

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

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EXECUTIVE SUMMARY

In 2013, following the passage of Amendment 64 which allows for the retail sale and possession of marijuana, the Colorado General Assembly enacted Senate Bill 13-283. This bill mandated 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 BRFSS 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.