The Legalization of Marijuana in Colorado

The Impact

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Rocky Mountain High Intensity
Drug Trafficking Area
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Executive Summary

Purpose

Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) is tracking the impact of marijuana legalization in the state of Colorado. This report will utilize, whenever possible, a comparison of three different eras in Colorado's legalization history:

- **2006 – 2008:** Medical marijuana pre-commercialization era
- **2009 – Present:** Medical marijuana commercialization and expansion era
- **2013 – Present:** Recreational marijuana era

Rocky Mountain HIDTA will collect and report comparative data in a variety of areas, including but not limited to:

- Impaired driving
- Youth marijuana use
- Adult marijuana use
- Emergency room admissions
- Marijuana-related exposure cases
- Diversion of Colorado marijuana

This is the fourth annual report on the impact of legalized marijuana in Colorado. It is divided into ten sections, each providing information on the impact of marijuana legalization. The sections are as follows:

Section 1 – Impaired Driving:

- Marijuana-related traffic deaths increased **48 percent** in the three-year average (2013-2015) since Colorado legalized recreational marijuana compared to the three-year average (2010-2012) prior to legalization.
    - During the same time, all traffic deaths increased **11 percent**.

- Marijuana-related traffic deaths increased **62 percen**t from 71 to 115 persons after recreational marijuana was legalized in 2013.

- In 2009, Colorado marijuana-related traffic deaths involving operators testing positive for marijuana represented **10 percent** of all traffic fatalities. By 2015, that number doubled to **21 percent**.

Section 2 – Youth Marijuana Use:

- Youth past month marijuana use **increased 20 percent** in the two year average (2013/2014) since Colorado legalized recreational marijuana compared to the two-year average prior to legalization (2011/2012).
    - Nationally youth past month marijuana use **declined 4 percent** during the same time.

- The latest 2013/2014 results show Colorado youth ranked #**1** in the nation for past month marijuana use, up from #**4** in 2011/2012 and #**14** in 2005/2006.

- Colorado youth past month marijuana use for 2013/2014 was **74 percent higher** than the national average compared to **39 percent higher** in 2011/2012.

Section 3 – Adult Marijuana Use:

- College-age past month marijuana use increased **17 percent** in the two-year average (2013/2014) since Colorado legalized recreational marijuana compared to the two-year average prior to legalization (2011/2012).
    - Nationally college-age past month marijuana use **increased 2 percent** during the same time.

- The latest 2013/2014 results show Colorado college age adults ranked #**1** in the nation for past month marijuana use, up from #**3** in 2011/2012 and #**8** in 2005/2006.

- Colorado college age past month marijuana use for 2013/2014 was **62 percent higher** than the national average compared to **42 percent higher** in 2011/2012.

- Adult past-month marijuana use **increased 63 percent** in the two year average (2013/2014) since Colorado legalized recreational marijuana compared to the two-year average prior to legalization (2011/2012).
    - Nationally adult past month marijuana use **increased 21 percent** during the same time.

- The latest 2013/2014 results show Colorado adults ranked #**1** in the nation for past month marijuana use, up from #**7** in 2011/2012 and #**8** in 2005/2006.

- Colorado adult past month marijuana use for 2013/2014 was **104 percent higher** than the national average compared to **51 percent higher** in 2011/2012.

Section 4 – Emergency Department Marijuana and Hospital Marijuana-Related Admissions:

- Colorado Emergency Department visits per year related to marijuana:
  - 2013 – **14,148**
  - 2014 – **18,255**

- Emergency Department rates likely related to marijuana increased **49 percent** in the two-year average (2013-2014) since Colorado legalized recreational marijuana compared to the two-year average prior to legalization (2011-2012).

- Number of hospitalizations related to marijuana:
  - 2011 – **6,305**
  - 2012 – **6,715**
  - 2013 – **8,272**
  - 2014 – **11,439**

- Hospital rates likely related to marijuana increased **32 percent** in the two-year average (2013-2014) since Colorado legalized recreational marijuana compared to the two-year average prior to legalization (2011-2012).

Section 5 – Marijuana-Related Exposure:

- Marijuana-related exposures increased **100 percen**t in the three-year average (2013-2015) since Colorado legalized recreational marijuana compared to the three-year average (2010-2012) prior to legalization.

- Marijuana-only exposures increased **155 percen**t in the three-year average (2013-2015) since Colorado legalized recreational marijuana compared to the three-year average (2010-2012) prior to legalization.

Section 6 – Treatment:

- Marijuana treatment data from Colorado in years 2005 – 2015 does not appear to demonstrate a definitive trend. Colorado averages approximately **6,500** treatment admissions annually for marijuana abuse.

- Over the last ten years, the top three drugs involved in treatment admissions, in descending order, were alcohol (average **13,382**), marijuana (average **6,652**) and methamphetamine (average **5,298**).

Section 7 – Diversion of Colorado Marijuana:

- Highway patrol yearly interdiction seizures of Colorado marijuana increased **37** percent from **288** to **394** (2013-2015), since recreational marijuana was legalized.

- Of the 394 seizures in 2015, there were **36** different states destined to receive marijuana from Colorado. The most common destinations identified were Missouri, Illinois, Texas, Iowa, and Florida.

Section 8 – Diversion by Parcel:

- Seizures of Colorado marijuana in the U.S. mail has increased **427 percent** from an average of 70 parcels (2010-2012) to 369 parcels (2013-2015) in the three years that recreational marijuana has been legal.

- Seizures of Colorado marijuana in the U.S. mail has increased **471 percen**t from an average of 129 pounds (2010-2012) to 736 pounds (2013-2015) in the three years that recreational marijuana has been legal.

Section 9 – Related Data:

- Crime in Denver and Colorado has increased from 2013 to 2015.

- Colorado annual tax revenue from the sale of recreational and medical marijuana was $115,579,432 (CY2015) or about **0.5 percent** of Colorado's total statewide budget (FY2016).

- "Denver is losing visitors and valuable convention business as a result of these overall safety (or perception of safety) issues..." – VISIT DENVER Report

- As of January 2016, there were **424 retail marijuana stores** in the state of Colorado compared to **322 Starbucks** and **202 McDonald's**.

- **68 percent** of local jurisdictions have banned medical and recreational marijuana businesses.

Section 10 – Related Material:

- This section lists various studies and reports regarding marijuana.

THERE IS MUCH MORE DATA IN EACH OF THE TEN SECTIONS. THIS PUBLICATION MAY BE FOUND ON THE ROCKY MOUNTAIN HIDTA WEBSITE; GO TO WWW.RMHIDTA.ORG AND CLICK ON REPORTS.

State of Washington Data:

Washington legalized recreational marijuana at the same time as Colorado. The reader is encouraged to review data from Washington on the impact of legalization in that state. Many of the same trends in Colorado related to legal marijuana also are occurring in Washington. These trends include: impaired driving, traffic fatalities, use among teens and exposure (see Sections 1 and 10).

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Introduction

Purpose

The purpose of this report and future reports is to document the impact of the legalization of marijuana for medical and recreational use in Colorado. Colorado and Washington serve as experimental labs for the nation to determine the impact of legalizing marijuana. This is an important opportunity to gather and examine meaningful data and facts. Citizens and policymakers may want to delay any decisions on this important issue until there is sufficient and accurate data to make an informed decision.

The Debate

There is an ongoing debate in this country concerning the impact of legalizing marijuana. Those in favor argue that the benefits of removing prohibition far outweigh the potential negative consequences. Some of the benefits they cite include:

- Eliminate arrests for possession and sale, resulting in fewer people with criminal records and a reduction in the prison population
- Free up law enforcement resources to target more serious and violent criminals
- Reduce traffic fatalities since users will switch from alcohol to marijuana, which does not impair driving to the same degree
- No increase in use, even among youth, because of tight regulations
- Added revenue generated through taxation
- Eliminate the black market

Those opposed to legalizing marijuana argue that the potential benefits of lifting prohibition pale in comparison to the adverse consequences. Some of the consequences they cite include:

- Increase in marijuana use among youth and young adults
- Increase in marijuana-impaired driving fatalities
- Rise in number of marijuana-addicted users in treatment

- Diversion of marijuana
- Adverse impact and cost of the physical and mental health damage caused by marijuana use
- The economic cost to society will far outweigh any potential revenue generated

Background

This document should help you determine which side is more correct. A number of states have enacted varying degrees of legalized marijuana by permitting medical marijuana and four permitting recreational marijuana. In 2010, Colorado's legislature passed legislation that included the licensing of medical marijuana centers ("dispensaries"), cultivation operations and manufacturing of marijuana edibles for medical purposes. In November 2012, Colorado voters legalized recreational marijuana allowing individuals to use and possess an ounce of marijuana and grow up to six plants. The amendment also permits licensing marijuana retail stores, cultivation operations, marijuana edible factories and testing facilities. Washington voters passed a similar measure in 2012.

Preface

Volume 4 will be formatted similar to *Volume 3*. It is important to note that, for purposes of the debate on legalizing marijuana in Colorado, there are three distinct timeframes to consider. Those are: the early medical marijuana era (2000 – 2008), the medical marijuana commercialization era (2009 – current) and the recreational marijuana era (2013 – current).

- **2000 – 2008:** In November 2000, Colorado voters passed Amendment 20 which permitted a qualifying patient, and/or caregiver of a patient, to possess up to 2 ounces of marijuana and grow 6 marijuana plants for medical purposes. During that time there were between 1,000 and 4,800 medical marijuana cardholders and no known dispensaries operating in the state.

- **2009 – Current:** Beginning in 2009 due to a number of events, marijuana became *de facto* legalized through the commercialization of the medical marijuana industry. By the end of 2012, there were over 100,000 medical marijuana cardholders and 500 licensed dispensaries operating in Colorado. There were also licensed cultivation operations and edible manufacturers.

- **2013 – Current:** In November 2012, Colorado voters passed Constitutional Amendment 64 which legalized marijuana for recreational purposes for anyone over the age of 21. The amendment also allowed for licensed marijuana retail stores, cultivation operations and edible manufacturers. Retail marijuana businesses became operational January 1, 2014.

Colorado's History with Marijuana Legalization

Medical Marijuana 2000 – 2008

In November 2000, Colorado voters passed Amendment 20 which permitted a qualifying patient and/or caregiver of a patient to possess up to 2 ounces of marijuana and grow 6 marijuana plants for medical purposes. Amendment 20 provided identification cards for individuals with a doctor's recommendation to use marijuana for a debilitating medical condition. The system was managed by the Colorado Department of Public Health and Environment (CDPHE), which issued identification cards to patients based on a doctor's recommendation. The department began accepting applications from patients in June 2001.

From 2001 – 2008, there were only 5,993 patient applications received and only 55 percent of those designated a primary caregiver. During that time, the average was three patients per caregiver and there were no known retail stores selling medical marijuana ("dispensaries"). Dispensaries were not an issue because CDPHE regulations limited a caregiver to no more than five patients.

Medical Marijuana Commercialization and Expansion 2009 – Present

In 2009, the dynamics surrounding medical marijuana in Colorado changed substantially. There were a number of factors that played a role in the explosion of the medical marijuana industry and number of patients:

The first was a Denver District Judge who, in late 2007, ruled that CDPHE violated the state's open meeting requirement when setting a five-patient-to-one-caregiver ratio and overturned the rule. That opened the door for caregivers to claim an unlimited number of patients for whom they were providing and growing marijuana. Although this decision expanded the parameters, very few initially began operating medical marijuana commercial operations (dispensaries) in fear of prosecution, particularly from the federal government.

The judge's ruling, and caregivers expanding their patient base, created significant problems for local prosecutors seeking a conviction for marijuana distribution by caregivers. Many jurisdictions ceased or limited filing those types of cases.

At a press conference in Santa Ana, California on February 25, 2009, the U.S. Attorney General was asked whether raids in California on medical marijuana dispensaries would continue. He responded "No" and referenced the President's campaign promise related to medical marijuana. In mid-March 2009, the U.S. Attorney General clarified the position saying that the Department of Justice enforcement policy would be restricted to traffickers who falsely masqueraded as medical dispensaries and used medical marijuana laws as a shield.

Beginning in the spring of 2009, Colorado experienced an explosion to over 20,000 new medical marijuana patient applications and the emergence of over 250 medical marijuana dispensaries (allowed to operate as "caregivers"). One dispensary owner claimed to be a primary caregiver to 1,200 patients. Government took little or no action against these commercial operations.

In July 2009, the Colorado Board of Health, after hearings, failed to reinstate the five-patients-to-one-caregiver rule.

On October 19, 2009, U.S. Deputy Attorney General David Ogden provided guidelines for U.S. Attorneys in states that enacted medical marijuana laws. The memo advised "Not focus federal resources in your state on individuals whose actions are in clear and unambiguous compliance with existing state law providing for the medical use of marijuana."

By the end of 2009, new patient applications jumped from around 6,000 for the first seven years to an additional 38,000 in just one year. Actual cardholders went from 4,800 in 2008 to 41,000 in 2009. By mid-2010, there were over 900 unlicensed marijuana dispensaries identified by law enforcement.

In 2010, law enforcement sought legislation to ban dispensaries and reinstate the one-to-five ratio of caregiver to patient as the model. However, in 2010 the Colorado Legislature passed HB-1284 which legalized medical marijuana centers (dispensaries), marijuana cultivation operations, and manufacturers for marijuana edible products. By 2012, there were 532 licensed dispensaries in Colorado and over 108,000 registered patients, 94 percent of who qualified for a card because of severe pain.

Recreational Marijuana 2013 – Present

In November of 2012, Colorado voters passed Amendment 64, which legalized marijuana for recreational use. Amendment 64 allows individuals 21 years or older to grow up to six plants, possess/use 1 ounce or less and furnish an ounce or less of marijuana if not for remuneration. Amendment 64 permits marijuana retail stores, marijuana cultivation sites, marijuana edible factories and marijuana testing sites. The first retail marijuana businesses were licensed and operational in January of 2014. Some individuals have established private cannabis clubs, formed co-ops for large marijuana grow operations, and/or supplied marijuana for no fee other than donations.

What has been the impact of commercialized medical marijuana and legalized recreational marijuana on Colorado? Review the report and you decide.

NOTE:

- DATA, IF AVAILABLE, WILL COMPARE PRE- AND POST-2009 WHEN MEDICAL MARIJUANA BECAME COMMERCIALIZED AND AFTER 2013 WHEN RECREATIONAL MARIJUANA BECAME LEGALIZED.
- MULTI-YEAR COMPARISONS ARE GENERALLY BETTER INDICATORS OF TRENDS. ONE-YEAR FLUCTUATIONS DO NOT NECESSARILY REFLECT A NEW TREND.
- PERCENTAGE COMPARISONS MAY BE ROUNDED TO THE NEAREST WHOLE NUMBER.
- PERCENT CHANGES ADDED TO GRAPHS WERE CALCULATED AND ADDED BY ROCKY MOUNTAIN HIDTA.
- THIS REPORT WILL CITE DATASETS WITH TERMS SUCH AS "MARIJUANA-RELATED" OR "TESTED POSITIVE FOR MARIJUANA." THAT DOES NOT NECESSARILY PROVE THAT MARIJUANA WAS THE CAUSE OF THE INCIDENT.

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SECTION 1: Impaired Driving and Fatalities

Definitions by Rocky Mountain HIDTA

Driving Under the Influence of Drugs (DUID): DUID could include alcohol in combination with drugs. This is an important measurement since the driver's ability to operate a vehicle was sufficiently impaired that it brought his or her driving to the attention of law enforcement. Not only the erratic driving but the subsequent evidence that the subject was under the influence of marijuana helps confirm the causation factor.

Marijuana-Related: Also called "marijuana mentions," is any time marijuana shows up in the toxicology report. It could be marijuana only or marijuana with other drugs and/or alcohol.

Marijuana Only: When toxicology results show marijuana and no other drugs or alcohol.

Fatalities: Any death resulting from a traffic crash involving a motor vehicle.

Operators: Anyone in control of their own movements such as a driver, pedestrian or bicyclist.

Some Findings

- Marijuana-related traffic deaths increased **48 percent** in the three-year average (2013-2015) since Colorado legalized recreational marijuana compared to the three-year average (2010-2012) prior to legalization.
    - During the same time period, all traffic deaths increased **11 percent**.

- Marijuana-related traffic deaths increased **62 percent** from 71 to 115 persons when recreational marijuana was legalized in 2013.

- In 2009, Colorado marijuana-related traffic deaths involving operators testing positive for marijuana represented **10 percent** of all traffic fatalities. By 2015, that number doubled to **21 percent**.

- There has been a **67 percen**t increase of operators testing positive for marijuana involved in a fatal traffic accident since recreational marijuana legalization in 2013.

- Consistent with the past, in 2015 still only **49 percent** of operators involved in traffic deaths were tested for drug impairment. Out of those who were tested, about **1 in 4** tested positive for marijuana.

