								
White	6	3	0	-100%	0	0	0	-100%
Hispanic	0	1	0	--	0	0	0	--
African-American	0	1	0	--	0	1	0	--
Other	0	0	0	--	0	0	0	--
Gender								
Male	6	5	0	-100%	0	0	0	-100%
Female	0	0	0	--	0	0	0	--

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

Appendix C, Table 5. Number of marijuana arrests, by race/ethnicity and judicial district[a], 2012–2014

Race	Judicial District	2012	2013	2014	% change 2012-2014
White					
	1	1,288	629	709	-45%
	2[b]	--	--	320	--
	3	4	1	2	-50%
	4	677	418	431	-36%
	5	323	115	66	-80%
	6	60	45	47	-22%
	7	141	74	64	-55%
	8	712	353	343	-52%
	9	151	48	60	-60%
	10	7	13	11	57%
	11	91	25	26	-71%
	12	38	6	11	-71%
	13	91	24	43	-53%
	14	192	51	77	-60%
	15	67	37	27	-60%
	16	14	2	1	-93%
	17	1,562	622	571	-63%
	18	1,260	649	589	-53%
	19	369	281	271	-27%
	20	591	372	283	-52%
	21	531	337	330	-38%
	22	43	4	11	-74%
	Total	8,273	4,271	4,293	-48%
Hispanic					
	1	233	120	204	-12%
	2[b]	--	--	281	--
	3	16	4	2	-88%
	4	84	48	72	-14%
	5	77	30	42	-45%
	6	5	4	7	40%
	7	41	19	20	-51%
	8	139	90	85	-39%
	9	41	26	31	-24%
	10	14	5	11	-21%
	11	3	2	0	-100%
	12	5	4	6	20%
	13	38	21	25	-34%
	14	15	7	7	-53%
	15	36	4	11	-69%

Appendix C, Table 5. Number of marijuana arrests, by race/ethnicity and judicial district[a], 2012–2014

Race	Judicial District	2012	2013	2014	% change 2012-2014
	16	8	1	1	-88%
	17	894	434	360	-60%
	18	286	180	202	-29%
	19	120	49	46	-62%
	20	85	40	48	-44%
	21	70	65	84	20%
	22	1	0	1	0%
	Total	2,260	1,318	1,546	-32%
African-American					
	1	59	34	30	-49%
	2[b]	--	--	213	--
	3	0	0	1	--
	4	136	91	114	-16%
	5	3	0	2	-33%
	6	1	1	0	-100%
	7	2	0	1	-50%
	8	39	17	24	-38%
	9	5	1	2	-60%
	10	2	1	0	-100%
	11	1	0	2	100%
	12	0	2	0	--
	13	7	1	0	-100%
	14	0	1	0	--
	15	5	1	1	-80%
	16	0	0	4	--
	17	100	43	33	-67%
	18	431	194	235	-45%
	19	10	8	10	0%
	20	28	16	12	-57%
	21	22	14	17	-23%
	22	0	0	0	--
	Total	906	534	701	-23%
Asian					
	1	17	10	6	-65%
	2[b]	--	--	7	--
	3	0	0	0	--
	4	14	6	5	-64%
	5	5	0	0	-100%
	6	0	1	0	--
	7	0	0	0	--

Appendix C, Table 5. Number of marijuana arrests, by race/ethnicity and judicial district[a], 2012–2014

Race	Judicial District	2012	2013	2014	% change 2012-2014
	8	4	3	1	-75%
	9	0	0	0	--
	10	0	0	0	--
	11	0	0	0	--
	12	0	0	0	--
	13	0	0	0	--
	14	0	0	0	--
	15	2	0	0	-100%
	16	0	0	0	--
	17	19	11	4	-79%
	18	21	20	16	-24%
	19	1	0	2	100%
	20	8	5	7	-13%
	21	5	0	0	-100%
	22	0	0	0	--
	Total	96	61	48	-50%
Native American					
	1	8	2	1	-88%
	2[b]	--	--	8	--
	3	0	0	0	--
	4	2	3	1	-50%
	5	0	0	0	--
	6	5	6	34	580%
	7	1	0	0	-100%
	8	3	2	1	-67%
	9	0	0	2	--
	10	0	0	0	--
	11	0	0	0	--
	12	0	0	0	--
	13	0	0	0	--
	14	4	0	0	-100%
	15	0	0	0	--
	16	0	0	0	--
	17	7	3	1	-86%
	18	6	2	5	-17%
	19	1	0	0	-100%
	20	1	0	0	-100%
	21	1	0	0	-100%
	22	30	3	1	-97%
	Total	70	22	54	-23%

Appendix C, Table 5. Number of marijuana arrests, by race/ethnicity and judicial district[a], 2012–2014

Race	Judicial District	2012	2013	2014	% change 2012-2014
Pacific Islander					
	1	0	0	0	--
	2[b]	--	--	0	--
	3	0	0	0	--
	4	0	0	0	--
	5	0	0	0	--
	6	0	0	0	--
	7	0	0	0	--
	8	0	1	0	--
	9	0	0	0	--
	10	0	0	0	--
	11	0	0	0	--
	12	0	0	0	--
	13	0	0	0	--
	14	0	0	0	--
	15	0	1	0	--
	16	0	0	0	--
	17	0	0	0	--
	18	0	0	2	--
	19	0	0	0	--
	20	0	0	0	--
	21	0	2	0	--
	22	0	0	0	--
	Total	0	4	2	--
Unknown					
	1	1	0	4	300%
	2[b]	--	--	7	--
	3	0	0	0	--
	4	0	0	3	--
	5	0	0	0	--
	6	1	0	0	-100%
	7	0	1	4	--
	8	2	2	2	0%
	9	0	0	0	--
	10	0	0	0	--
	11	0	0	0	--
	12	0	0	0	--
	13	0	0	0	--
	14	0	1	0	--
	15	0	0	0	--

Appendix C, Table 5. Number of marijuana arrests, by race/ethnicity and judicial district[a], 2012–2014

Race	Judicial District	2012	2013	2014	% change 2012-2014
	16	0	1	0	--
	17	12	7	10	-17%
	18	9	3	4	-56%
	19	2	2	1	-50%
	20	1	0	3	200%
	21	0	0	0	--
	22	0	0	0	--
	Total	28	20	38	36%
Total					
	1	1,606	795	954	-41%
	2[b]	--	--	836	--
	3	20	5	5	-75%
	4	913	566	626	-31%
	5	408	145	110	-73%
	6	72	57	88	22%
	7	185	94	89	-52%
	8	899	468	456	-49%
	9	197	75	95	-52%
	10	23	19	22	-4%
	11	95	27	28	-71%
	12	43	12	17	-60%
	13	136	46	68	-50%
	14	211	60	84	-60%
	15	110	43	39	-65%
	16	22	4	6	-73%
	17	2,594	1,120	979	-62%
	18	2,013	1,048	1,053	-48%
	19	503	340	330	-34%
	20	714	433	353	-51%
	21	629	418	431	-31%
	22	74	7	13	-82%
	Total	11,633	6,230	6,682	-43%

[a] There are some agencies that occupy more than one judicial district. In these cases, an attempt was made to assign the arrests to the district with the majority of residents for that agency.

[b] The City and County of Denver represents the 2nd Judicial District in Colorado. Denver's reported marijuana arrest data for 2012 and 2013 was incomplete due to separate jail arrest and citation systems. Cite and release data were not reported to the Colorado Bureau of Investigation until July 2013. Additionally, the 2014 arrest data reported by Denver include a non-criminal civil citation, which lead to an over-reporting of marijuana arrests for that year. See Appendix K, Table 16 for internal data provided by the Denver Police Department's Data Analysis Unit.