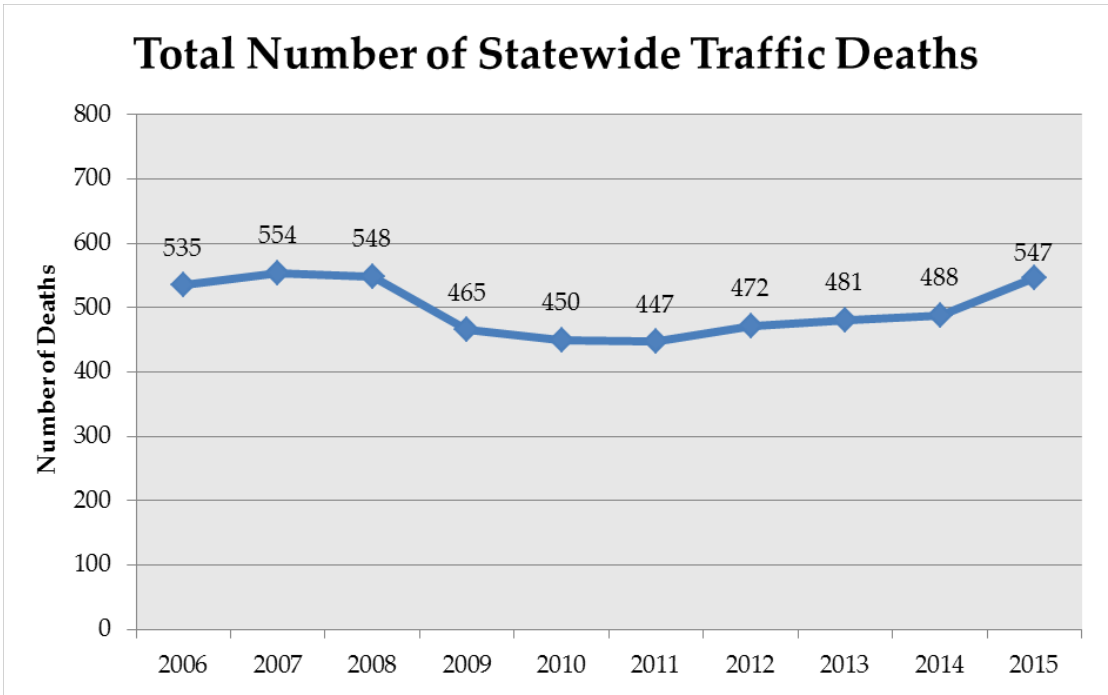
- The number of toxicology screens positive for marijuana (primarily DUID) increased **29 percent** in the three-year average (2013-2015) since Colorado legalized recreational marijuana compared to the three-year average (2010-2012) prior to legalization.

- The Colorado State Patrol DUID Program 2015 data includes:
    - **77 percen**t (665) of the 862 DUIDs involved marijuana
    - **40 percent** (347) of the 862 DUIDs involved marijuana only

Data for Traffic Deaths

NOTE:

- **THE DATA FOR 2012 THROUGH 2015 WAS OBTAINED FROM THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT). CDOT AND RMHIDTA CONTACTED CORONER OFFICES AND LAW ENFORCEMENT AGENCIES INVOLVED WITH FATALITIES TO OBTAIN TOXICOLOGY REPORTS. THIS REPRESENTS 100 PERCENT REPORTING. PRIOR YEAR(S) MAY HAVE HAD LESS THAN 100 PERCENT REPORTING TO THE COLORADO DEPARTMENT OF TRANSPORTATION, AND SUBSEQUENTLY THE FATALITY ANALYSIS REPORTING SYSTEM (FARS). ANALYSIS OF DATA WAS CONDUCTED BY ROCKY MOUNTAIN HIDTA.**
- **2015 FARS DATA WILL NOT BE OFFICIAL UNTIL JANUARY 2017.**



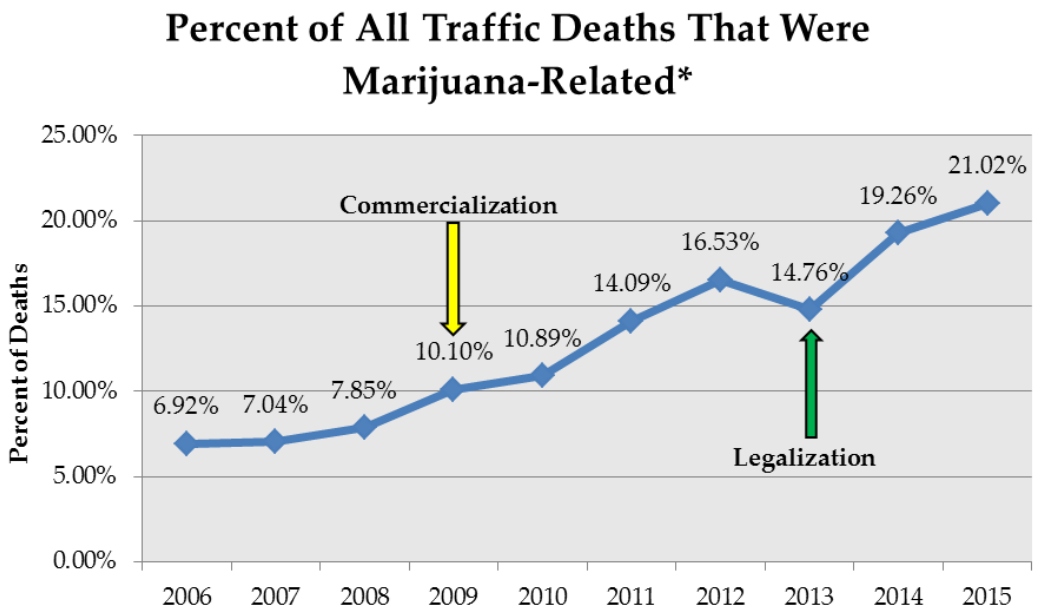
SOURCE: **National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS) and Colorado Department of Transportation**

- **In 2015 there were a total of 547 traffic deaths of which:**
  - **359 were drivers**
  - **111 were passengers**
  - **59 were pedestrians**
  - **13 were bicyclists**
  - **4 were in wheelchairs**
  - **1 was in a stroller**

Traffic Deaths Related to Marijuana*			
Crash Year	Total Statewide Fatalities	Fatalities with Operators Testing Positive for Marijuana	Percentage Total Fatalities (Marijuana)
2006	535	37	6.92%
2007	554	39	7.04%
2008	548	43	7.85%
2009	465	47	10.10%
2010	450	49	10.89%
2011	447	63	14.09%
2012	472	78	16.53%
2013	481	71	14.76%
2014	488	94	19.26%
2015	547	115	21.02%

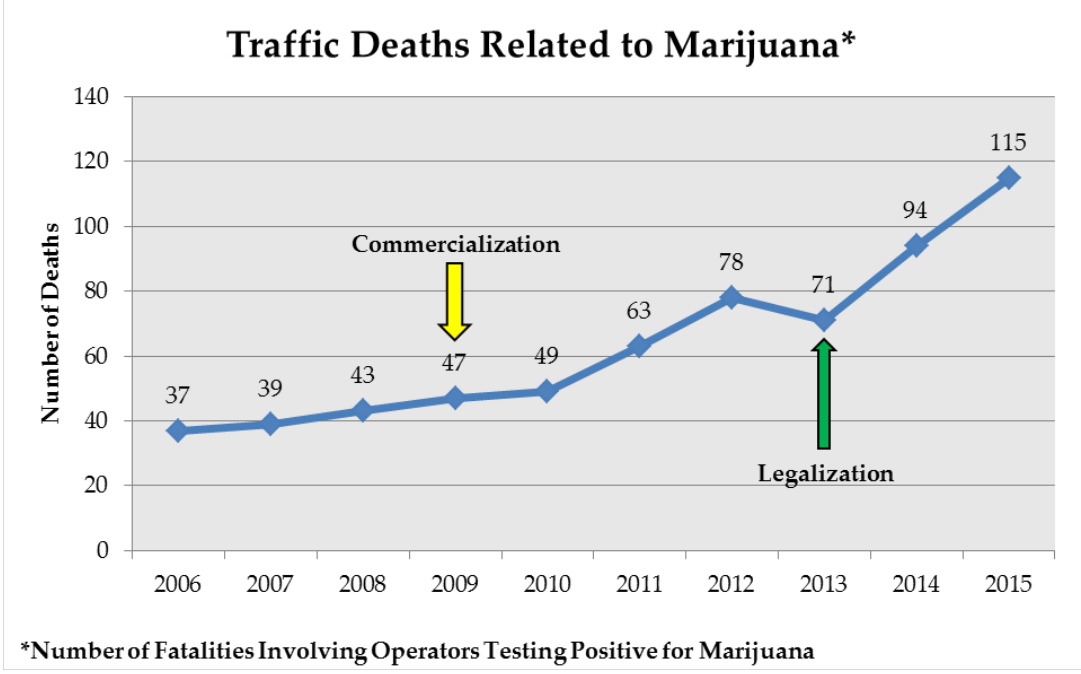
***Fatalities Involving Operators Testing Positive for Marijuana**

SOURCE: **National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS)**



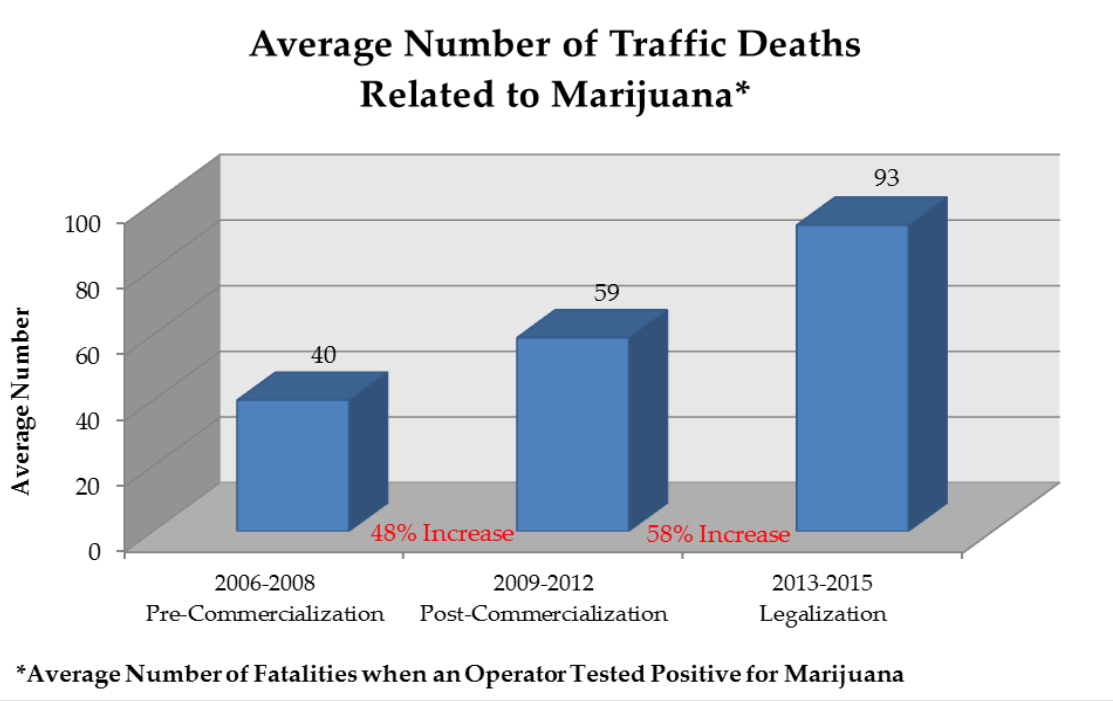
***Percent of All Fatalities Where the Operators Tested Positive for Marijuana**

SOURCE: **National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado Department of Transportation 2012-2015**



SOURCE: National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado Department of Transportation 2012-2015

- **In 2015 there were a total of 115 marijuana-related traffic deaths of which:**
  - **75 were drivers**
  - **20 were passengers**
  - **17 were pedestrians**
  - **3 were bicyclists**

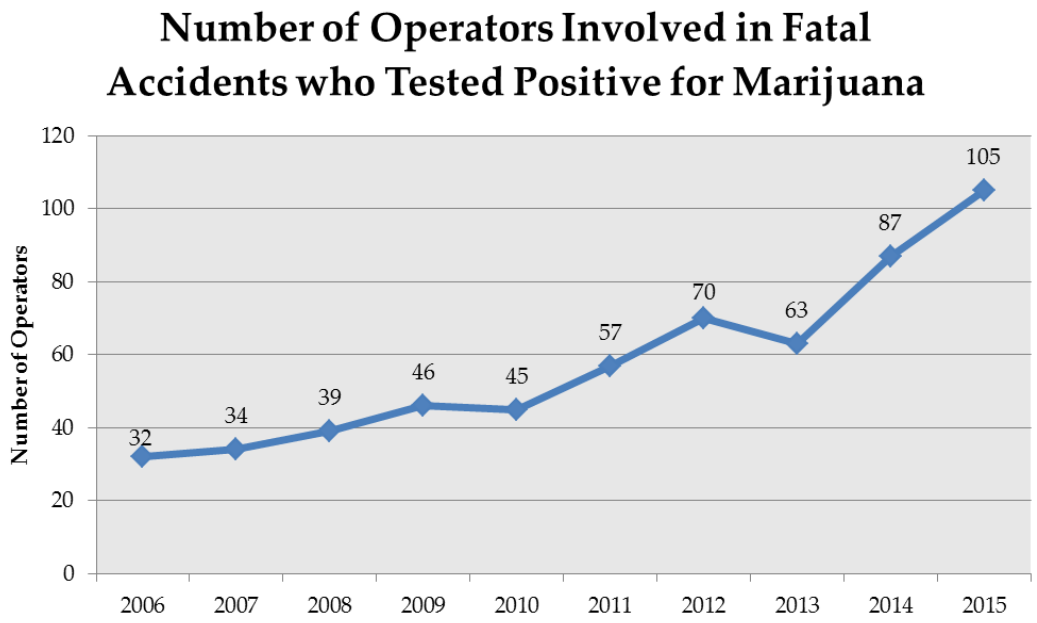


SOURCE: National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado Department of Transportation 2012-2015

Operators Testing Positive for Marijuana Involved in Fatal Crashes*			
Crash Year	**Total Operators Involved in Fatal Crashes**	**Operators in Fatal Crashes Testing Positive for Marijuana**	**Percentage of Total Operators Who Tested Positive for Marijuana**
2006	795	32	4.03%
2007	866	34	3.93%
2008	782	39	4.99%
2009	718	46	6.41%
2010	652	45	6.90%
2011	648	57	8.80%
2012	732	70	9.56%
2013	702	63	8.97%
2014	765	87	11.37%
2015	871	105	12.06%

*Operators Involved in Fatalities Testing Positive for Marijuana

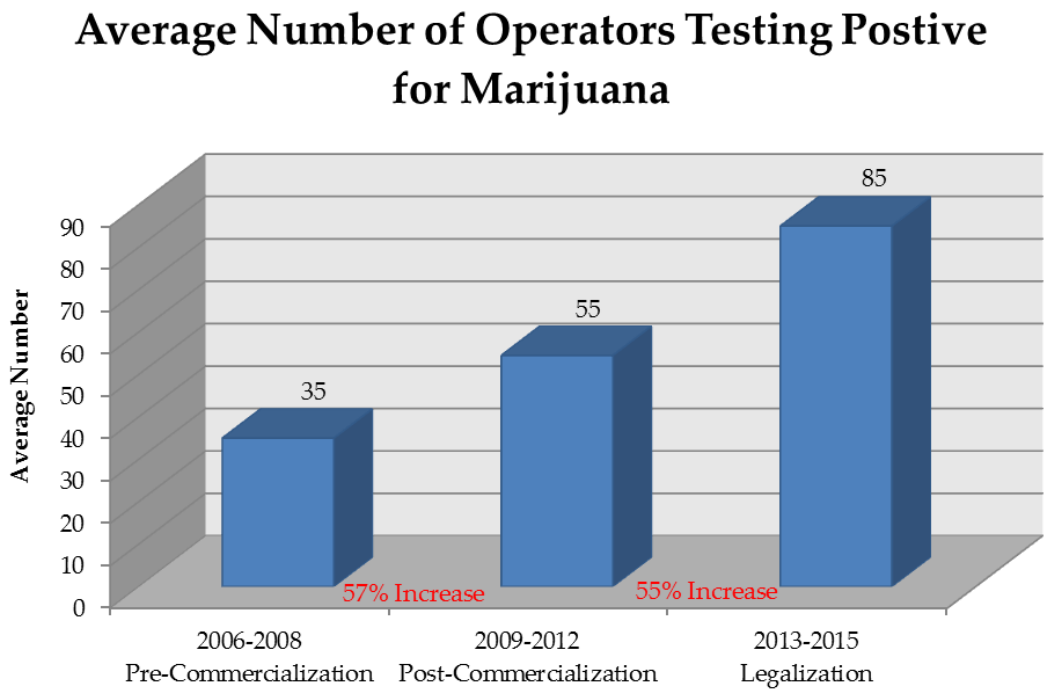
SOURCE: National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado Department of Transportation 2012-2015



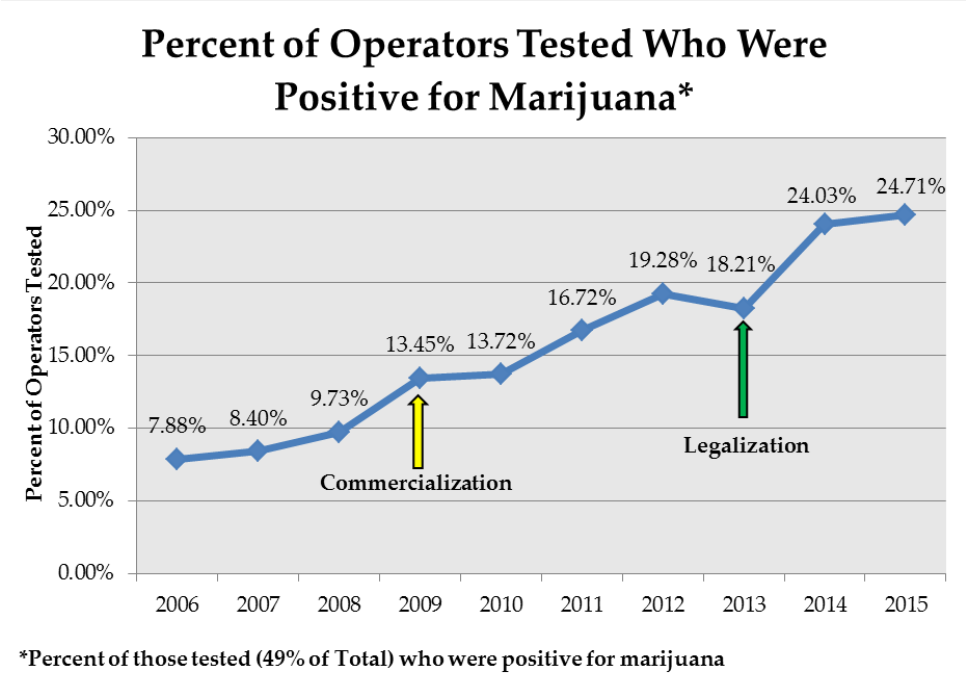
SOURCE: **National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado Department of Transportation 2012-2015**

- **Consistent with the past, in 2015 only 49 percent of operators involved in traffic deaths were tested for drug impairment.**

- **In 2015, there were a total of 105 operators testing positive for marijuana of which:**
  - **88 were drivers**
  - **15 were pedestrians**
  - **2 were bicyclists**

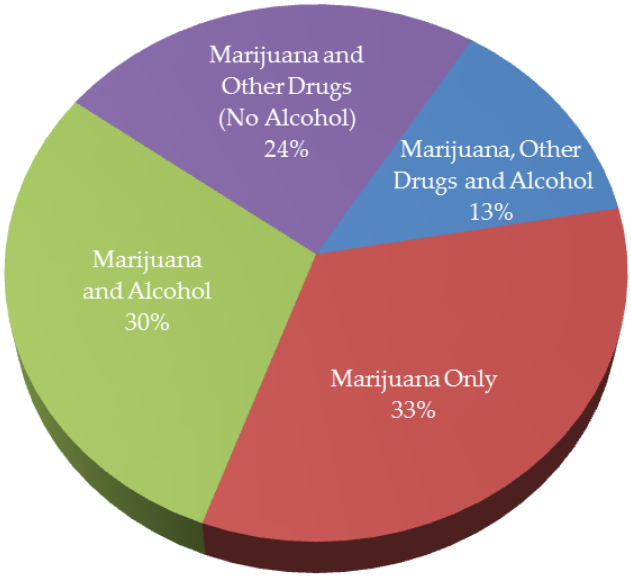


SOURCE: **National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado Department of Transportation 2012-2015**



SOURCE: **National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado Department of Transportation 2012-2015**

Drug Combinations for Operators Positive for Marijuana*, 2015

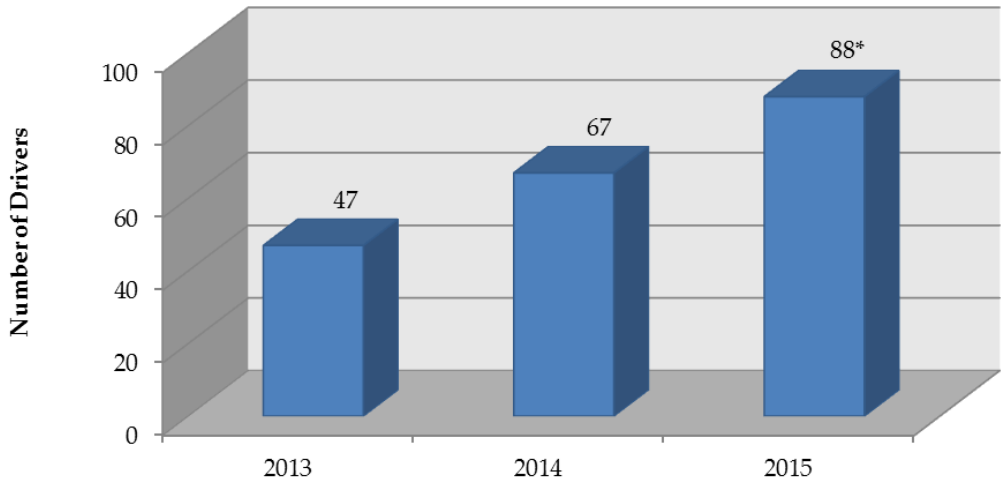


*Toxicology results for all substances present in individuals who tested positive for marijuana

SOURCE: National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2006-2011 and Colorado Department of Transportation 2012-2015

- **In 2015, of the operators who tested positive for marijuana, one out of three had only marijuana present in their system.**

Number of Drivers Involved in Fatal Crashes Who Tested Positive for Marijuana



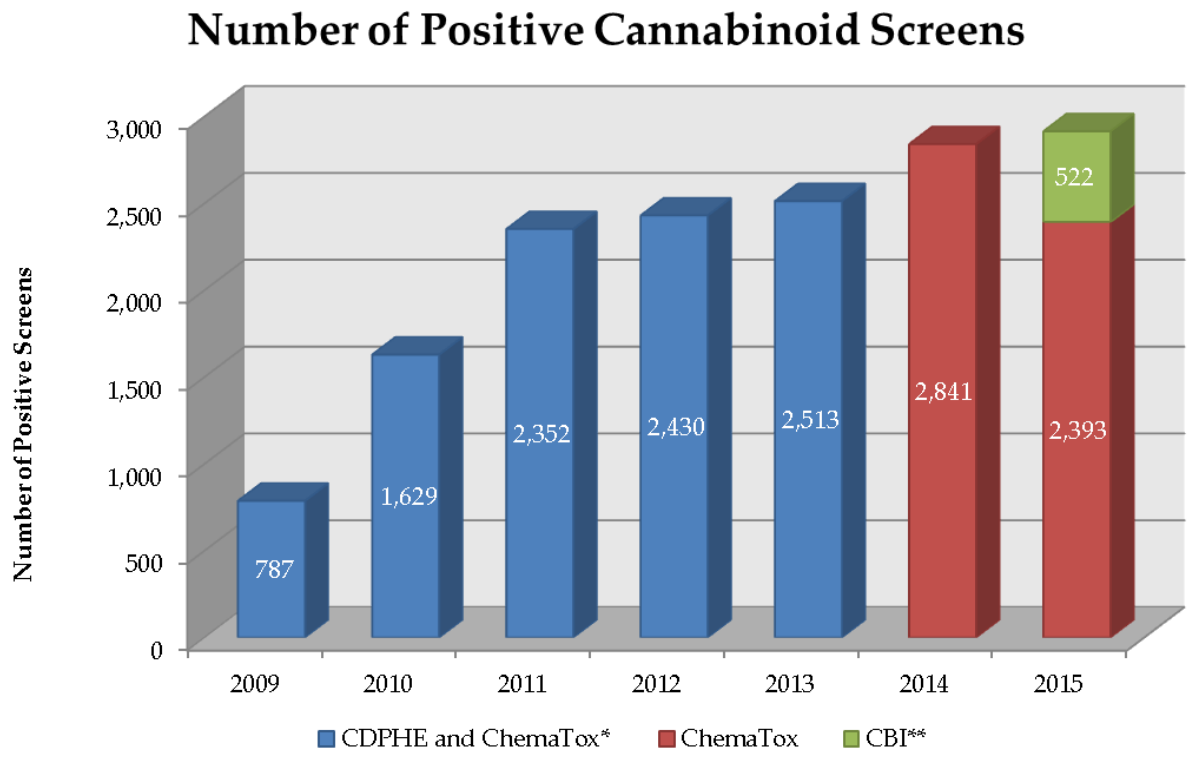
*2015 data obtained from CDOT

SOURCE: Colorado Department of Public Safety, Division of Criminal Justice, Office of Research and Statistics, "Marijuana Legalization in Colorado: Early Findings/A Report Pursuant to Senate Bill 13-283," March 2016

- **There was an 87 percent increase in drivers testing positive for marijuana who were involved in fatal crashes from 2013 to 2015.**

Data for Impaired Driving

NOTE: THE NUMBER OF DUID ARRESTS IS NOT REFLECTIVE OF THE TOTAL NUMBER OF PEOPLE ARRESTED FOR DRIVING UNDER THE INFLUENCE WHO ARE INTOXICATED ON NON-ALCOHOL SUBSTANCES. IF SOMEONE IS DRIVING BOTH INTOXICATED ON ALCOHOL AND INTOXICATED ON ANY OTHER DRUG (INCLUDING MARIJUANA), ALCOHOL IS ALMOST ALWAYS THE ONLY INTOXICANT TESTED FOR. A DRIVER WHO TESTS OVER THE LEGAL LIMIT FOR ALCOHOL WILL BE CHARGED WITH DUI, EVEN IF HE OR SHE IS POSITIVE FOR OTHER DRUGS. HOWEVER, WHETHER OR NOT HE OR SHE IS POSITIVE FOR OTHER DRUGS WILL REMAIN UNKNOWN BECAUSE OTHER DRUGS ARE NOT OFTEN TESTED FOR.



*Data from the Colorado Department of Public Health and Environment was merged with ChemaTox data from 2009 to 2013.
**The Colorado Bureau of Investigation began toxicology operations in July 1, 2015.
There were a total of 723 9-Panel drug screen (including Cannabinoids) cases analyzed by CBI in 2015.

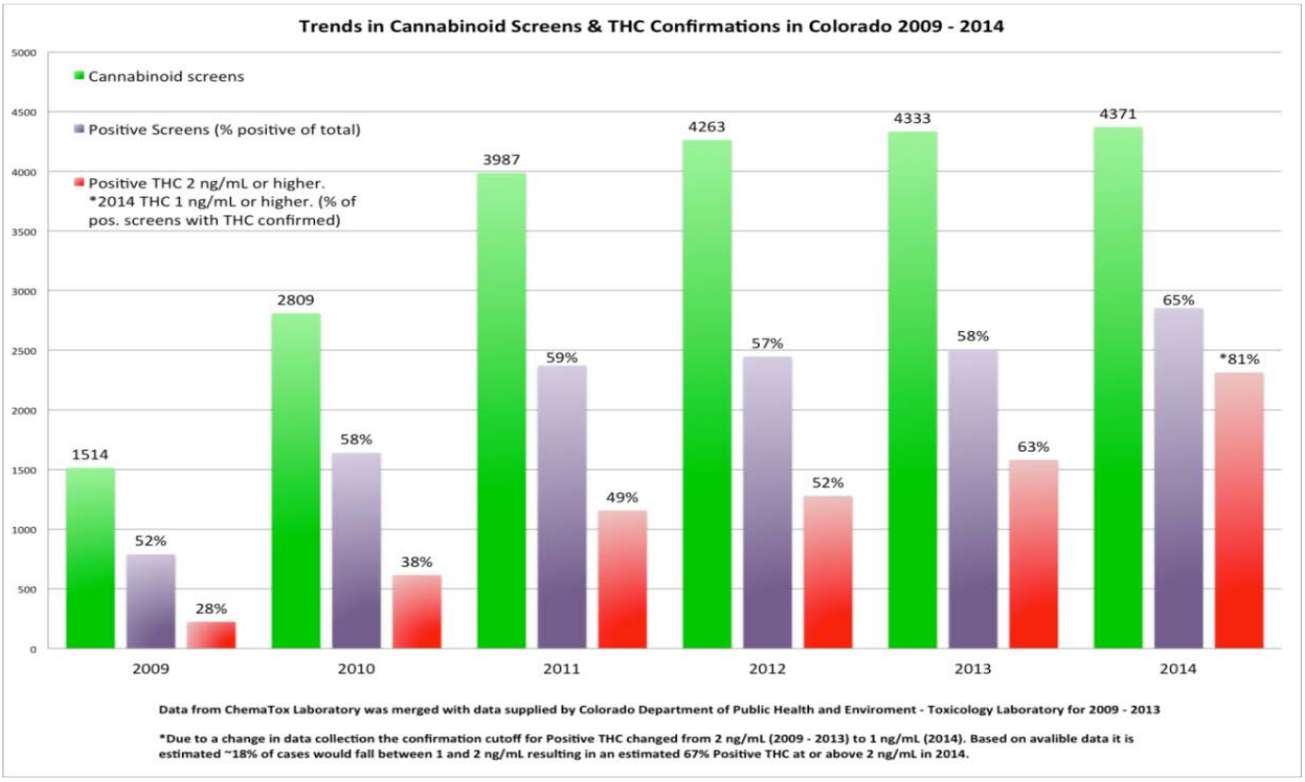
SOURCE: **Colorado Bureau of Investigation and Rocky Mountain HIDTA**

- **The above graph is Rocky Mountain HIDTA's conversion of the following ChemaTox data as well as data from the Colorado Bureau of Investigation's state laboratory.**

NOTE: THE ABOVE GRAPHS INCLUDE DATA FROM CHEMATOX LABORATORY WHICH WAS MERGED WITH DATA SUPPLIED BY COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT - TOXICOLOGY LABORATORY. THE VAST MAJORITY OF THE SCREENS ARE DUID SUBMISSIONS FROM COLORADO LAW ENFORCEMENT.

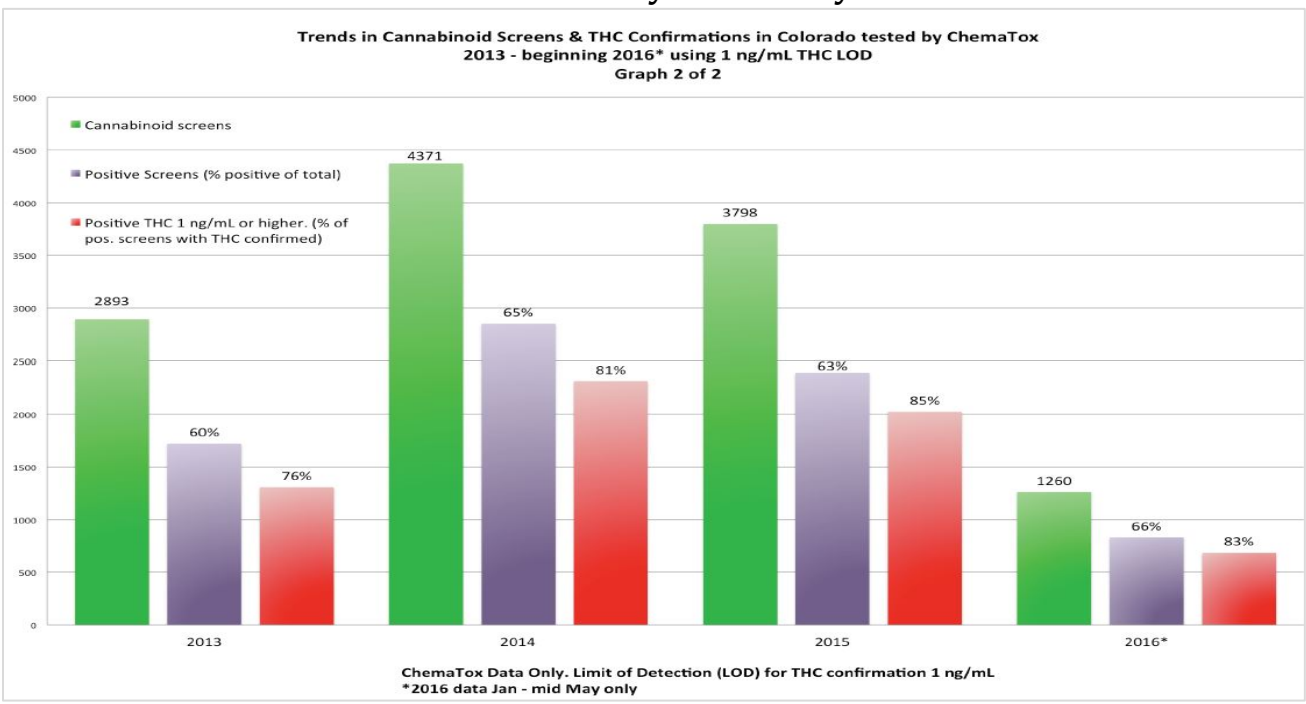
NOTE: COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT DISCONTINUED TESTING IN JULY 2013. THE COLORADO BUREAU OF INVESTIGATION BEGAN TESTING ON JULY 1, 2015.