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

Appendix D

Offenses by location

Appendix D, Table 6. Marijuana offenses, by specific location, 2012–2014

Location	2012	2013	2014	% change 2012-2014
Total	19,363	9,784	10,814	-44%
Abandoned/Condemned Structure	7	3	3	-57%
Air/Bus/Train Terminal	51	66	90	76%
Amusement Park	10	5	1	-90%
Arena/Stadium/Fairgrounds/Coliseum	22	14	8	-64%
Auto Dealership New/Used	1	-	-	-100%
Bank/Savings and Loan (includes other financial institutions)	12	4	1	-92%
Bar/Night Club	114	30	22	-81%
Camp/Campground	6	-	1	-83%
Church/Synagogue/Temple (includes other religious buildings)	7	15	12	71%
Commercial/Office Building	59	70	63	7%
Community Center	-	7	7	-
Construction Site	8	-	2	-75%
Convenience Store	74	47	50	-32%
Daycare Facility	-	-	3	-
Department/Discount Store	353	216	249	-29%
Dock/Wharf/Freight/Modal Terminal	6	5	12	100%
Drug Store/Doctor s Office/Hospital (includes medical supply building)	30	10	20	-33%
Farm Facility	-	8	-	-
Field/Woods	301	226	149	-50%
Gambling Facility/Casino/Race Track	17	2	1	-94%
Government/Public Building	101	59	49	-51%
Grocery/Supermarket	122	54	61	-50%
Highway/Road/Alley/Street	9,203	3,415	3,304	-64%
Hotel/Motel (includes other temporary lodgings)	241	81	80	-67%
Industrial Site	1	-	4	300%
Jail/Prison/Penitentiary	70	34	32	-54%
Lake/Waterway	14	4	8	-43%
Liquor Store	15	1	-	-100%
Military Installation	2	-	-	-100%
Other/Unknown	841	352	429	-49%
Park/Playground	462	399	625	35%
Parking Lot/Garage	1,636	744	860	-47%
Rental Storage Facility (Mini-storage/Self-storage)	22	6	1	-95%
Residence/Home/Apartment/Condominium/Nursing Home	2,601	1,057	1,374	-47%
Rest Area	2	1	3	50%
Restaurant/Cafeteria	84	28	41	-51%
School/College/University	43	-	-	-100%

Appendix D, Table 6. Marijuana offenses, by specific location, 2012–2014

Location	2012	2013	2014	% change 2012-2014
School-College/University	887	748	762	-14%
School-Elementary/Secondary	1,766	1,980	2,363	34%
Service/Gas Station	18	12	16	-11%
Shelter-Mission/Homeless	1	1	-	-100%
Shopping Mall	49	27	34	-31%
Specialty Store (Fur, Jewelry, TV, Dress Store)	104	53	74	-29%

Note: In 2012, elementary/secondary and college/university were combined in one school category. In 2013, elementary/secondary schools were separated from college/university as a school reporting place.
Source: Colorado Bureau of Investigation, National Incident-Based Crime Reporting System data.

Appendix E

Court filings by age, charge category, judicial district, and charge classification

Appendix E, Table 7. Marijuana court filings, by age and charge category, 2006–2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Age 10-17										
Total	1,777	1,888	1,676	1,619	1,688	1,583	1,665	1,530	1,180	519
Possession	1,539	1,640	1,464	1,373	1,455	1,410	1,484	1,350	1,011	409
Possession with intent	85	99	93	88	71	42	42	48	40	37
Distribution	68	60	50	75	55	64	58	56	65	36
Manufacture	14	11	10	8	10	6	2	6	0	5
Public consumption	58	73	56	68	85	54	68	68	61	31
Conspiracy	7	5	2	6	9	7	11	2	3	1
Other	6	0	1	1	3	0	0	0	0	0
Age 18-20										
Total	2,702	2,911	2,875	2,859	2,648	2,695	2,599	1,561	1,324	560
Possession	2,387	2,597	2,562	2,521	2,376	2,443	2,403	1,373	1,171	435
Possession with intent	162	152	164	172	119	75	58	49	28	35
Distribution	81	75	68	85	70	53	55	42	42	36
Manufacture	37	49	38	36	19	23	21	8	5	4
Public consumption	14	23	31	36	41	86	56	84	75	41
Conspiracy	8	8	6	7	19	14	3	4	2	8
Other	13	7	6	2	4	1	3	1	1	1
Age 21 or over										
Total	7,410	7,551	6,883	6,603	6,151	5,983	6,057	988	757	868
Possession	6,347	6,486	5,956	5,694	5,165	5,118	5,226	432	214	223
Possession with intent	452	441	404	389	328	269	229	159	174	243
Distribution	242	241	225	199	225	177	190	185	119	158
Manufacture	272	316	236	239	337	317	291	80	77	93
Public consumption	30	33	19	40	50	73	79	104	149	133
Conspiracy	41	27	26	37	32	25	36	26	24	17
Other	26	7	17	5	14	4	6	2	0	1

Source: Data provided by the Colorado State Judicial Branch.
Note: The City/County of Denver does not report misdemeanors or petty offenses to the Colorado State Judicial Branch and are not included in this report.

Appendix E, Table 8. Marijuana court filings, by judicial district and charge category, 2006–2015

Judicial district	Year	Conspiracy	Manufacture	Distribution	Possession with intent	Possession	Public consumption	Other	Total
JD 1									
	2006	7	36	27	56	1,162	14	4	1,306
	2007	1	36	30	43	1,189	4	0	1,303
	2008	4	33	29	70	1,192	3	0	1,331
	2009	2	38	30	63	1,038	12	1	1,184
	2010	5	30	51	66	1,073	13	0	1,238
	2011	11	35	50	59	1,082	18	0	1,255
	2012	13	19	34	28	988	9	0	1,091
	2013	5	19	49	23	332	1	1	430
	2014	3	5	35	23	291	11	1	369
	2015	0	9	21	29	113	2	0	174
JD 2									
	2006	9	36	180	163	497	0	2	887
	2007	14	37	108	138	188	0	0	485
	2008	9	30	93	126	74	0	0	332
	2009	8	18	80	107	47	0	1	261
	2010	8	14	67	102	28	0	0	219
	2011	2	17	35	68	21	0	0	143
	2012	1	20	58	60	22	1	0	162
	2013	9	6	44	49	7	1	0	116
	2014	12	13	13	57	15	0	0	110
	2015	3	6	51	54	6	0	0	120
JD 3									
	2006	0	0	1	4	84	0	0	89
	2007	0	10	1	3	93	0	0	107
	2008	0	3	0	4	73	0	1	81
	2009	0	0	1	2	104	0	0	107
	2010	0	6	2	0	109	0	0	117
	2011	0	2	0	1	117	1	2	123
	2012	0	14	0	1	86	6	7	114
	2013	0	0	5	3	31	6	1	46
	2014	0	1	0	3	13	0	0	17
	2015	0	0	8	1	6	2	0	17
JD 4									
	2006	1	39	36	87	1,591	13	3	1,770
	2007	1	53	43	97	1,709	14	2	1,919
	2008	2	37	42	68	1,454	4	9	1,616
	2009	4	35	41	54	1,205	6	1	1,346
	2010	13	64	33	46	1,153	14	6	1,329
	2011	3	73	22	36	954	19	1	1,108
	2012	3	61	21	46	882	19	1	1,033

Appendix E, Table 8. Marijuana court filings, by judicial district and charge category, 2006–2015