ChemaTox and Colorado Department of Public Health and Environment (Data Combined 2009-2013)

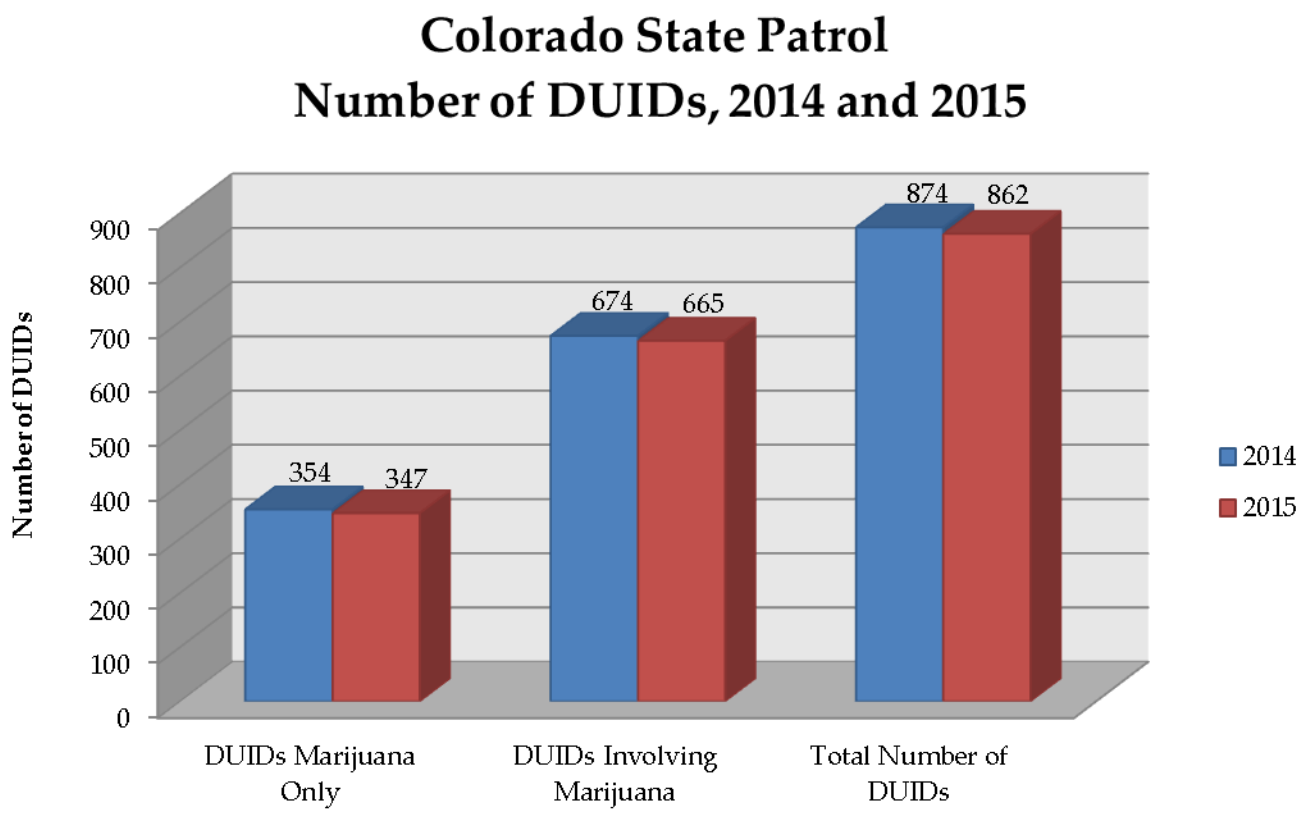


SOURCE: Sarah Urfer, M.S., D-ABFT-FT; ChemaTox Laboratory

ChemaTox Data Only (2013-May 2016)



SOURCE: Sarah Urfer, M.D., D-ABFT-FT, ChemaTox Laboratory

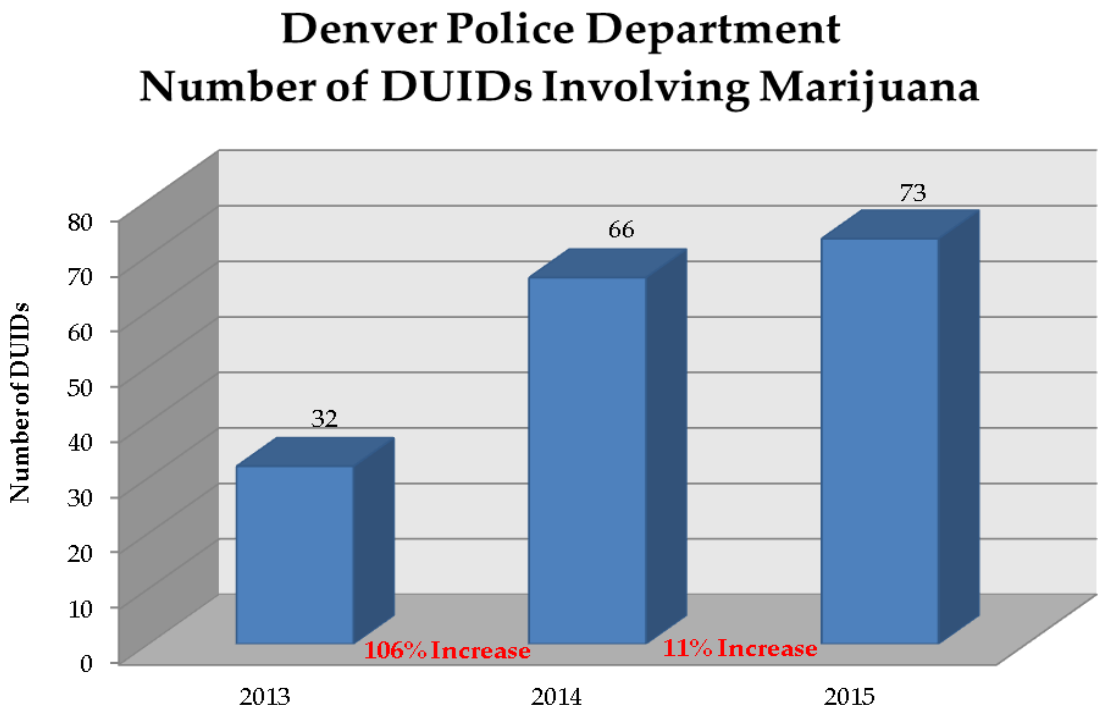


SOURCE: Colorado State Patrol, CSP Citations for Drug Impairment by Drug Type

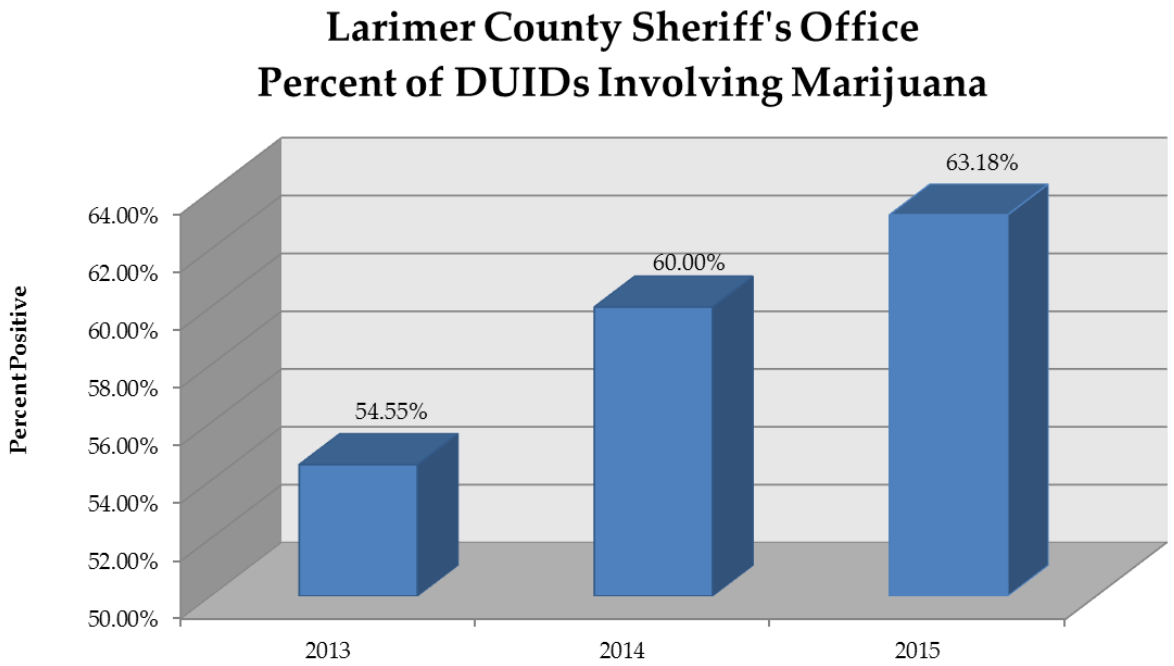
- **In 2015, 77 percent of total DUIDs involved marijuana and 40 percent of total DUIDs involved marijuana only**

- **In 2015, Colorado State Patrol made 1,000 less DUI and DUID cases than in 2014. However, marijuana made up 15 percent of the total in 2015 and 12 percent of the total in 2014.**

NOTE: "MARIJUANA CITATIONS DEFINED AS ANY CITATION WHERE CONTACT WAS CITED FOR DRIVING UNDER THE INFLUENCE (DUI) OR DRIVING WHILE ABILITY IMPAIRED (DWAI) AND MARIJUANA INFORMATION WAS FILLED OUT ON TRAFFIC STOP FORM INDICATING MARIJUANA & ALCOHOL, MARIJUANA & OTHER CONTROLLED SUBSTANCES, OR MARIJUANA ONLY PRESENT BASED ON OFFICER OPINION ONLY (NO TOXICOLOGICAL CONFIRMATION)." - *COLORADO STATE PATROL*

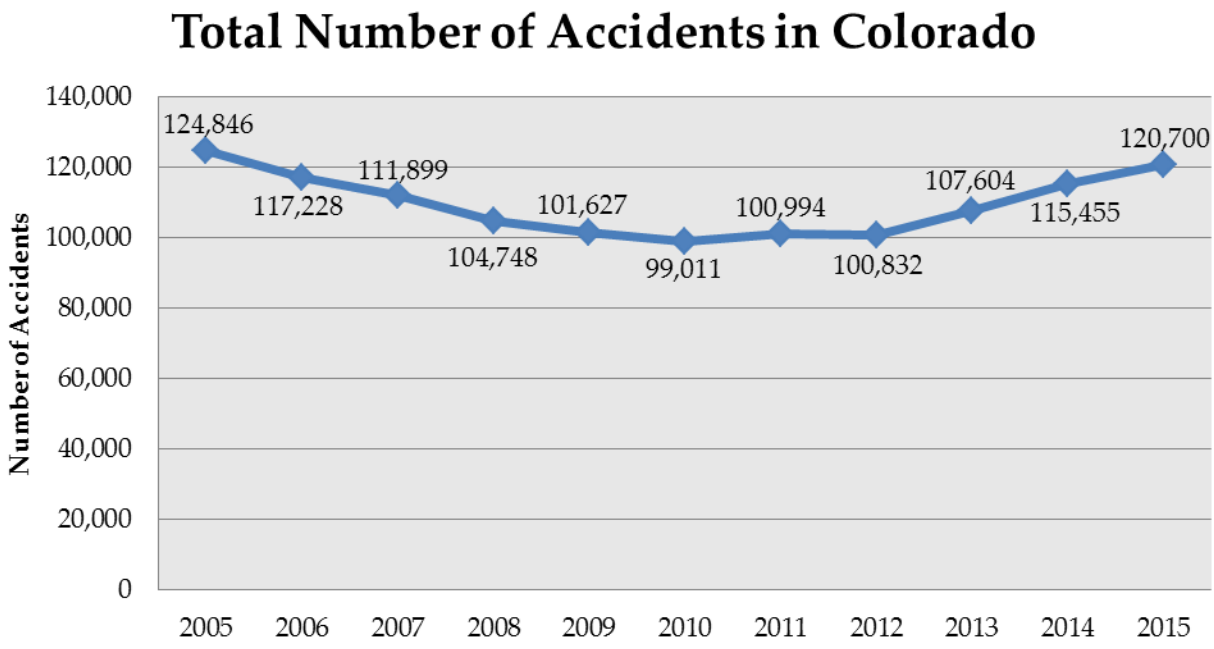


SOURCE: Denver Police Department, Traffic Operations Bureau via Data Analysis Unit



*Percent of All DUID blood samples submitted for drug testing

SOURCE: Larimer County Sheriff's Office, Records Section



SOURCE: **Colorado Department of Transportation (CDOT)**

NOTE:	**ROCKY MOUNTAIN HIDTA HAS BEEN ASKED ABOUT THE TOTAL NUMBER OF TRAFFIC ACCIDENTS SEEN IN COLORADO SINCE LEGALIZATION AND IS, THEREFORE, PROVIDING THE DATA. ROCKY MOUNTAIN HIDTA IS NOT EQUATING ALL TRAFFIC ACCIDENTS WITH MARIJUANA LEGALIZATION.**

Related Costs

Economic Cost of Vehicle Accidents Resulting in Fatalities: According to the National Highway Traffic Safety Administration report, *The Economic and Societal Impact Of Motor Vehicles Crashes, 2010*, the total economic costs for a vehicle fatality is $1,398,916. That includes property damage, medical, insurance, productivity, among other considerations.[1]

Cost of Driving Under the Influence: The cost associated with the first driving-under-the-influence (DUI) offense is estimated at $10,270. Costs associated with a DUID (driving-under-the-influence-of-drugs) are very similar to those of a DUI/alcohol.[2]

Some Information from Washington State

Marijuana-Related Fatal Car Accidents Surge in Washington State After Legalization:[3]

- Ten percent of Washington state drivers involved in fatal car crashes between 2010 and 2014 tested positive for recent marijuana use, with the percentage of drivers who had used pot within hours of a crash doubling between 2013 and 2014 (AAA Foundation for Traffic Safety).
- For 2013, there were 436 fatal crashes in Washington. Among those crashes, there were 40 in which the drivers involved tested positive for THC (9 percent). For 2014, there were 462 fatal crashes, 85 drivers tested positive for THC (18 percent).

More Pot Use Found in Fatal Crashes, Data Says: "We have seen marijuana involvement in fatal crashes remain steady over the years and then it just spiked in 2014," said Dr. Staci Hoff, Washington Traffic Safety Commission research director.[4]

More Deaths on Washington's Roads:[5]

- Drivers with active THC in their blood involved in a fatal driving accident have increased 122.2 percent from 2010 to 2014.
- There was a 400 percent increase of marijuana-related DUIs between 2012 and 2014.
- "Marijuana-only DUIs have also been on the rise since 2012. These are DUIs for which marijuana was confirmed to be the only active drug in the driver's system. From 2012 to 2014 the department [Washington State Traffic Safety Commission] noted a 460 percent increase."

Case Examples and Related Material

20-Year-Old Colorado Man Kills 8-Year-Old Girl While Driving High A former star athlete at Mead High School accused of fatally running over an 8-year-old Longmont girl on her bike told police he thought he'd hit the curb — until he saw the girl's stepfather waving at him, according to an arrest affidavit released July 29, 2016.

Kyle Kenneth Couch, 20, turned right on a red light at the same time Peyton Knowlton rolled into the crosswalk on May 20, 2016. The girl was crushed by the rear right tire of the Ford F-250 pickup, and died from her injuries. Couch, of Longmont, surrendered to police Friday on an arrest warrant that included charges of vehicular homicide and driving under the influence of drugs. One blood sample collected more

than two hours after the collision tested positive for cannabinoids, finding 1.5 nanograms of THC per milliliter of blood. That's below Colorado's legal limit of 5 nanograms per milliliter. But Deputy Police Chief Jeff Satur said the law allows the DUI charge when those test results are combined with officer observations of impaired behavior and marijuana evidence found inside Couch's pickup.