Judicial district	Year	Conspiracy	Manufacture	Distribution	Possession with intent	Possession	Public consumption	Other	Total
	2013	1	3	31	14	361	22	0	432
	2014	1	8	18	13	276	107	0	423
	2015	2	10	9	12	102	44	0	179
JD 5									
	2006	2	5	4	18	529	2	2	562
	2007	2	17	17	20	552	2	2	612
	2008	1	6	9	5	558	0	0	579
	2009	1	4	18	15	453	2	0	493
	2010	2	12	12	10	422	4	0	462
	2011	1	4	12	12	382	11	0	422
	2012	0	15	14	4	560	9	0	602
	2013	2	1	13	15	125	19	0	175
	2014	1	10	6	2	103	21	0	143
	2015	2	7	9	6	51	14	0	89
JD 6									
	2006	0	3	8	6	150	0	0	167
	2007	0	6	5	4	150	6	0	171
	2008	1	3	3	8	114	1	0	130
	2009	1	1	3	6	102	2	1	116
	2010	1	4	3	3	104	1	1	117
	2011	1	0	0	2	150	0	0	153
	2012	0	1	8	5	83	2	0	99
	2013	0	0	0	0	16	0	0	16
	2014	0	0	1	0	10	0	0	11
	2015	0	0	4	1	4	4	0	13
JD 7									
	2006	1	16	12	5	271	1	0	306
	2007	1	10	1	6	321	1	1	341
	2008	1	8	2	10	277	6	0	304
	2009	5	10	6	4	248	8	0	281
	2010	1	8	4	11	266	11	0	301
	2011	0	5	2	3	265	8	0	283
	2012	0	4	3	3	232	1	0	243
	2013	1	3	4	0	85	10	0	103
	2014	0	3	5	0	56	13	0	77
	2015	0	5	2	3	23	5	0	38
JD 8									
	2006	0	36	10	24	804	19	1	894
	2007	3	44	25	30	811	33	2	948
	2008	0	32	17	33	809	25	5	921
	2009	0	21	27	27	699	29	0	803

Appendix E, Table 8. Marijuana court filings, by judicial district and charge category, 2006–2015

Judicial district	Year	Conspiracy	Manufacture	Distribution	Possession with intent	Possession	Public consumption	Other	Total
	2010	1	36	13	35	802	21	4	912
	2011	2	26	20	23	907	19	0	997
	2012	3	20	4	29	953	35	1	1,045
	2013	6	11	17	11	348	60	0	453
	2014	0	3	17	10	271	46	0	347
	2015	2	7	11	21	109	36	0	186
JD 9									
	2006	2	3	2	19	296	5	0	327
	2007	0	4	3	9	258	1	0	275
	2008	0	6	2	11	244	0	0	263
	2009	1	4	6	9	284	2	0	306
	2010	4	1	10	8	226	0	1	250
	2011	0	8	10	8	210	5	0	241
	2012	0	2	10	6	257	10	0	285
	2013	0	0	7	8	81	1	0	97
	2014	0	0	9	1	68	10	0	88
	2015	0	0	8	3	24	4	0	39
JD 10									
	2006	0	7	2	26	219	1	0	255
	2007	0	5	4	26	236	2	0	273
	2008	4	7	2	18	200	1	0	232
	2009	0	4	2	26	249	1	0	282
	2010	0	8	10	4	224	2	0	248
	2011	1	8	7	1	185	1	0	203
	2012	1	5	15	5	162	3	0	191
	2013	0	7	3	4	52	2	1	69
	2014	0	1	3	8	40	1	0	53
	2015	1	1	14	21	43	4	0	84
JD 11									
	2006	0	8	3	5	278	6	0	300
	2007	1	15	9	9	306	5	0	345
	2008	2	10	3	7	305	0	1	328
	2009	0	8	6	12	271	6	0	303
	2010	0	3	3	3	172	1	0	182
	2011	0	8	8	4	163	5	0	188
	2012	1	5	4	2	192	6	0	210
	2013	0	1	2	0	55	5	0	63
	2014	1	0	3	4	56	4	0	68
	2015	0	10	3	2	13	1	0	29
JD 12									
	2006	2	4	11	2	192	0	0	211

Appendix E, Table 8. Marijuana court filings, by judicial district and charge category, 2006–2015

Judicial district	Year	Conspiracy	Manufacture	Distribution	Possession with intent	Possession	Public consumption	Other	Total
	2007	1	7	13	11	205	6	0	243
	2008	1	1	19	2	193	3	0	219
	2009	2	8	10	5	279	1	1	306
	2010	0	0	2	1	176	1	0	180
	2011	2	2	5	1	122	2	0	134
	2012	1	1	1	2	104	0	0	109
	2013	0	2	0	1	21	0	0	24
	2014	0	0	2	6	26	0	0	34
	2015	1	0	9	1	28	2	0	41
JD 13									
	2006	0	1	3	17	234	4	0	259
	2007	0	3	10	24	304	5	1	347
	2008	1	3	2	4	232	1	1	244
	2009	3	1	3	18	255	1	0	281
	2010	1	2	3	20	205	2	0	233
	2011	1	2	2	22	175	6	0	208
	2012	0	3	0	10	187	2	0	202
	2013	0	0	2	15	60	0	0	77
	2014	1	0	4	4	57	2	0	68
	2015	0	3	7	8	46	1	0	65
JD 14									
	2006	7	3	2	4	343	0	0	359
	2007	0	2	5	6	256	3	1	273
	2008	1	5	8	6	247	7	0	274
	2009	2	12	9	13	296	0	2	334
	2010	0	3	6	5	281	2	0	297
	2011	0	4	4	7	290	2	0	307
	2012	0	5	5	3	299	2	0	314
	2013	0	3	2	5	83	4	0	97
	2014	1	0	4	3	33	1	0	42
	2015	0	3	4	2	8	5	0	22
JD 15									
	2006	0	0	1	0	42	0	0	43
	2007	0	0	0	0	49	0	0	49
	2008	0	0	3	5	81	0	0	89
	2009	0	2	1	7	95	0	0	105
	2010	0	2	3	5	72	0	1	83
	2011	0	3	0	7	53	0	0	63
	2012	0	0	0	3	83	0	0	86
	2013	2	0	6	8	17	0	0	33
	2014	0	2	4	1	16	0	0	23

Appendix E, Table 8. Marijuana court filings, by judicial district and charge category, 2006–2015

Judicial district	Year	Conspiracy	Manufacture	Distribution	Possession with intent	Possession	Public consumption	Other	Total
	2015	0	0	6	4	5	0	0	15
JD 16									
	2006	6	2	2	7	54	0		71
	2007	0	4	4	2	65	1	0	76
	2008	0	2	8	2	49	0	0	61
	2009	0	1	0	4	67	1	0	73
	2010	0	0	0	2	42	0	0	44
	2011	0	1	1	1	55	0	0	58
	2012	0	1	1	0	62	0	0	64
	2013	0	0	0	0	11	2	0	13
	2014	0	0	1	0	10	0	0	11
	2015	0	0	0	1	6	0	0	7
JD 17									
	2006	1	31	24	79	718	3	0	856
	2007	9	35	22	91	818	6	0	981
	2008	0	24	14	65	843	6	1	953
	2009	8	31	20	62	855	3	0	979
	2010	10	87	26	71	912	0	0	1,106
	2011	6	88	36	45	997	5	0	1,177
	2012	7	99	32	39	1,081	2	0	1,260
	2013	0	11	25	29	312	6	0	383
	2014	3	11	23	18	211	13	0	279
	2015	2	3	10	23	125	18	0	181
JD 18									
	2006	7	30	23	96	990	19	31	1,196
	2007	1	30	32	100	1,149	8	4	1,324
	2008	1	22	19	126	1,029	17	4	1,218
	2009	8	45	42	98	1,016	23	1	1,233
	2010	7	59	37	56	907	37	7	1,110
	2011	6	33	25	29	958	46	2	1,099
	2012	15	15	37	39	992	39	0	1,137
	2013	3	11	35	26	474	17	0	566
	2014	4	18	19	36	351	27	0	455
	2015	9	19	23	52	157	13	0	273
JD 19									
	2006	3	9	6	23	415	6	0	462
	2007	1	15	8	16	485	10	0	535
	2008	5	6	23	15	479	10	1	539
	2009	2	6	23	32	517	16	0	596
	2010	3	9	18	26	500	14	0	570
	2011	2	3	11	14	466	4	0	500

Appendix E, Table 8. Marijuana court filings, by judicial district and charge category, 2006–2015

Judicial district	Year	Conspiracy	Manufacture	Distribution	Possession with intent	Possession	Public consumption	Other	Total
	2012	3	8	14	14	471	4	0	514
	2013	0	7	9	18	302	6	0	342
	2014	1	1	14	18	245	8	0	287
	2015	0	5	7	32	101	8	0	153
JD 20									
	2006	6	40	31	33	647	3	2	762
	2007	4	29	30	33	682	6	1	785
	2008	1	41	35	41	792	6	1	917
	2009	3	23	21	51	838	12	0	948
	2010	4	9	35	17	760	17	0	842
	2011	3	11	23	14	861	55	0	967
	2012	2	8	19	12	859	49	0	949
	2013	3	1	20	7	213	83	0	327
	2014	1	0	33	8	80	11	0	133
	2015	2	3	13	10	46	16	2	92
JD 21									
	2006	1	11	2	24	690	2	0	730
	2007	0	12	3	22	832	16	0	885
	2008	0	4	7	31	689	16	0	747
	2009	0	11	6	32	642	18	0	709
	2010	0	8	11	27	514	36	1	597
	2011	5	13	20	30	485	6	0	559
	2012	0	8	24	18	465	5	0	520
	2013	0	7	12	20	153	11	0	203
	2014	0	6	11	24	151	13	0	205
	2015	2	11	15	26	47	27	0	128
JD 22									
	2006	1	3	1	4	78	4	0	91
	2007	1	2	4	2	82	0	0	91
	2008	0	2	4	4	72	0	0	82
	2009	0	1	4	2	45	1	0	53
	2010	0	1	1	1	62	0	0	65
	2011	0	0	1	0	86	1	0	88
	2012	0	0	0	0	110	0	0	110
	2013	0	2	0	0	21	1	0	24
	2014	0	0	1	3	21	0	0	25
	2015	0	0	1	3	5	0	0	9

Source: Data provided by the Colorado State Judicial Branch.
Note: The City/County of Denver does not report misdemeanors or petty offenses to the Colorado State Judicial Branch and are not included in this report.

Appendix E, Table 9. Marijuana court filings, by judicial district and charge classification, 2006–2015

Judicial district	Year	Felony	Misdemeanor	Petty offense	Total
JD 1					
	2006	142	146	1018	1,306
	2007	126	106	1071	1,303
	2008	150	86	1095	1,331
	2009	153	75	956	1,184
	2010	168	47	1023	1,238
	2011	158	47	1050	1,255
	2012	101	95	932	1,091
	2013	93	86	282	430
	2014	49	80	261	369
	2015	42	37	95	174
JD 2					
	2006	418	463	6	887
	2007	314	156	15	485
	2008	272	50	11	332
	2009	220	39	2	261
	2010	198	18	3	219
	2011	125	15	3	143
	2012	146	15	7	162
	2013	135	6	5	116
	2014	105	14	1	110
	2015	110	8	2	120
JD 3					
	2006	8	1	80	89
	2007	14	7	86	107
	2008	8	4	69	81
	2009	3	12	92	107
	2010	10	7	100	117
	2011	2	6	115	123
	2012	16	12	87	114
	2013	5	8	34	46
	2014	3	3	11	17
	2015	9	4	4	17
JD 4					
	2006	183	95	1490	1,770
	2007	212	97	1608	1,919
	2008	166	99	1351	1,616
	2009	149	49	1146	1,346
	2010	157	75	1095	1,329
	2011	125	55	926	1,108

Appendix E, Table 9. Marijuana court filings, by judicial district and charge classification, 2006–2015

Judicial district	Year	Felony	Misdemeanor	Petty offense	Total
	2012	127	67	866	1,033
	2013	57	73	362	432
	2014	37	73	344	423
	2015	28	39	112	179
JD 5					
	2006	34	58	470	562
	2007	69	43	500	612
	2008	28	47	504	579
	2009	47	38	408	493
	2010	47	36	379	462
	2011	34	24	364	422
	2012	34	56	520	602
	2013	31	34	114	175
	2014	14	60	77	143
	2015	19	33	37	89
JD 6					
	2006	21	8	138	167
	2007	18	7	146	171
	2008	18	5	107	130
	2009	13	7	96	116
	2010	12	14	91	117
	2011	3	12	138	153
	2012	15	40	76	99
	2013	2	16	14	16
	2014	1	11	9	11
	2015	4	1	8	13
JD 7					
	2006	43	8	256	306
	2007	23	27	291	341
	2008	26	6	272	304
	2009	26	12	243	281
	2010	30	12	259	301
	2011	9	22	252	283
	2012	8	29	213	243
	2013	8	12	84	103
	2014	7	10	62	77
	2015	9	5	24	38
JD 8					
	2006	78	52	764	894
	2007	114	74	761	948

Appendix E, Table 9. Marijuana court filings, by judicial district and charge classification, 2006–2015

Judicial district	Year	Felony	Misdemeanor	Petty offense	Total
	2008	90	77	754	921
	2009	81	15	707	803
	2010	91	37	784	912
	2011	77	36	884	997
	2012	59	71	952	1,045
	2013	46	47	380	453
	2014	13	57	291	347
	2015	33	30	123	186
JD 9					
	2006	31	10	286	327
	2007	19	19	237	275
	2008	20	13	230	263
	2009	25	15	266	306
	2010	33	8	208	250
	2011	23	17	201	241
	2012	19	20	250	285
	2013	13	7	79	97
	2014	4	11	74	88
	2015	9	8	22	39
JD 10					
	2006	47	56	152	255
	2007	37	41	195	273
	2008	32	37	163	232
	2009	32	45	205	282
	2010	22	58	168	248
	2011	13	13	177	203
	2012	26	15	153	191
	2013	12	12	51	69
	2014	10	11	35	53
	2015	16	28	40	84
JD 11					
	2006	28	12	260	300
	2007	42	14	288	345
	2008	40	6	282	328
	2009	31	10	260	303
	2010	12	7	163	182
	2011	20	9	159	188
	2012	13	14	189	210
	2013	2	3	58	63
	2014	7	8	56	68

Appendix E, Table 9. Marijuana court filings, by judicial district and charge classification, 2006–2015

Judicial district	Year	Felony	Misdemeanor	Petty offense	Total
	2015	15	3	11	29
JD 12					
	2006	26	38	147	211
	2007	32	49	161	243
	2008	27	45	147	219
	2009	28	42	235	306
	2010	3	35	142	180
	2011	8	21	105	134
	2012	8	33	86	109
	2013	0	22	12	24
	2014	6	13	21	34
	2015	8	8	25	41
JD 13					
	2006	27	38	194	259
	2007	41	24	282	347
	2008	18	24	202	244
	2009	27	32	222	281
	2010	30	40	163	233
	2011	35	31	142	208
	2012	32	40	151	202
	2013	19	31	35	77
	2014	8	23	38	68
	2015	17	21	27	65
JD 14					
	2006	19	29	311	359
	2007	15	19	239	273
	2008	20	17	237	274
	2009	43	11	280	334
	2010	20	10	267	297
	2011	12	24	271	307
	2012	14	22	287	314
	2013	9	24	69	97
	2014	4	14	31	42
	2015	7	2	13	22
JD 15					
	2006	2	1	40	43
	2007	0	6	43	49
	2008	11	5	73	89
	2009	10	6	89	105
	2010	10	5	68	83