The presumptive sentencing range for vehicular homicide, a Class 3 felony, is four to 12 years in prison.

Couch attends Colorado Mesa University where, in 2015, he appeared in six games as a linebacker as a red shirt freshman for the football team. In 2013, Couch became the first athlete from Mead High School to win a state title when he captured the Class 4A wrestling championship at 182 pounds. He was named the Longmont *Times-Call's* Wrestler of the Year that season and was able to defend his crown a year later, winning the 4A title at 195 pounds to cap his senior season with a 49-1 record.

Couch, now 20, has been arrested on suspicion of vehicular homicide and driving under the influence of marijuana in connection with the death of 8-year-old Peyton Knowlton.[6]

Father Blames Teenage "Son's Death in Part on Legalized Pot": A 17-year-old, driving while high on marijuana when his car struck and killed another teenage boy, was sentenced to two years in youth corrections. The incident occurred in November of 2014, the teenager was sentenced in April of 2016.

Both the father of the victim and the 17th Judicial District Attorney blamed marijuana for what happened.

The Broomfield courtroom was crowded with family and friends of the victim. They wore buttons reading "Justice for Chad" in memory of Chad Britton who was only 16. The teen was his father's best friend before he was killed. With tears rolling down his cheek Lonnie Britton spoke of his boy, "He was a beautiful soul. He'd do anything for anyone."

It was normal day at Broomfield High School when Chad went to his car during lunch. Another teen was driving a separate car, so high on marijuana his friends warned him not to drive. Tragically, Chad was struck and killed. A witness at the time told reporters, "He was putting stuff in the back of his car and the other kid wasn't paying attention and just hit him."

In juvenile court, family and friends tried to hold back the tears but failed. It was an emotional sentencing as the driver of the car, Brandon Cullip, was sentenced to two years in youth corrections. Cullip pleaded guilty to vehicular homicide in February of 2016. Cullip had obtained his driver's license just six days before the accident occurred.

Britton's father told the judge he had, "a hole in his heart that will never be mended" and he blamed his son's death in part on legalized pot. "I think this was

probably the worst thing that could happen to the state of Colorado, passing the marijuana law," Lonnie Britton said.

When recreational pot was legalized in Colorado there was fear about this very sort of thing happening. Dave Young, the district attorney for the 17th Judicial District covering Adams and Broomfield counties, told CBS4's Rick Sallinger, "The legalization of marijuana has supplied marijuana to kids and our youth and I don't think it's going to be the last time we have a tragedy like this because of marijuana."[7]

Middle School Counselor Killed by High Driver as She Helped Fellow Motorist:

A counselor at Wolf Point Middle School, Montana, was hit by a car and killed by an impaired driver in Colorado as she stopped to help another driver. The Jefferson County coroner in Colorado identified the woman as Jana Elliott, 56. She died of multiple blunt force trauma injuries. Elliott is identified as a counselor for the sixth grade in Montana.

The driver who hit Elliott, identified as Curtis Blodgett, 24, is being charged with vehicular homicide for allegedly smoking marijuana prior to the crash, according to *The Denver Post*. Blodgett allegedly admitted he had smoked marijuana that day. Detectives are working to determine whether Blodgett was legally impaired at the time of the crash. "How much he had in his system and what he had in his system will determine whether additional charges could be filed," Lakewood Police Spokesman Steve Davis told *The Post*.

According to the Lakewood Police Department Traffic Unit, Elliott was driving on US Highway 6 when a vehicle traveling in the left lane lost the bicycle it was carrying on its top. The driver of the vehicle stopped to retrieve the bike and Elliott stopped along the shoulder as well to help. After they retrieved the bicycle and were preparing to drive away, another vehicle rear ended Elliott's vehicle at a speed of 65 mph. Elliott was killed in the crash.[8]

Teen Driver Charged With Vehicular Homicide and DUI in Boulder, Colorado Crash:

A 17-year-old accused of driving into a stopped car and killing two people in May of 2016 was charged with four counts of vehicular homicide, as Boulder prosecutors alleged for the first time that the teen was under the influence of marijuana at the time of the crash.

Joe Ramas, 39, and Stacey Reynolds, 30, both of Boulder, died as a result of the injuries they sustained in the May 7 crash. The teen driver, Quinn Hefferan, is being prosecuted as a juvenile in this case. Hefferan just recently graduated from Boulder High School in the spring of 2016.

Hefferan turned himself in to police and appeared in court Wednesday morning. He was charged with two counts of vehicular homicide under a reckless-driving theory

and two counts of vehicular homicide under a driving-under-the-influence-of-drugs theory. He also will be charged in Boulder County Court with DUI (drugs), reckless driving, improper lane change and running a red light.

District Attorney Stan Garnett said the DUI-related charges against Hefferan stem from the teen's suspected use of marijuana. The maximum penalty for vehicular homicide against a juvenile is two years in the department of youth corrections, Garnett said.

Just before midnight on May 7, police say Hefferan was driving a 2002 Volkswagen Jetta when he rear-ended a 2010 Honda Fit stopped at a red light. The Jetta also struck a 2008 Dodge Ram that was stopped at the light as well. The two occupants of the Fit — Ramas and Reynolds — were taken to Boulder Community Health in critical condition, but each was taken off life support and died within days of the crash.

Hefferan was treated for minor injuries and released, while the occupants of the Ram were not injured. Police said Hefferan was driving "at least" 45 mph and that there was 'minimal braking' before the crash.[9]

Teens in Fatal Crash had Marijuana and Traces of Xanax in Their Systems: The 18-year-old driver and two other teens that died in a car crash in May near Conifer tested positive for traces of prescription drugs and marijuana.

The crash happened at 4:35 p.m. on May 10, 2016 when the driver of a Dodge Dakota pickup truck traveling near Conifer, Colorado lost control and ran off the road, rolling down an embankment and into a creek. Three teenage boys, including the driver, died. One other passenger was transported to a hospital and was expected to survive. All of them were students from St. John's Military School in Salina, Kansas, an Episcopalian all-boys boarding school, and were on a trip after the end of the school year.

The toxicology reports, released by the Jefferson County coroner's office Thursday, showed all three teens — Jacob Whitting, John Yoder, 19, and Akinwumi Ricketts, 16 — had taken Xanax, an anti-anxiety drug, and marijuana. The toxicology screen of the driver, Whitting, recorded THC levels at higher than 5 nanograms or more of active THC (delta-9 tetrahydrocannabinol) per milliliter of blood which, under Colorado law, is considered impaired while driving. None of the boys tested positive for alcohol.

Whitting had just graduated as valedictorian. He had received a varsity letter for academics, among other awards.[10]

Impaired, Even if Blood Levels are Below 5ng/ml: "The percentage of drivers involved in fatal crashes who had traces of marijuana in their blood has doubled since marijuana was legalized in Washington state, a new study suggests.

'Marijuana use in driving is a growing, contributing factor to fatal crashes,' said Jake Nelson, the director of traffic safety advocacy and research at the American Automobile

Association (AAA) said. 'It's a highway safety problem that we should all be concerned about.'

The team found that prior to legalization, about 8.3 percent of drivers involved in fatal crashes had THC in their blood, but after legalization, 17 percent of drivers had THC in their blood. Of that 17 percent, about two-thirds also had some other drugs or alcohol in their system. The total number of fatal crashes also went up slightly, the study found.

While the study can't prove that marijuana was a key cause of those crashes, it is likely that marijuana is at least one contributor to those fatal crashes, Nelson said.

The researchers found that 70 percent of drivers who failed these sobriety tests, and whose impairment was attributed to marijuana by drug-recognition experts, still had blood levels of THC lower than 5 nanograms per milliliter.

'For instance, it's possible that police are simply testing for THC more often now that the drug has been legalized, and are therefore catching people who might have been missed in previous years,' [Benjamin] Hansen [an economist at the University of Oregon in Eugene and at the National Bureau of Economic Research] said. 'It's also possible that people who are found to have detectable levels of THC in their blood were not impaired at the time of the crash,' he added."[11]

Delays in DUI Blood Testing – Impact on Cannabis DUI Assessments: A study published in the *Traffic Injury Prevention* journal (June 11, 2015) set out to examine time from law enforcement dispatch to the first blood draw in cases of driving under the influence (DUI) in Colorado for 2012. Laboratory toxicology results were also looked at in order to understand the implications of delays in blood draws in cases of DUI of marijuana's THC. The results of this study revealed that the average time from law enforcement dispatch to blood draw in cases of vehicular homicide and vehicular assault was 2.32 hours, with a range of .83 to 8.0 hours. Data from DUI traffic arrests found that between 42 and 70 percent of all cannabinoid-positive traffic arrests tested below 5 ng/ml THC in blood, which is the legal limit in Colorado and Washington.

Researchers discuss the fact that alcohol is metabolized at a linear rate, which allows forensic toxicologists to determine blood alcohol content at the time of arrest when multiple blood determinations are available. In contrast, THC is more problematic as it is not metabolized in a linear fashion. THC is not a reliable marker for impairment because it can be detected in blood for hours or even days after signs of impairment disappear. In fact, there is no accepted method to extrapolate backward from the time of arrest or a crash, as can be done with alcohol. The difficulty in identifying a suitable test for determining a driver's impairment from THC further adds to the controversy surrounding the legalization of marijuana in the state.[12]

Scientific Basis for Laws on Marijuana, Driving Questioned: There is no science that shows drivers become impaired at a specific level of THC in the blood. A lot depends on the individual. Drivers with relatively high levels of THC in their systems might not be impaired, especially if they are regular users, while others with relatively low levels may be unsafe behind the wheel.

Some drivers may be impaired when they are stopped by police, but by the time their blood is tested they have fallen below the legal threshold because active THC dissipates rapidly. The average time to collect blood from a suspected driver is often more than two hours, because taking a blood sample typically requires a warrant and transport to a police station or hospital.[13]

Overview of Major Issues Regarding the Impacts of Alcohol and Marijuana on Driving:

- THC concentrates in fatty tissue, including the brain, and is less evenly-distributed throughout the body than is alcohol. Blood levels, therefore, may not be reflective of central nervous system effects, including the ability to safely operate a motor vehicle.
- Impairment remains for 2 to 4 hours after intake (at least in smoking research) despite blood levels dropping rapidly to low levels. Following oral ingestion, absorption is slower with much later, and lower, peak blood concentrations but still substantial impairment.
- Acute marijuana use has been shown to moderately diminish virtually every driving-related capacity. Effects depend on dose, absorption, time since peak blood level, history of use and skill/task involved.[14]

Drug Use Now Rivals Drunk Driving as Cause of Fatal Car Crashes, Study Says: According to the Governors Highway Safety Association, a national organization of state highway safety officers, drugs were found in the systems of almost 40 percent of fatally-injured drivers who were tested for them. This number rivals that of the number of drivers who died with alcohol in their system.

The number of dead drivers who tested positive for drugs has increased from 29 percent in 2005 to 39.9 percent in 2013, according to federal crash data.

"Every state must take steps to reduce drug-impaired driving, regardless of the legal status of marijuana," stated Jonathan Adkins, executive director of the Governors Highway Safety Association.

Marijuana is by far the most common drug that is used, found in roadside surveys, and found in fatally-injured drivers. Marijuana use by drivers likely increases after a state permits recreational marijuana use.[15]

Drive High or Drive Drunk, Which is Safer?: "Our data further suggest that many marijuana users in Colorado and Washington believe that driving while under the influence of marijuana or hashish is safe in general and safer than driving under the influence of alcohol. However, it is clear that marijuana use impairs the ability to drive, particularly among occasional marijuana users who may be less tolerant to THC."[16]

Stoned Drivers Didn't Think They'd Get Caught: "Our research indicates that unfortunately a lot of marijuana users are driving high and many believe they will not get a DUI for doing so," CDOT spokeswoman Amy Ford said in a statement.

"About 55 percent of them drove a vehicle within 2 hours of consuming marijuana, a CDOT survey found."

"Through its 'Drive High, Get a DUI' campaign, the Colorado Department of Transportation reported that 51 percent of marijuana users did not think they'd be cited for driving while under the influence of the drug."[17]

Sources

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[11] Tia Ghose, Live Science, May 10, 2016, "Does Driving High on Marijuana Increase Fatal Crashes?," <http://www.livescience.com/54693-high-drivers-double-after-marijuana-legalization.html>, accessed May 10, 2016

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SECTION 2: Youth Marijuana Use

Some Findings

- Youth past month marijuana use **increased 20 percent** in the two-year average (2013/2014) since Colorado legalized recreational marijuana compared to the two-year average prior to legalization (2011/2012).
    - Nationally youth past month marijuana use **declined 4 percent** during the same timeframe.

- The latest 2013/2014 results show Colorado youth ranked #**1** in the nation for past month marijuana use, up from #**4** in 2011/2012 and #**14** in 2005/2006.

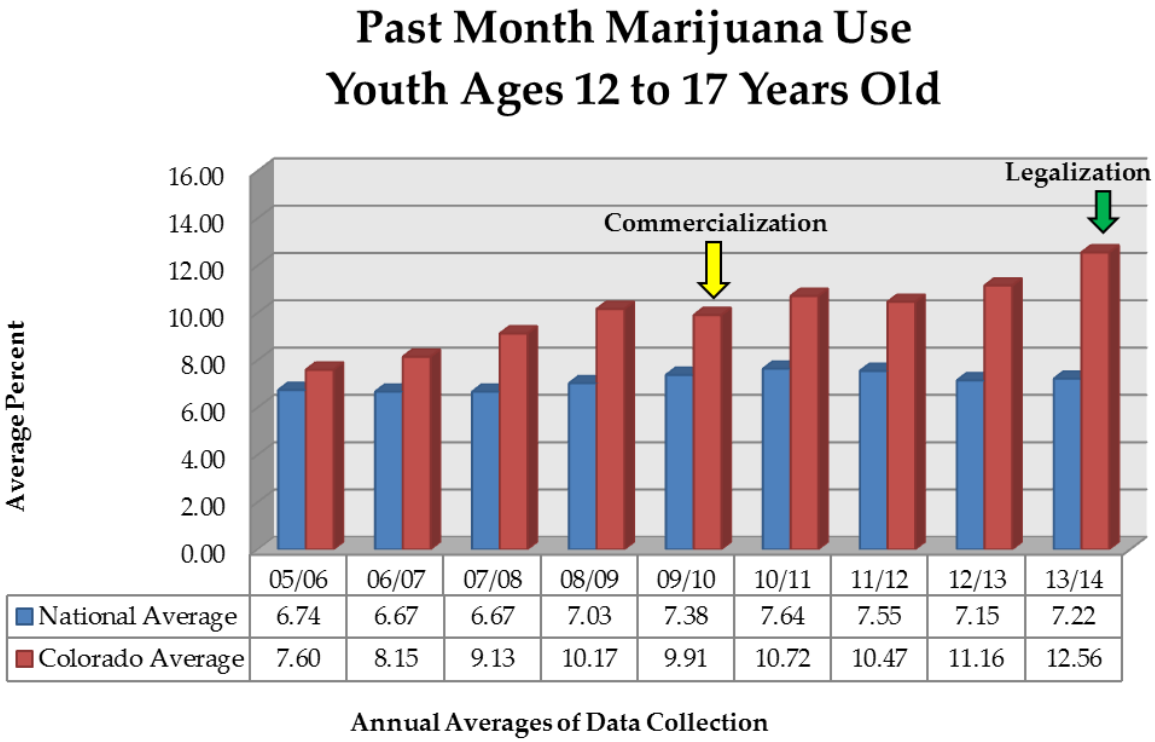
- Colorado youth past month marijuana use for 2013/2014 was **74 percent higher** than the national average compared to **39 percent higher** in 2011/2012.

- The top ten states for the highest rate of current marijuana use were all medical marijuana states whereas the bottom ten were all non-medical-marijuana states.

- In school year 2015/2016, **62 percent** of all drug expulsions and suspensions were for marijuana violations.

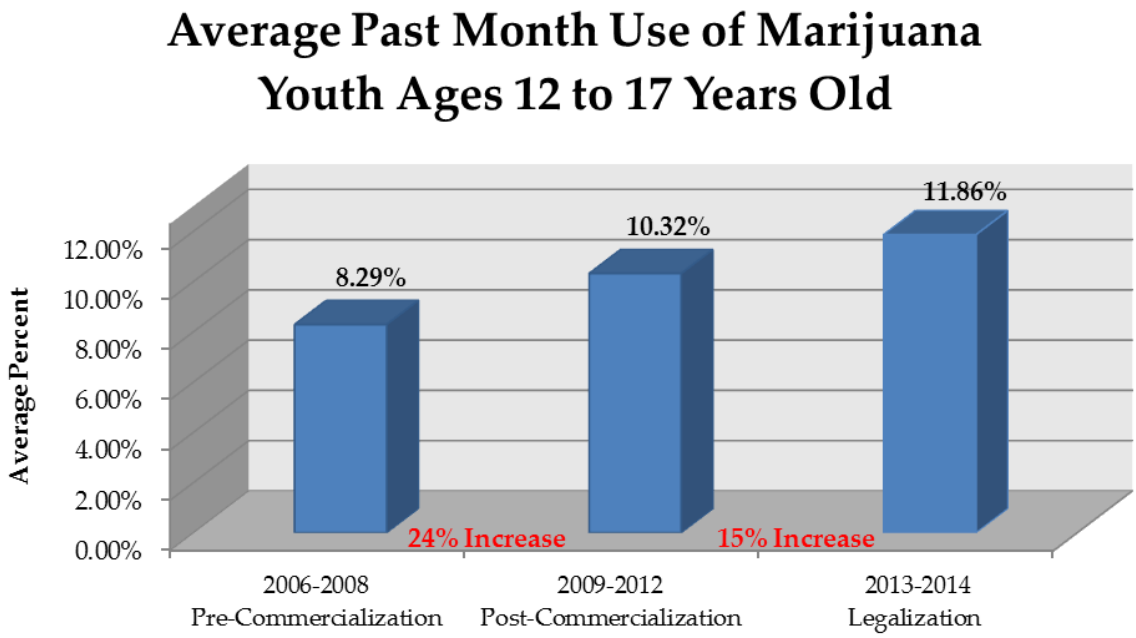
Data

Youth Ages 12 to 17 Years Old

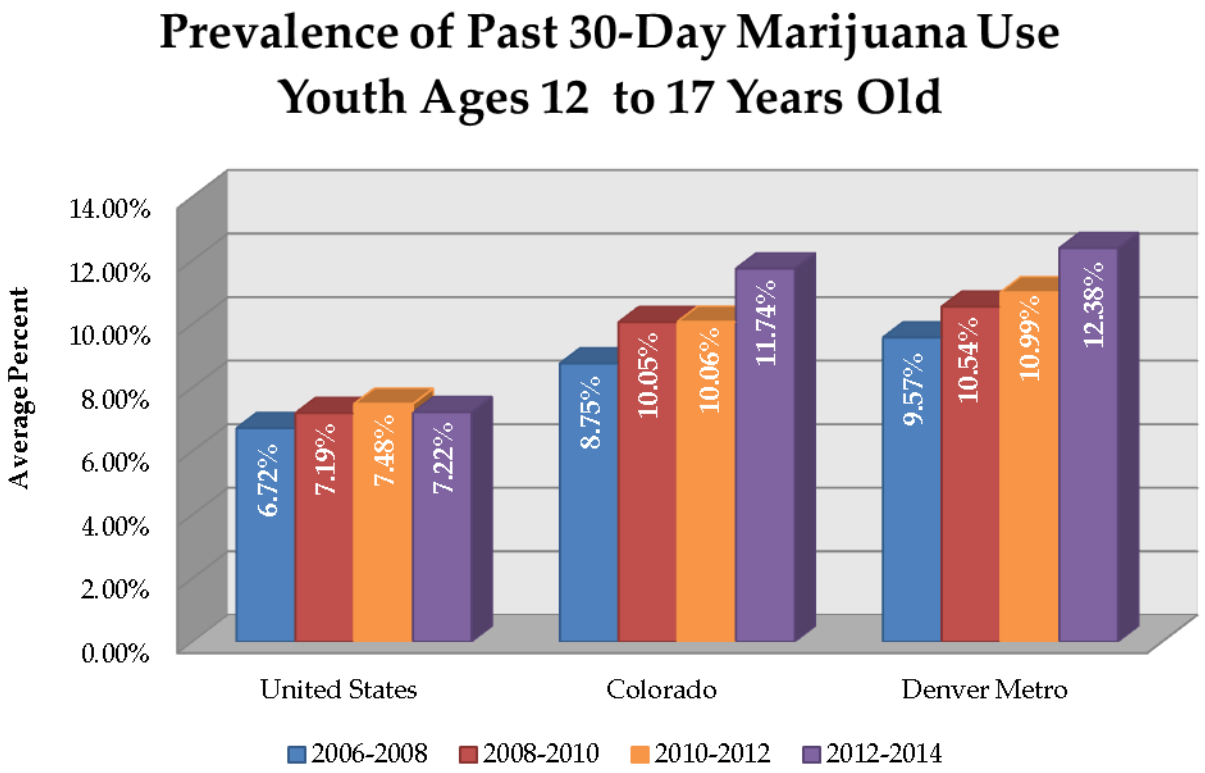


	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
National Average	6.74	6.67	6.67	7.03	7.38	7.64	7.55	7.15	7.22
Colorado Average	7.60	8.15	9.13	10.17	9.91	10.72	10.47	11.16	12.56

SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**

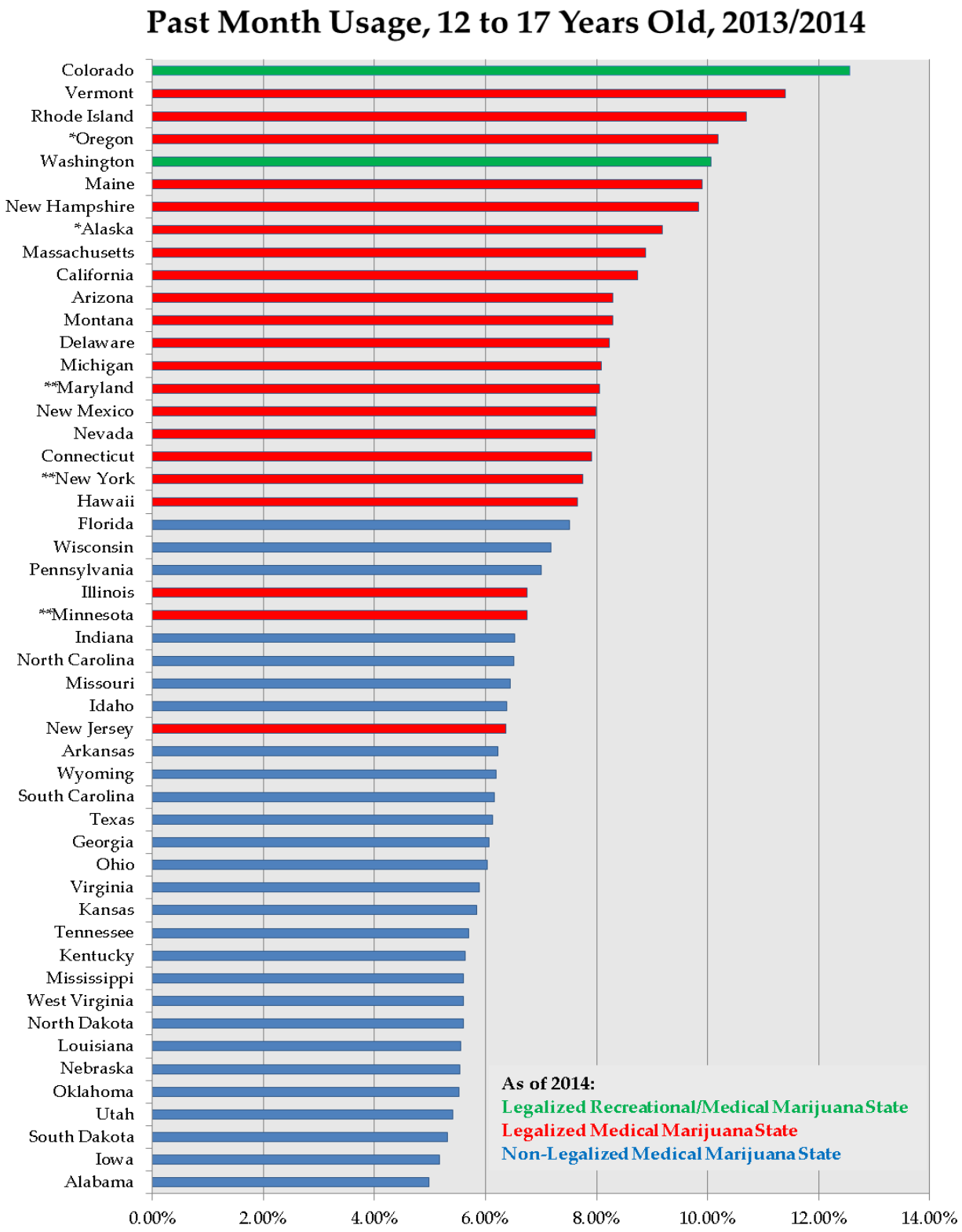


SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**



SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health, Substate Region Estimates 2006-2014**

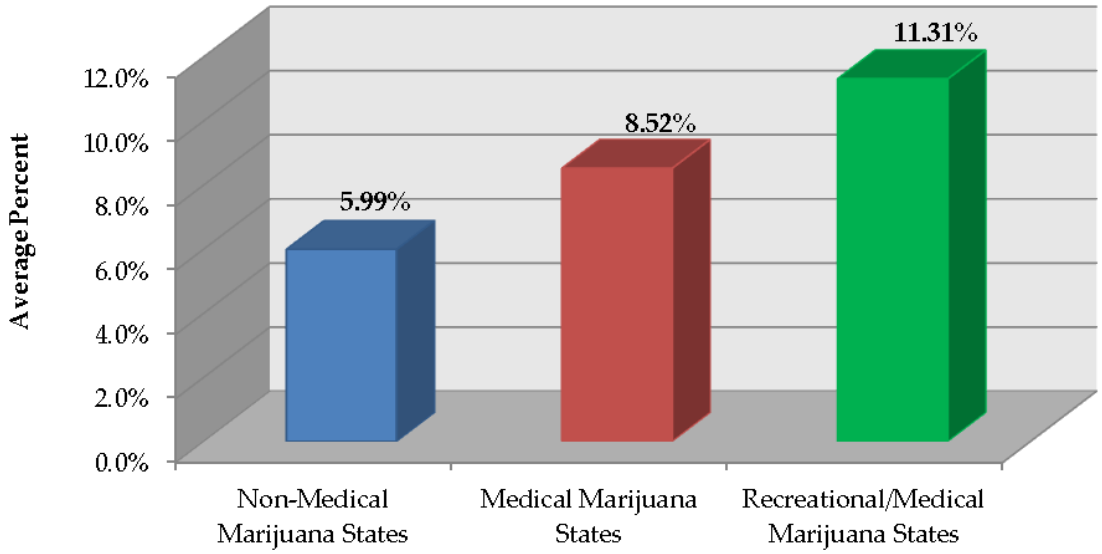
NOTE:	**SUBSTATE DATA IS ONLY AVAILABLE FROM THE NATIONAL SURVEY ON DRUG USE AND HEALTH IN THE ABOVE TIMEFRAMES.**



SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**

NOTE: *Oregon and Alaska voted to legalize recreational marijuana in November 2014
**States that had legislation for medical marijuana signed into effect during 2014

Average Past Month Use
Youth Ages 12 to 17 Years Old, 2013/2014

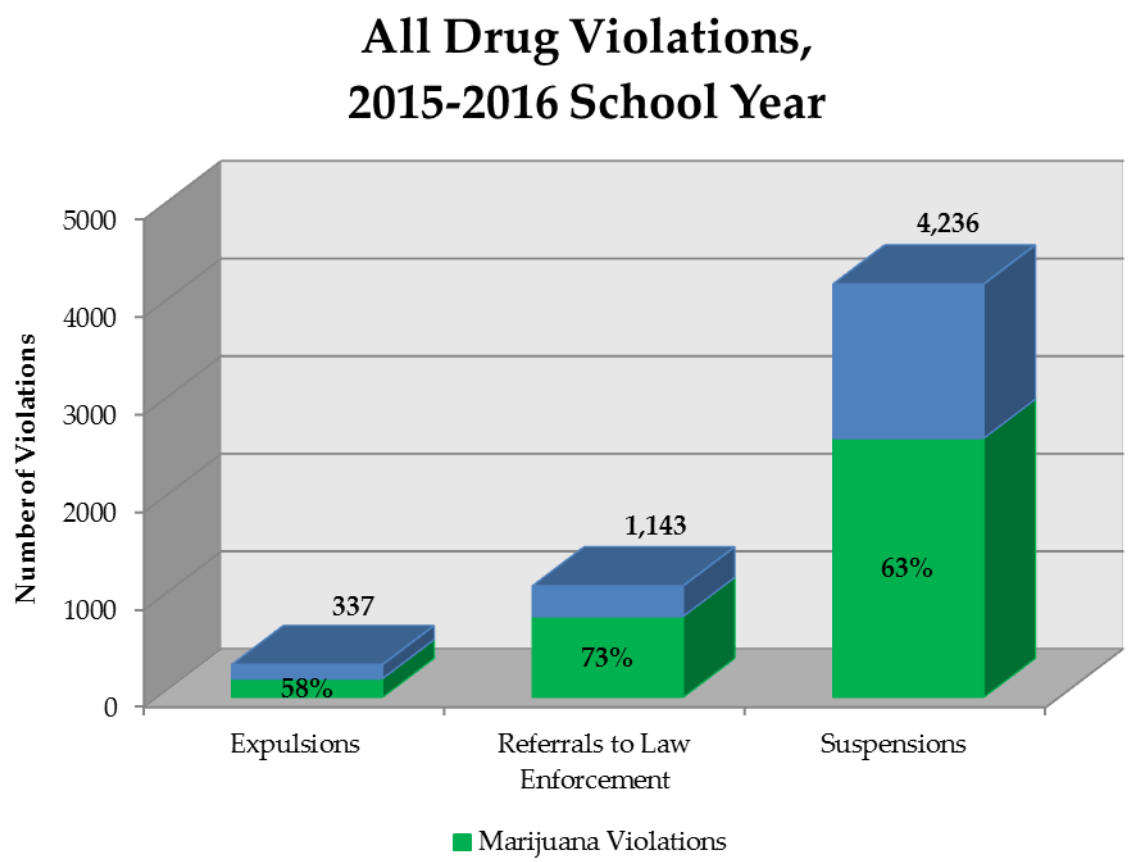


SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**

States for Past Month Marijuana Use
Youth Ages 12 to 17 Years Old, 2013/2014

Top 10 (Medical/Recreational States)	Bottom 10 (Non-Medical or Recreational States)
National Average = 7.22%	
1. Colorado – 12.56%	41. Mississippi – 5.60%
2. Vermont – 11.40%	42. West Virginia – 5.60%
3. Rhode Island – 10.69%	43. North Dakota – 5.60%
4. Oregon – 10.19%	44. Louisiana – 5.55%
5. Washington – 10.06%	45. Nebraska – 5.54%
6. Maine – 9.90%	46. Oklahoma – 5.52%
7. New Hampshire – 9.83%	47. Utah – 5.42%
8. Alaska – 9.19%	48. South Dakota – 5.32%
9. Massachusetts – 8.88%	49. Iowa – 5.17%
10. California – 8.74%	50. Alabama – 4.98%

SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**

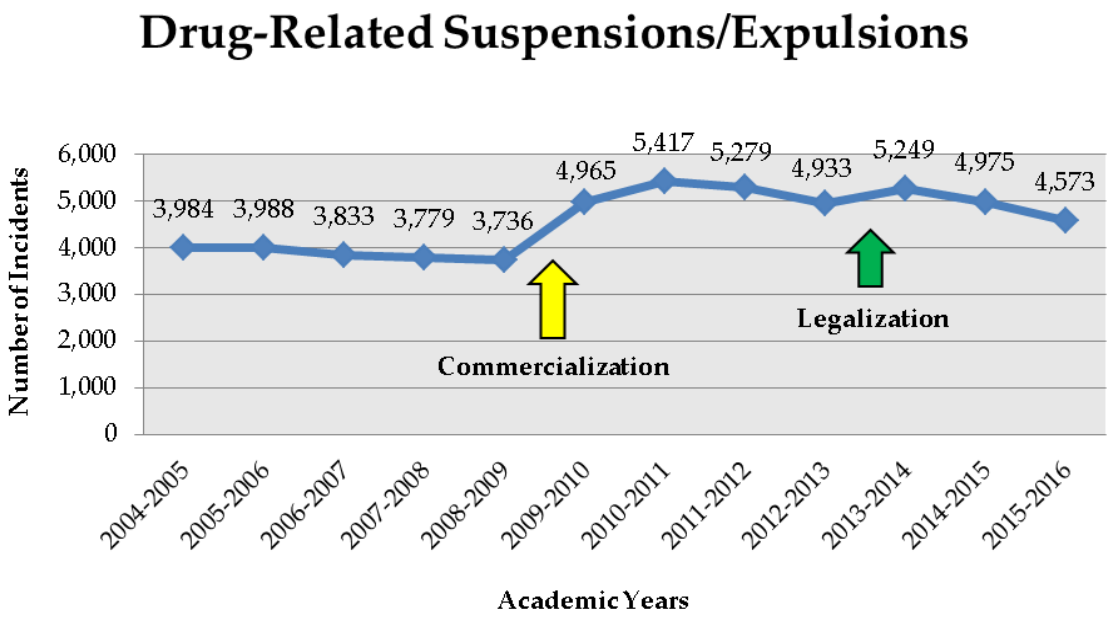


SOURCE: Colorado Department of Education, 10-Year Trend Data : State Suspension and Expulsion Incident Rates and Reasons

NOTE: THE COLORADO DEPARTMENT OF EDUCATION BEGAN COLLECTING MARIJUANA VIOLATIONS SEPARATELY FROM ALL DRUG VIOLATIONS DURING THE 2015-2016 SCHOOL YEAR.