Appendix E, Table 9. Marijuana court filings, by judicial district and charge classification, 2006–2015

Judicial district	Year	Felony	Misdemeanor	Petty offense	Total
	2011	7	3	53	63
	2012	3	21	80	86
	2013	17	8	13	33
	2014	5	6	13	23
	2015	9	1	5	15
JD 16					
	2006	17	9	45	71
	2007	10	9	57	76
	2008	12	3	46	61
	2009	5	7	61	73
	2010	3	2	39	44
	2011	2	3	53	58
	2012	2	9	61	64
	2013	0	3	11	13
	2014	1	0	10	11
	2015	2	3	2	7
JD 17					
	2006	147	50	660	856
	2007	167	77	737	981
	2008	117	54	782	953
	2009	135	60	784	979
	2010	202	63	841	1,106
	2011	165	99	913	1,177
	2012	183	85	1020	1,260
	2013	63	97	272	383
	2014	33	71	184	279
	2015	28	46	107	181
JD 18					
	2006	161	212	823	1,196
	2007	184	205	934	1,324
	2008	181	158	879	1,218
	2009	199	136	897	1,233
	2010	164	102	844	1,110
	2011	95	70	934	1,099
	2012	112	121	958	1,137
	2013	80	98	432	566
	2014	75	85	332	455
	2015	94	48	131	273
JD 19					
	2006	46	28	388	462

Appendix E, Table 9. Marijuana court filings, by judicial district and charge classification, 2006–2015

Judicial district	Year	Felony	Misdemeanor	Petty offense	Total
	2007	42	25	468	535
	2008	53	17	469	539
	2009	68	18	510	596
	2010	61	16	493	570
	2011	33	17	450	500
	2012	44	50	447	514
	2013	41	38	280	342
	2014	31	52	213	287
	2015	42	22	89	153
JD 20					
	2006	119	46	597	762
	2007	107	29	649	785
	2008	134	20	763	917
	2009	122	27	799	948
	2010	74	30	738	842
	2011	52	63	851	967
	2012	41	73	839	949
	2013	36	27	273	327
	2014	22	45	72	133
	2015	23	28	41	92
JD 21					
	2006	46	17	667	730
	2007	45	35	805	885
	2008	49	30	668	747
	2009	59	12	638	709
	2010	54	21	522	597
	2011	65	26	468	559
	2012	52	28	447	520
	2013	40	13	154	203
	2014	34	23	151	205
	2015	42	28	58	128
JD 22					
	2006	10	7	74	91
	2007	10	3	78	91
	2008	10	1	71	82
	2009	7	0	46	53
	2010	3	3	59	65
	2011	2	2	85	88
	2012	0	10	107	110
	2013	2	7	22	24

Appendix E, Table 9. Marijuana court filings, by judicial district and charge classification, 2006–2015

Judicial district	Year	Felony	Misdemeanor	Petty offense	Total
	2014	2	6	18	25
	2015	0	6	3	9

Source: Data provided by the Colorado State Judicial Branch.
Note: The City/County of Denver does not report misdemeanors or petty offenses to the Colorado State Judicial Branch and are not included in this report.

Appendix F

School discipline trends

Appendix F, Table 10. Disciplinary incidents for drugs in Colorado schools, 2004–2015

School year	Pupil count	Drug suspensions	Drug expulsions	Drug referrals to Law Enforcement	Drug suspension rate	Drug expulsion rate	Drug referrals to LE rate
2004-2005	766,657	3,394	590	2,317	443	77	302
2005-2006	780,708	3,409	579	1,996	437	74	256
2006-2007	794,026	3,287	546	1,940	414	69	244
2007-2008	802,639	3,212	567	1,923	400	71	240
2008-2009	818,443	3,202	534	1,898	391	65	232
2009-2010	832,368	4,212	753	2,192	506	90	263
2010-2011	843,316	4,650	767	2,255	551	91	267
2011-2012	854,265	4,561	718	1,951	534	84	228
2012-2013	863,561	4,319	614	1,921	500	71	222
2013-2014	876,999	4,714	535	1,823	538	61	208
2014-2015	889,006	4,529	446	1,160	509	50	130

Note: These are disciplinary incidents for all drugs and are not limited to marijuana. Rates are calculated per 100,000 students and it is possible for one student to have multiple disciplinary incidents in one school year. There was an effort to reduce expulsions and suspensions in Colorado schools from 2011-12 onward and this should be kept in mind when interpreting these results.
Source: Colorado Department of Education, Colorado Education Statistics,
URL: http://www.cde.state.co.us/cdereval, Retrieved 12/14/2015.

Appendix F, Table 11. Disciplinary incident rates for drugs in Colorado, by school racial and poverty characteristics, 2004–2015

	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Drug expulsion rate											
Percent minority											
0-25%	52	53	66	45	70	74	51	41	45	43	51
26-50%	77	91	94	72	45	60	72	92	97	63	70
51-75%	69	34	72	78	81	64	63	105	89	91	52
76-100%	43	52	44	33	34	36	54	56	43	28	31
Percent receiving free/reduced lunch											
0-25%	51	60	69	77	80	57	72	35	44	24	33
26-50%	78	59	60	73	48	64	97	90	59	83	54
51-75%	70	66	76	52	64	112	78	100	83	70	96
76-100%	36	56	21	32	32	40	28	41	39	35	28
Drug suspension rate											
Percent minority											
0-25%	205	218	315	267	244	231	229	284	303	190	313
26-50%	403	286	397	381	278	232	268	386	474	382	460
51-75%	506	528	679	526	577	595	489	681	653	710	651
76-100%	667	445	715	559	520	526	426	609	680	801	658
Percent receiving free/reduced lunch											
0-25%	263	248	296	315	326	362	362	419	266	180	302
26-50%	279	320	317	251	280	336	512	444	380	399	459
51-75%	653	431	439	485	371	632	571	588	513	692	713
76-100%	406	350	423	335	281	443	471	478	467	616	506

Note: These are disciplinary incidents for all drugs and is not limited to marijuana. Rates are calculated per 100,000 students and it is possible for one student to have multiple disciplinary incidents in one school year. There was an effort to reduce expulsions and suspensions in Colorado schools from 2011-12 onward and this should be kept in mind when interpreting these results.
Source: Colorado Department of Education, Colorado Education Statistics,
URL: http://www.cde.state.co.us/cdereval, Retrieved 12/14/2015.

Appendix G

Recent marijuana use, by region, grade level, and adult status

Appendix G, Table 12. Past 30-day marijuana use, by school level or age, 2013/2014

Region	Counties	Middle school	High school	Adult
Colorado	All	5.1	19.7	13.6
Region 1	Logan, Morgan, Philips, Sedgwick, Washington, Yuma	5.8	11.4	7.9
Region 2	Larimer	4.1	16.9	13.7
Region 3	Douglas	1.3	13.2	10.0
Region 4	El Paso	2.5	14.8	12.0
Region 5	Cheyenne, Elbert, Kit Carson, Lincoln	4.6	9.4	1.4
Region 6	Baca, Bent, Crowley, Huerfano, Kiowa, Las Animas, Otero, Prowers	12.3	17.6	5.9
Region 7	Pueblo	22.8	32.1	12.7
Region 8	Alamosa, Conejos, Costilla, Mineral, Rio Grande, Saguache	8.2	23.1	14.4
Region 9	Archuleta, Dolores, La Plata, Montezuma, San Juan	10.0	24.6	14.2
Region 10	Delta, Gunnison, Hinsdale, Montrose, Ouray, San Miguel	5.0	26.7	13.5
Region 11	Jackson, Moffat, Rio Blanco, Routt	2.1	14.3	11.0
Region 12	Eagle, Garfield, Grand, Pitkin, Summit	4.8	19.7	15.6
Region 13	Chaffee, Custer, Fremont, Lake	10.0	22.9	9.6
Region 14	Adams	6.4	22.8	11.2
Region 15	Arapahoe	7.1	20.6	14.9
Region 16	Boulder, Broomfield	4.0	20.3	18.9
Region 17	Clear Creek, Gilpin, Park, Teller	5.7	25.1	11.4
Region 18	Weld	4.0	18.6	12.1
Region 19	Mesa	5.5	17.2	5.4
Region 20	Denver	19.2	26.6	18.5
Region 21	Jefferson	NA	NA	14.8

Source: Colorado Department of Public Health and Environment, 2014 Behavioral Risk Factor and Surveillance Survey; Colorado Department of Public Health and Environment, 2013 Healthy Kids Colorado Survey.