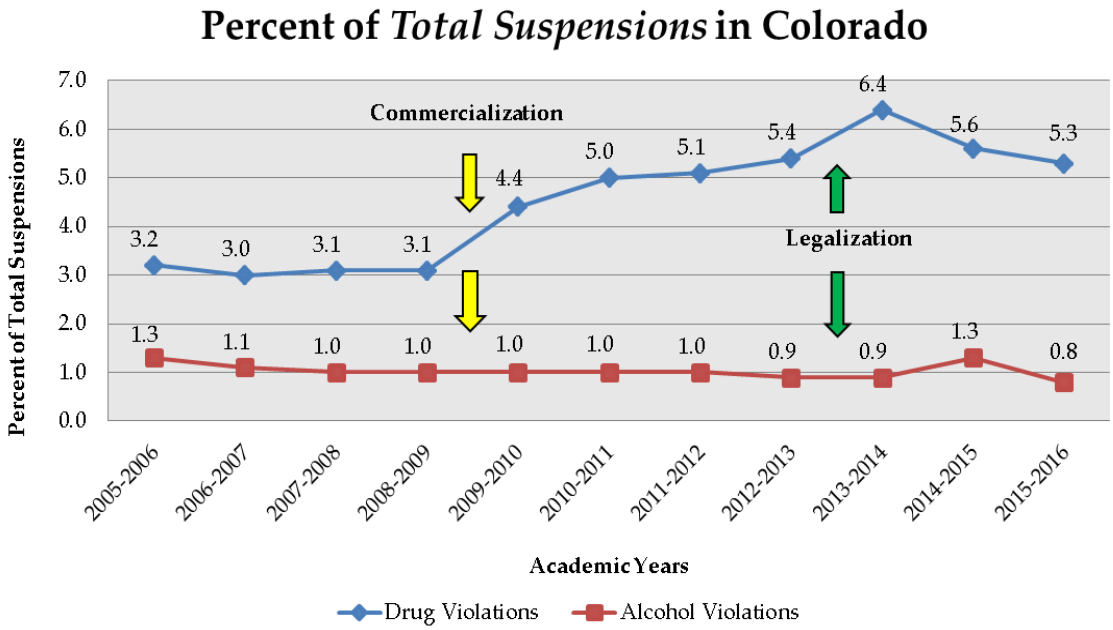
Impact on School Violation Numbers

- **"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." – Colorado Department of Public Safety, *Marijuana Legalization in Colorado: Early Findings, A Report Pursuant to Senate Bill 13-283,* March 2016**



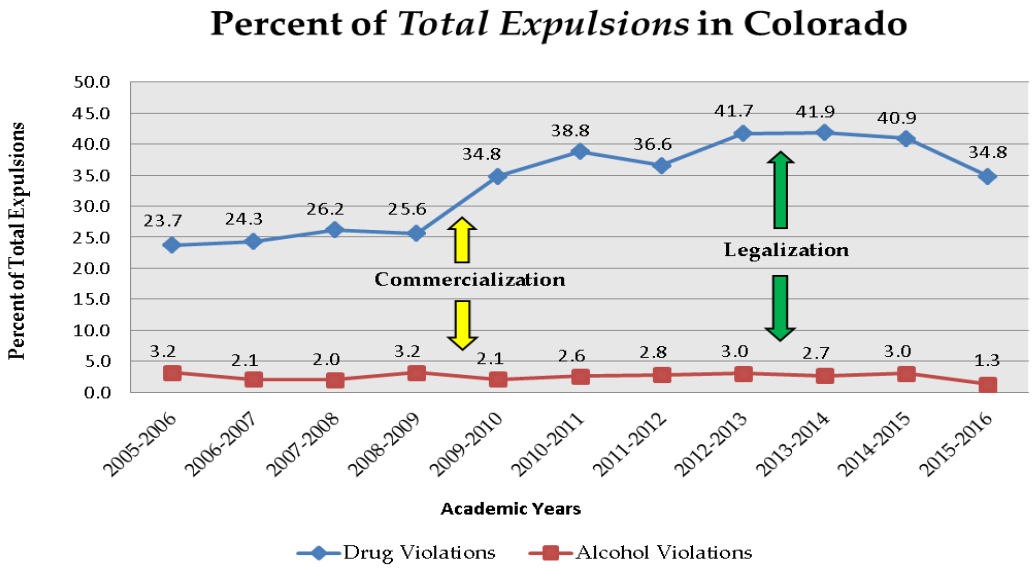
SOURCE: Colorado Department of Education, 10-Year Trend Data : State Suspension and Expulsion Incident Rates and Reasons

- **In school year 2015/2016, 62 percent of all drug expulsions and suspensions were for marijuana violations.**



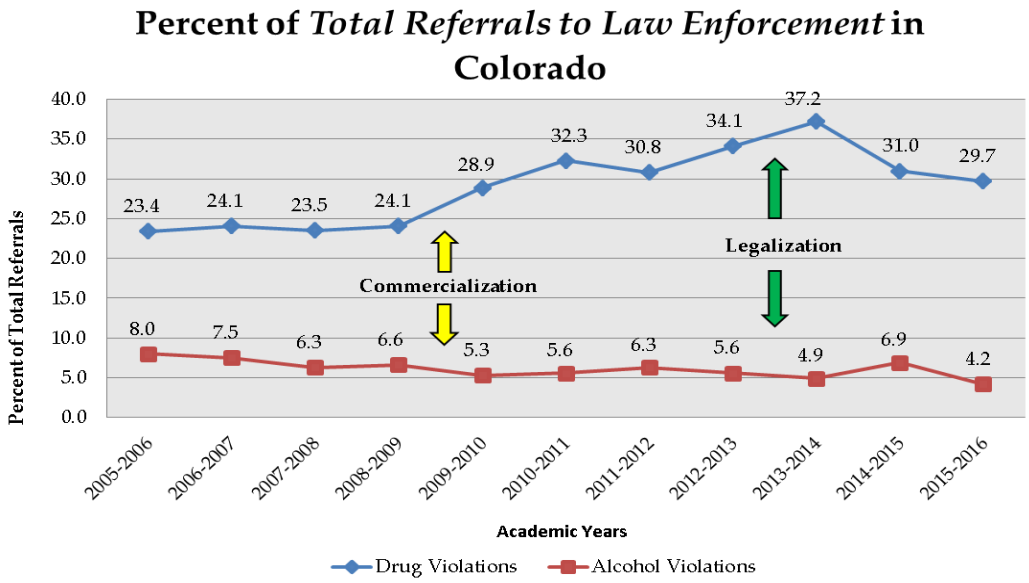
SOURCE: Colorado Department of Education, 10-Year Trend Data : State Suspension and Expulsion Incident Rates and Reasons

- **In school year 2015/2016, 63 percent of total suspensions were for marijuana violations.**



SOURCE: Colorado Department of Education, 10-Year Trend Data : State Suspension and Expulsion Incident Rates and Reasons

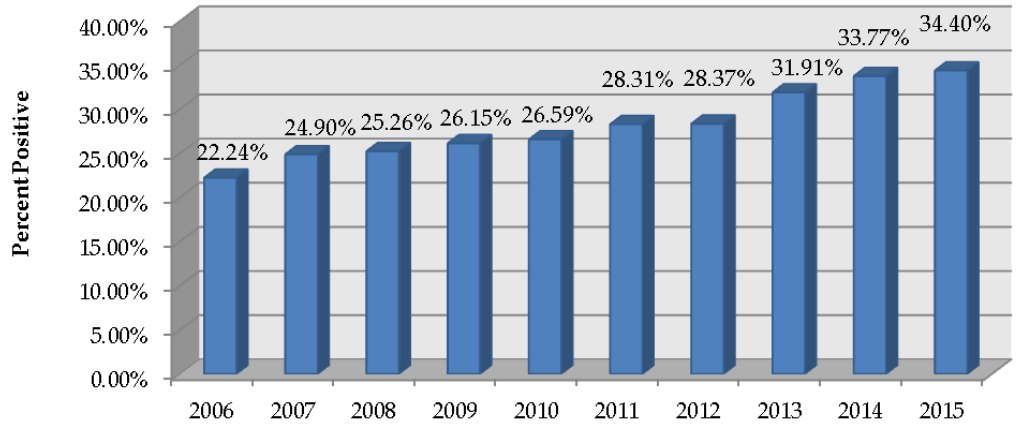
- **In school year 2015/2016, 58 percent of total expulsions were for marijuana violations.**



SOURCE: Colorado Department of Education, 10-Year Trend Data : State Suspension and Expulsion Incident Rates and Reasons

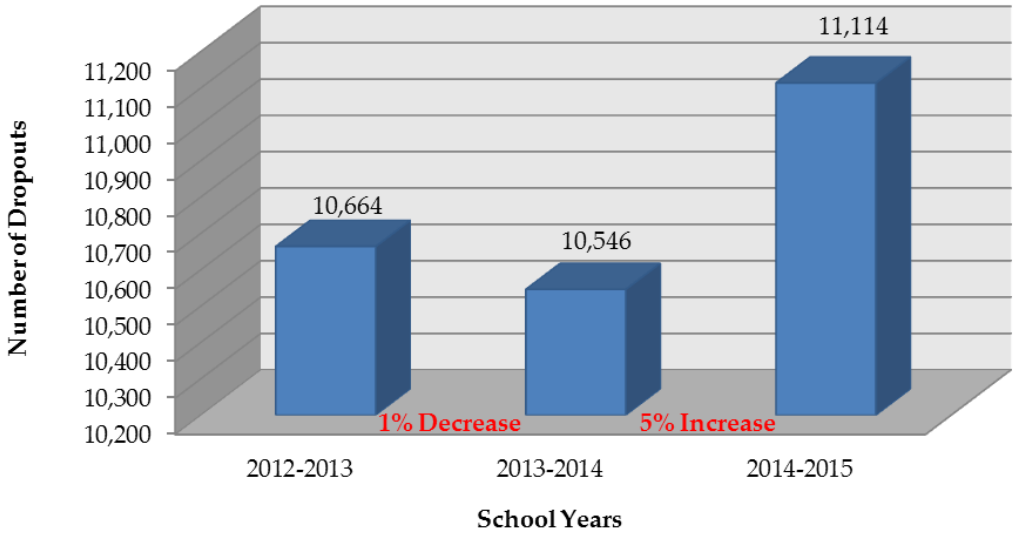
- **In school year 2015/2016, 73 percent of all referrals to law enforcement were for marijuana violations.**

Colorado Probation
Percent of All Urinalysis Tests Positive for Marijuana
Youth Ages 10 - 17 Years Old



SOURCE: **Division of Probation Services/State Court Administrator's Office**

Colorado School Dropout Rates



SOURCE: **Colorado Department of Education**

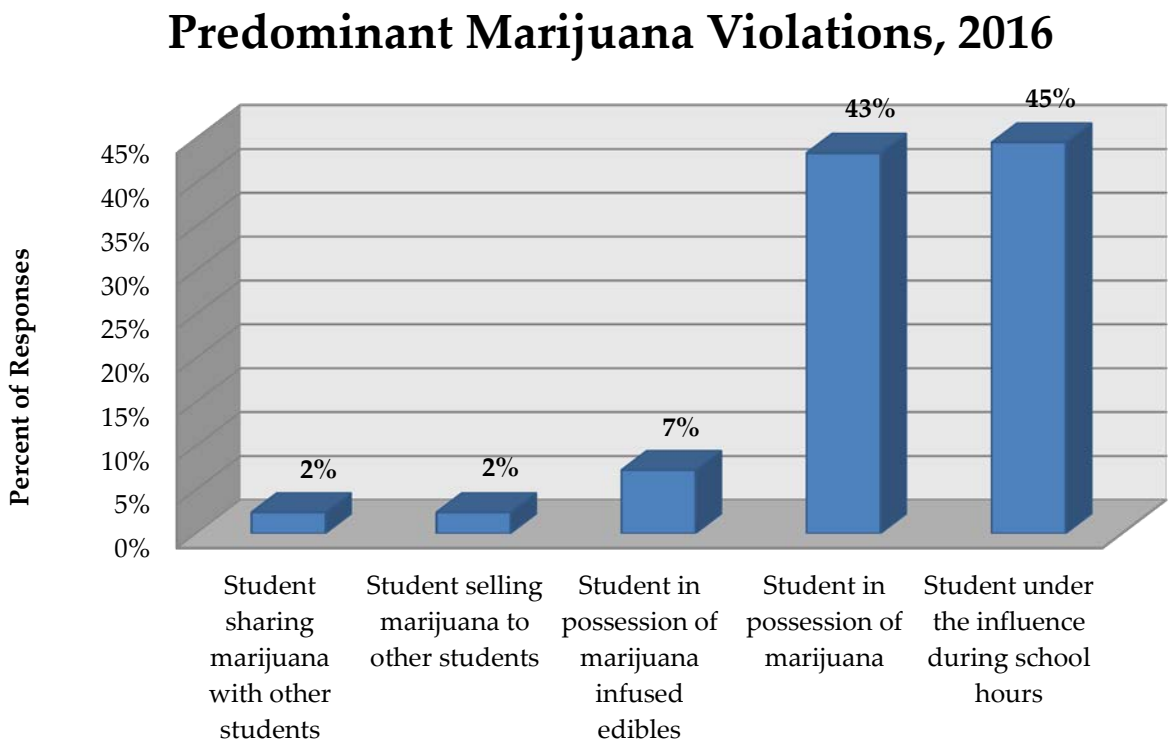
NOTE: ROCKY MOUNTAIN HIDTA HAS BEEN ASKED ABOUT SCHOOL DROPOUT RATES IN COLORADO NUMEROUS TIMES AND IS, THEREFORE, PROVIDING THE DATA. ROCKY MOUNTAIN HIDTA IS NOT EQUATING THE DROPOUT RATES WITH MARIJUANA LEGALIZATION.

Colorado School Resource Officer Survey

In June 2016, 103 school resource officers (SRO) participated in a survey concerning marijuana in schools. The majority were assigned to high schools with an average tenure of six years as an SRO. They were asked for their professional opinion on a number of questions, including:

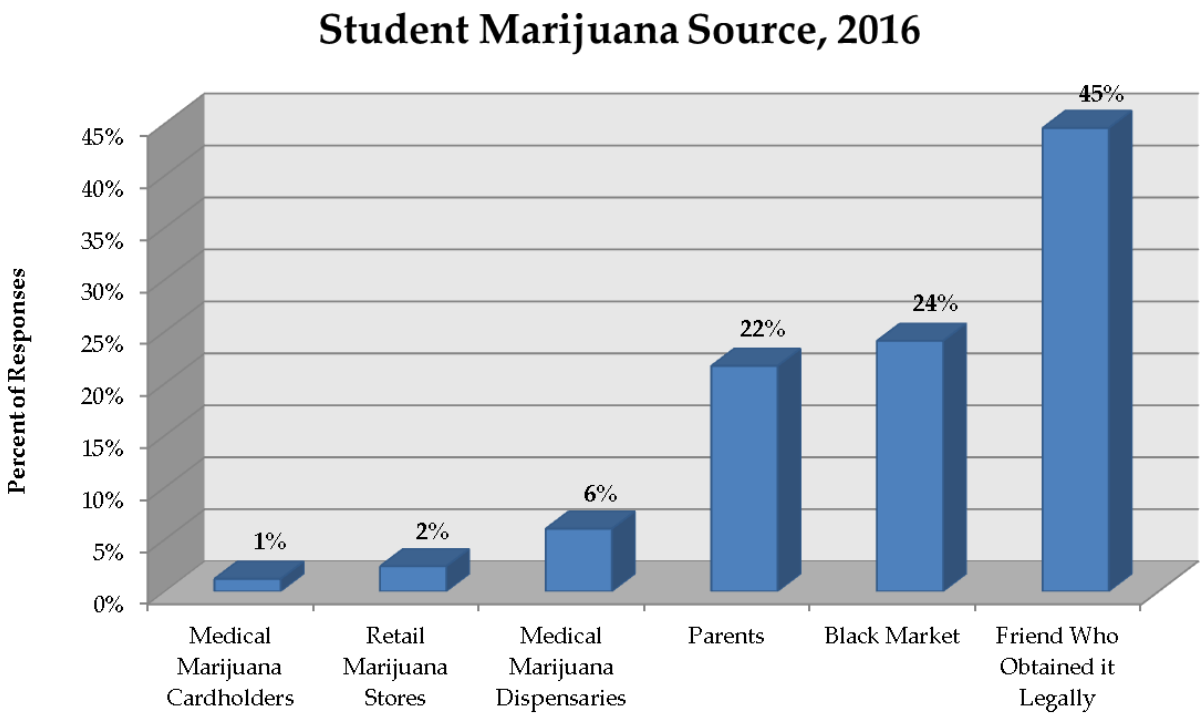
- Since the legalization of recreational marijuana, what impact has there been on marijuana-related incidents at your school?
  - 82 percent reported an increase in incidents
  - 12 percent reported no change in incidents
  - 6 percent reported a decrease in incidents

- What were the most predominant marijuana violations by students on campus?
  - 45 percent reported being under the influence during school hours
  - 43 percent reported possession of marijuana
  - 7 percent reported possession of marijuana-infused edibles
  - 2 percent reported selling marijuana to other students
  - 2 percent reported sharing marijuana with other students



SOURCE: **Colorado Association of School Resource Officers (CASRO) and Rocky Mountain HIDTA**

- Where do the students get their marijuana?
  - 45 percent reported friends who obtain it legally
  - 24 percent reported from the black market
  - 22 percent reported from their parents
  - 6 percent reported from medical marijuana dispensaries
  - 2 percent reported from retail marijuana stores
  - 1 percent reported from medical marijuana cardholders



SOURCE: **Colorado Association of School Resource Officers (CASRO) and Rocky Mountain HIDTA**

Some Comments from School Resource Officers

High at School: "Multiple incidents of students leaving campus during lunch, smoking marijuana and returning to campus under the influence."