Appendix H

Marijuana business licenses, by license type, city, and county

Appendix H, Table 13. Licensees, by type of license and city, December 2015

City	Medical center	Medical cultivation	Medical product manufacturer	Retail store	Retail cultivation	Retail product manufacturer	Testing lab	Total licenses
Total	508	736	197	408	512	160		2521
Alamosa	2							2
Alma	1	1		1	1			4
Antonito				2				2
Aspen	4	1	2	7		4		18
Aurora				22	9	11	1	42
Avon	2	1		4	3	2		12
Avondale					6			6
Bailey	1	1		3	4	2		11
Basalt	1	1		1	2			5
Berthoud	2	1						3
Beulah					2			2
Black Hawk				3	2			5
Bond					1			1
Boone					8			8
Boulder	15	32	14	17	38	15	1	131
Breckenridge	1	1		4	2	1		9
Buena Vista	1	2						3
Canon City	2							2
Carbondale	1	2	2	5	8	3	1	21
Cascade	1	1						2
Center					1	1		2
Central City	2			4				6
Colorado City					2	1		3
Colorado Springs	117	149	35					301
Commerce City			1	1		2		4
Como					1			1
Cortez	3	3	1	5	2			14
Craig	1							1
Crested Butte	2			4	2	2		10
De Beque				3	2			5
Denver	208	383	95	157	211	48	10	1102
Dillon				3				3
Divide	1	1						2
Downieville	1	1		1	1			4
Dumont	1	1	2	1	2	2		9
Durango	5	5	1	8	6	1	2	26
Eagle	1	1		1	1			4
Edgewater	5			6				11
Edwards	2	1		1	1			5
Empire	1	2		1	1			5
Englewood	4	2						6
Evergreen			1			1		2
Fairplay	1	1		1	3			6
Federal Heights	1							1
Florence		6						6

Appendix H, Table 13. Licensees, by type of license and city, December 2015

City	Medical center	Medical cultivation	Medical product manufacturer	Retail store	Retail cultivation	Retail product manufacturer	Testing lab	Total licenses
Florissant		2						2
Fort Collins	14	16	3	10	11	3		57
Fort Garland	1	1		2				4
Fort Morgan						1		1
Fraser	1			2				3
Frisco	1			3	1	1		6
Garden City	3	5	1	4	4	2		19
Georgetown	1		1	1		1		4
Glendale	3			5				8
Glenwood	4	3		6	3	1		17
Golden	1							1
Grand Lake				3				3
Gunnison				6	4			10
Gypsum					1			1
Hartsel				1	2	1		4
Henderson			1			1		2
Hesperus					1	1		2
Idaho Springs	1	1	1	3	6	1		13
Jefferson					1			1
Lafayette	1	5	1	2	5	1		15
Lake George					1			1
Lakewood	12	5						17
Leadville				3	5			8
Littleton	4	1						5
Log Lane	2	3	1	3	4	1		14
Longmont	3			3				6
Louisville	1			2				3
Lyons	2			2	1			5
Mancos	1	1		2	1			5
Manitou				2				2
Moffat				1	2	1		4
Montrose	2	2			3			7
Mountain View	1	1						2
Nederland	1			4	2	1		8
New Castle		1						1
Northglenn	5	2		5	2			14
Oak Creek		2	2	1	5	4		14
Ophir			1			1		2
Pagosa Springs	2	2		3	2			9
Palisade	1	1						2
Palmer Lake		1	1		1			3
Parachute				4		1		5
Penrose	2	11	1					14
Pueblo	13	20	6	10	45	13		107
Pueblo West	11	13	10	10	15	12		71
Ridgway	1	3	1	3	4	1		13

Appendix H, Table 13. Licensees, by type of license and city, December 2015

City	Medical center	Medical cultivation	Medical product manufacturer	Retail store	Retail cultivation	Retail product manufacturer	Testing lab	Total licenses
Rifle	5	6			5			16
Rye					5			5
Saguache		1			2			3
Salida		1	1	3	5	1		11
San Acacio					1			1
San Luis	1	2		2	2			7
San Pablo					2			2
Sedgwick	1	1		1	1			4
Silt				2				2
Silver Plume				1				1
Silverthorne	1	1		1	1			4
Silverton				2	3	1		6
Snowmass					1			1
Steamboat	3	9	2	3	8	2		27
Tabernash	1	1	2	1	1	2		8
Telluride	3	4	2	4	5	2		20
Trinidad	4	4	2	11	7	4		32
Walsenburg				1	3			4
Watkins					1			1
Wheat Ridge	4	3	3	4	5	3	2	22
Woodland Park		1						1

Source: Colorado Department of Revenue, Marijuana Enforcement Division.

URL: https://www.colorado.gov/pacific/enforcement/med-licensed-facilities. Retrieved 12/4/2015

Appendix H, Table 14. Licensees, by type of license and county, December 2015

County	Medical center	Medical cultivation	Medical product manufacturer	Retail store	Retail cultivation	Retail product manufacturer	Testing lab	Total licenses
Adams	6	2	2	5	9	10	1	35
Alamosa	2							2
Arapahoe	11	3		7	5	23		49
Archuleta	2	2		2		3		9
Boulder	23	37	15	46	17	30	1	169
Chaffee	1	3	1	5	1	3		14
Clear Creek	5	5	4	10	4	8		36
Conejos						2		2
Costilla	2	3		5		4		14
Denver	208	383	95	211	48	157	10	1112
Eagle	5	3		7	2	6		23
El Paso	118	151	36	1		2		308
Fremont	4	17	1					22
Garfield	10	12	2	16	5	17	1	63
Gilpin	2			2		7		11
Grand	2	1	2	1	2	6		14
Gunnison	2			6	2	10		20
Huerfano				3		1		4
Jefferson	23	9	4	5	4	10	2	57
La Plata	5	5	1	7	2	8	2	30
Lake				5		3		8
Larimer	16	17	3	11	3	10		60
Las Animas	4	4	2	7	4	11		32
Mesa	1	1		2		3		7
Moffat	1							1
Montezuma	4	4	1	3		7		19
Montrose	2	2		3				7
Morgan	2	3	1	4	2	3		15
Ouray	1	3	1	4	1	3		13
Park	3	3		13	3	6		28
Pitkin	5	2	2	3	4	8		24
Pueblo	24	33	16	83	26	20		202
Routt	3	11	4	13	6	4		41
Saguache		1		5	2	1		9
San Juan				3	1	2		6
San Miguel	3	4	3	5	3	4		22
Sedgwick	1	1		1		1		4
Summit	3	2		4	2	11		22
Teller	1	4						5
Weld	3	5	1	4	2	4		19

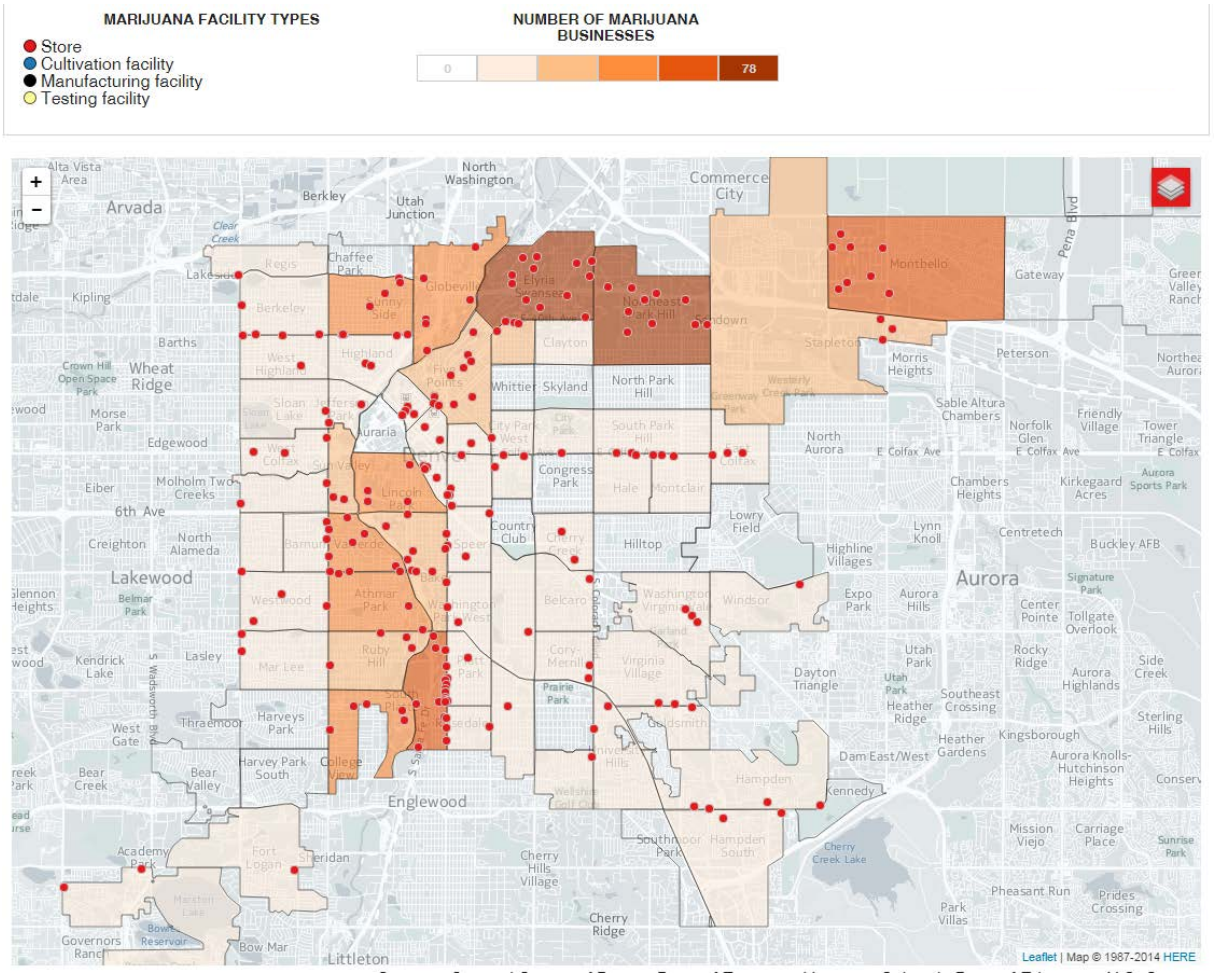
Source: Colorado Department of Revenue, Marijuana Enforcement Division.

URL: https://www.colorado.gov/pacific/enforcement/med-licensed-facilities. Retrieved 12/4/2015

Appendix I

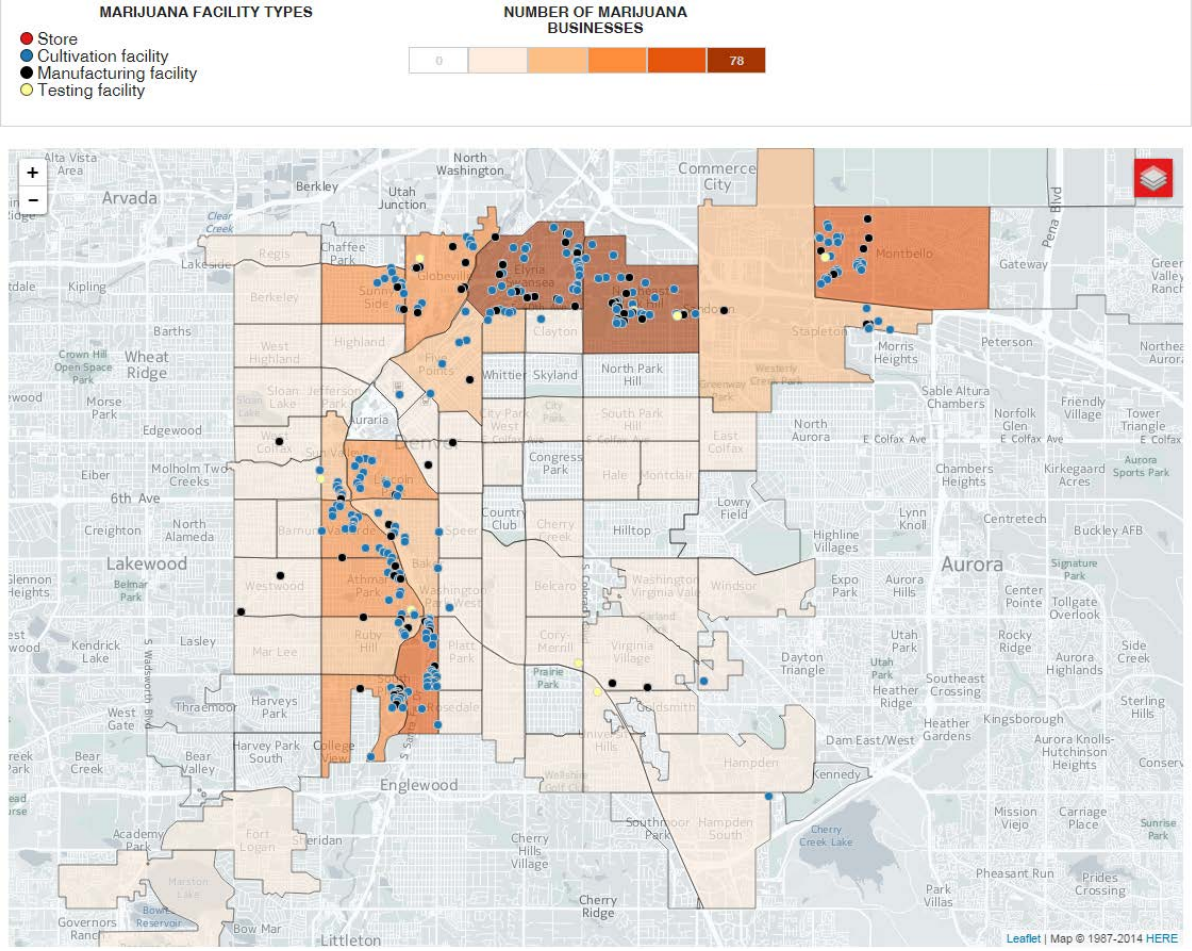
Marijuana licensees in Denver

Appendix I, Figure 1. Marijuana retail stores and medical dispensaries in Denver, 2016



Source: Denver Post ; URL: http://extras.denverpost.com/maps/news/marijuana/licensed-facilities/ .

Appendix I, Figure 2. Marijuana cultivation, manufacturing, and testing facilities in Denver, 2016



Source: Denver Post; URL: http://extras.denverpost.com/maps/news/marijuana/licensed-facilities/. Copyright © 2016 The Denver Post. Used with permission.

Appendix J

Medical marijuana registry cardholders, by county

Appendix J, Table 15. Medical marijuana cardholders, by county, November 2015

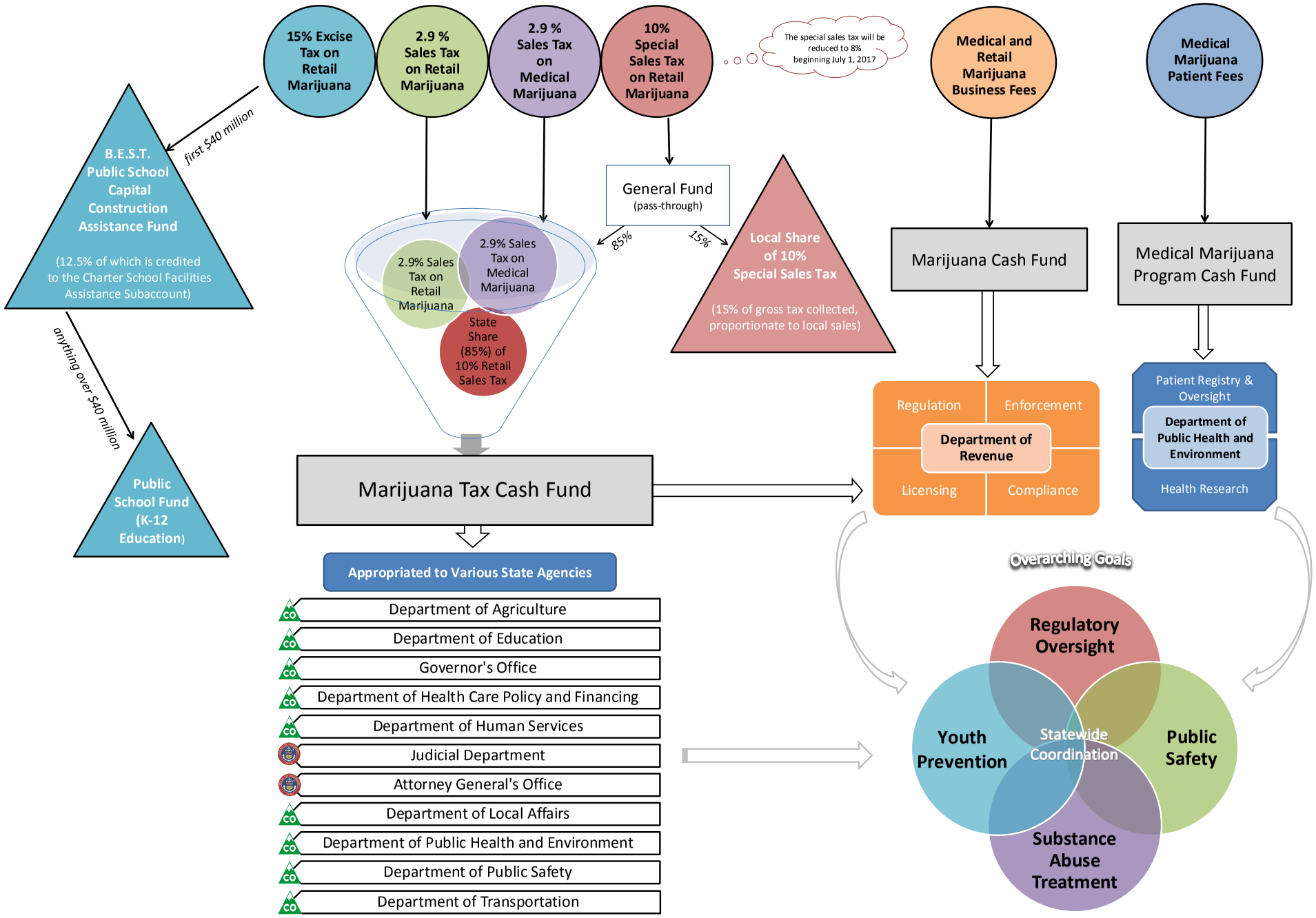
County	# of Patients	% of Patients	County	# of Patients	% of Patients
Adams	7,792	7.1%	Kit Carson	54	<1%
Alamosa	255	<1%	La Plata	1,680	1.5%
Arapahoe	10,630	9.7%	Lake	177	<1%
Archuleta	584	<1%	Larimer	5,349	4.9%
Baca	30	<1%	Las Animas	338	<1%
Bent	70	<1%	Lincoln	53	<1%
Boulder	8,092	7.4%	Logan	219	<1%
Broomfield	1,093	<1%	Mesa	1,851	1.7%
Chaffee	389	<1%	Mineral	20	<1%
Cheyenne	22	<1%	Moffat	210	<1%
Clear Creek	340	<1%	Montezuma	691	<1%
Conejos	77	<1%	Montrose	641	<1%
Costilla	173	<1%	Morgan	219	<1%
Crowley	88	<1%	Otero	257	<1%
Custer	111	<1%	Ouray	153	<1%
Delta	527	<1%	Park	713	<1%
Denver	16,604	15.1%	Phillips	42	<1%
Dolores	50	<1%	Pitkin	443	<1%
Douglas	3,390	3.1%	Prowers	120	<1%
Eagle	1,227	1.1%	Pueblo	3,672	3.3%
El Paso	18,944	17.2%	Rio Blanco	60	<1%
Elbert	290	<1%	Rio Grande	177	<1%
Fremont	1,159	1.1%	Routt	868	<1%
Garfield	1,104	1.0%	Saguache	174	<1%
Gilpin	273	<1%	San Juan	13	<1%
Grand	374	<1%	San Miguel	267	<1%
Gunnison	262	<1%	Sedgwick	78	<1%
Hinsdale	10	<1%	Summit	1,003	<1%
Huerfano	223	<1%	Teller	908	<1%
Jackson	22	<1%	Washington	56	<1%
Jefferson	11,895	10.8%	Weld	3,224	2.9%
Kiowa	10	<1%	Yuma	79	<1%

Source: Colorado Department of Public Health & Environment, Medical marijuana statistics and data, URL: https://www.colorado.gov/pacific/cdphe/medical-marijuana-statistics-and-data.

Appendix K

Marijuana revenue collection and expenditure flowchart

How is Marijuana Revenue Collected and Spent in the State of Colorado?



Source: Alice heet, Colorado Office of State Planning and Budgeting

Appendix L

Denver Police Department Marijuana Arrest Data from Internal Analysis

Appendix L, Table 16. Marijuana arrests in Denver, 2012-2014[a]

	2012	2013	2014	% change 2012-2014
Total	1,572	868	395	-75%
Age group				
Juvenile	378	368	116	-69%
Adult	1,194	500	279	-77%
Race/ethnicity				
White	816	387	179	-78%
Hispanic	263	252	107	-59%
African-American	467	209	97	-79%
Other	26	19	12	-54%

[a] Denver's officially reported marijuana arrest data for 2012 and 2013 was incomplete due to separate jail arrest and citation systems. Cite and release data were not reported to the Colorado Bureau of Investigation until July 2013. Additionally, the 2014 arrest data reported by Denver include a non-criminal civil citation, which lead to an over-reporting of marijuana arrests for that year. The Denver Police Department does not believe that the official data they reported to the Colorado Bureau of Investigation is an accurate reflection of their internal data.The data in this table come from an internal analysis conducted by the Denver Police Department's Data Analysis Unit.

These data do not reflect the official State data and any questions about the methodology for gathering and presenting these data should be addressed to the Denver Police Department's Data Analysis Unit.

Source: Denver Police Department (2016).