Home Grows:

- "Children coming in clothes smelling like marijuana."
- "Incidents are slightly up from last year but seeing an increase in BHO [butane hash oil] (homemade). Had an incident in which 2 elementary students came to school smelling of product. Father had a licensed care giver operation and was growing 160 plants in house. DHHS took no action because of the grow being legal."

Middle School Users: "On several occasions students have shown up to school obviously high on marijuana. When asked where they obtained the drug it's 50-50 parents or friends. I have seen this at the 6th grade level, but mostly 8th grade level. Hardest part telling kids that marijuana usage at an early age is detrimental to brain growth, but some tell me that my mom and dad say it's ok."

Getting High and Skipping Class: "The amount of marijuana use/sales has climbed since it became legal for legal users. One of the primary problems I see is the strength (potency) of the marijuana. Students use on a break/lunch and cannot return to class, therefore the truancy rates are high."

School Marijuana Use on the Rise: "Students at the middle and high school levels have brought leaf marijuana, edibles, and paraphernalia to school either for personal use or to share with others. They tend to store said items in their cars, backpacks, and other personal belongings. Having worked in the schools before Marijuana was legal and then returning after legalization the number of middle school students who are using and exposed to marijuana seems to be on the rise in my opinion."

"Legal" Users Selling to Kids: "Former students gather across the street from school and sell to current students. Sellers are either 21+ years old or 18 & have medical marijuana cards."

Home Environment Encourages Use: "8th grade kid high at school he and 6th grade sister both smoke marijuana at home with parents while watching TV at night. Parents also let both eat marijuana edibles that parents make. Search warrant in home has illegal grow, but much finished products (marijuana) and other drugs and stolen gun."

Edibles Resulting in Paramedics: "In Feb. 2016 a juvenile male brought edibles into the school. The male gave it out to several students and consumed himself. Paramedics were called and the male was transported to the ER. The juvenile's parent was a user and the source of the edibles."

Elementary Students Defending Pot Use: "I have taught D.A.R.E over 20 years. The attitude towards marijuana has drastically changed among grade school kids. They are more vocal in defending the useful purpose and benefits of marijuana. Kids defend parent and sibling use. I asked a 5th grade boy what he thought he would be doing when he was 25 years old. He replied 'work in a weed shop.' I asked why he chose that for a job, he said 'because that's what my dad wants me to do.' Common parenting in my community. I have seen a large increase in pro-marijuana clothing in students 4-

12 grades. I have a large Native American population of students in my classes. Many will defend the use of marijuana as they are taught it is medicine and has always been so in their culture, no matter if legal or not by 'the white man laws.' Many Native American students have explained to me the use of marijuana is a 'right of passage.'"

Buying Marijuana on Facebook: "There has been a definite increase in hash/marijuana concentrate at the school. There has also been a significant increase in delivery methods showing up at school (pipe/vape pens/etc.). I have also seen the increase in the use of social media to buy their product. Just go to a certain Facebook page, order your hash/marijuana and the sellers will deliver the product to the local park by your home. I had a case this year (2016) where I now have a warrant out for an adult for selling marijuana to a child and contributing to the delinquency of a child and the deal was made on Facebook and was sold at a business near the school. Internet sales are a booming business in the marijuana world."

Regular Marijuana Use:

- "Students at alternative high school come to school high or leave campus and get high and don't return to school. Students admitting getting high on regular basis 3-4 times a week and usually high most of the weekend. Alcohol also involved. Middle school students report experimenting with marijuana. Few (3-4) report smoking once a month."
- "Many students skip their study period just prior to lunch and return from lunch high on marijuana. This is pretty much a daily occurrence."

Medical Marijuana Diversion: "In April 2016 three students were in parking lot of school smoking marijuana. One student recently turned 18 and shortly after, obtained medical MJ card. That student was sharing with the other two. Student contacted with MJ at Prom. Had recently turned 18 and then got medical MJ card. That led to discovery of possession of alcohol. January 2016 sophomore student found near campus selling marijuana to other students. Suspended by school, court gave diversion."

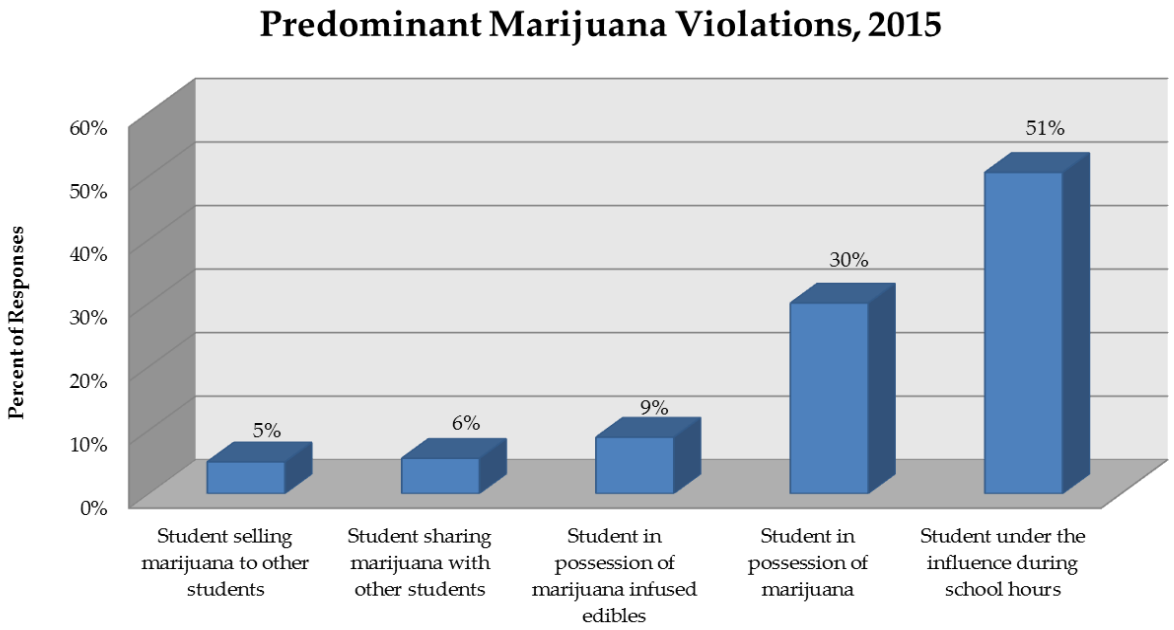
School Counselor Survey

- **The Colorado School Counselor Association elected not to participate in a 2016 survey.**

In August 2015, 188 school counselors participated in a survey concerning the legalization of marijuana in schools. The majority were assigned to high schools with an average tenure of ten years. They were asked for their professional opinion on a number of questions including:

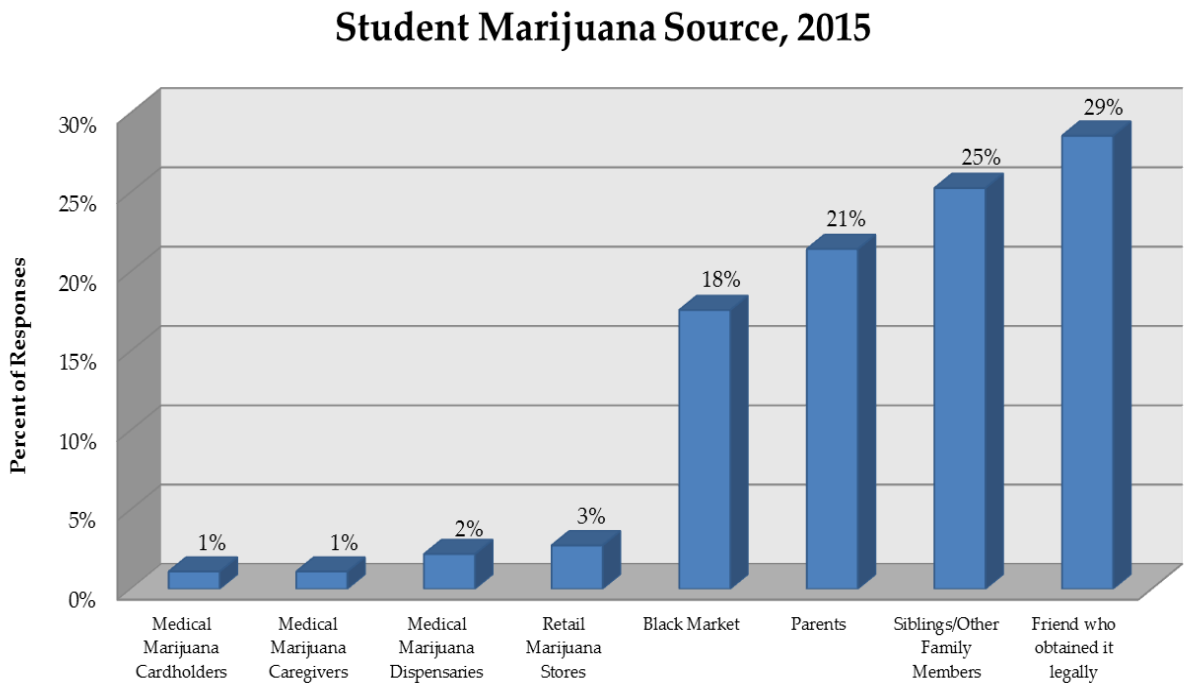
- Since the legalization of recreational marijuana, what impact has there been on marijuana-related incidents at your school?
  - 69 percent reported an increase in incidents
  - 30 percent reported no change in incidents
  - 2 percent reported a slight decrease in incidents

- What were the most predominant marijuana violations by students on campus?
  - 51 percent reported being under the influence during school hours
  - 30 percent reported possession of marijuana
  - 9 percent reported possession of marijuana-infused edibles
  - 6 percent reported sharing marijuana with other students
  - 5 percent reported selling marijuana to other students



SOURCE **Colorado School Counselor Association (CSCA) and Rocky Mountain HIDTA**

- Where do the students get their marijuana?
  - 29 percent reported friends who obtain it legally
  - 25 percent reported from their siblings or other family members
  - 21 percent reported from their parents
  - 18 percent reported from the black market
  - 3 percent reported from retail marijuana stores
  - 2 percent reported from medical marijuana dispensaries
  - 1 percent reported from medical marijuana cardholders
  - 1 percent reported from medical marijuana caregivers



SOURCE **Colorado School Counselor Association (CSCA) and Rocky Mountain HIDTA**

Some Comments from School Counselors

Halls Reek of Pot After Lunch:

- "Many kids come back from lunch highly intoxicated from marijuana use. Halls reek of pot, so many kids are high that it is impossible to apprehend all but the most impaired."
- "They go off campus and smoke during lunch with friends. They will run home with friends during lunch and smoke then."

- "There have been several instances of students in their cars on lunch or during their off hours 'hotboxing' or smoking marijuana. Most students are seniors but on occasion, seniors will provide marijuana to 9th or 10th grade students."
- "2014/2015 school year, several students caught coming back from off-campus lunch under the influence of marijuana."
- "Had a student come back from lunch, teacher believed that they were high. Student was escorted to the office, student admitted they were indeed high to the administrator."
- "Students are often referred after lunch (open campus) after they have been riding around smoking marijuana with their friends."
- "More and more students are coming back to school high after lunch."
- "In April 2015, students were going out for a break. 2-3 students smoked marijuana about a block away from school. They smelled like pot when they got back."

Just a Plant: "In March of 2015 a fifth grade boy offered marijuana to another fifth grader on the playground. In October of 2014 a kindergarten girl described the pipe in her grandmother's car and the store where you go to buy pipes. In May of 2015 a first grade girl reported that her mom smokes weed in the garage. 'It's not a drug, it's just a plant.'"

Arrives at School Stoned:

- "At the beginning of the second semester, three middle school boys were routinely arriving late at school, and noticeable intoxicated."
- "We have middle school students who either come to school high, or have it on them in a bag. Or they have pipes on them."
- "In May 2015, a teacher witnessed 2 seniors smoking marijuana while driving to school. One student admitted to having done so; the other denied it."
- "Teaching a lesson in class during first period that started 7:30 AM and 2 students were already high in class."
- "A male 13 y/o student fell asleep in several classes. He was interviewed by the school counselor and the RSO (sic). He was assessed as being high and admitted that he uses marijuana often before school. He steals it from his older brother."
- "12 yr. old, sixth grader, was suspected of coming to summer school high. When confronted he told the teacher that he smoked it at home the night before but denied being high at the time. Later, he confirmed that he had smoked early that morning. The marijuana came from his mother's stash."

New Use of Bathrooms:

- "2 students were smoking marijuana in the restroom last year."
- "8th grade male student had marijuana in his locker, classmates reported it. 8th grade female student smoked a joint in a school bathroom during school hours. Shared it with a friend."
- "7th grade girl last year had hidden marijuana and a pipe in the girl's restroom and told several friends who began getting bathroom break passes from various classrooms. Security noted an increased traffic flow to and from that restroom and found the weed and soon after the violators."

It's Legal:

- "3 or 4 times in the last school year, students have come to school under the influence after meeting at homes where parents were absent, sharing marijuana off campus and then bringing it on campus. 7th and 8th grade students have been involved, and most often their reaction when caught is 'it's legal'."
- "I met with at least 5 students last year alone that have been showing significant signs of drug use or were caught and they all said they will not stop using weed on a daily basis. Their justification was it's fine because it's legal. If it's legal it's not as bad as what adults say about the risks."

Grades Decline: "I would like to say that in general our Marijuana incidents have not gone up. We have a savvy population that knows to keep it away from school. However, I have seen a huge spike in talking with kids about it in my sessions. Last year I had two very intelligent students (above 4.0) that used marijuana 2-6 times a week. Both of them had grades decline and significant social emotional issues spike in the Spring of their Senior Year. They also both had violations at school."

Dad Allows Pot Smoking: "We had reports of two students (brothers) appear to be high at school. Our officer assessed both of them and discovered that their father, who had a medical marijuana card, was having them both "smoke a bowl" before school. He thought it would make their school day easier."

Parents High: "At our elementary school, we have noticed an increased number of parents showing up to school high. Kids have also brought [marijuana] to school to show their friends."

Difficulty in Assessment: "For school personnel, it is more difficult to evaluate what substance a student is under the influence of. We can smell alcohol and smoked marijuana but the edibles and vapes are hard to detect."

Warning: Drug Canines: "I would like to just offer that we need policy that allows for more use of drug dogs and not having to forewarn students or parents when these dogs will be present. Students and especially dealers, the ones we need to catch, are very vigilant in making adjustments when these resources are used."

Youth Use Surveys Not Utilized and Why

- **After careful analysis and consideration, Rocky Mountain HIDTA did not use the following datasets in this report because of the following reasons:**

Healthy Kids Colorado Survey (HKCS)

The HKCS shows a 7.6 percent increase in student marijuana use from 2013 (19.7 percent) to 2015 (21.2 percent). According to a front page article in *The Denver Post* (June 21, 2016), the increase was not statistically significant and thus "Pot use among Colorado teens flat." In fact, *The Denver Post* editorial board released an editorial on June 22, 2016 titled "Colorado's good news on teen pot use." An analysis of the data paints a different picture of student marijuana use in Colorado. For a detailed analysis and actual data, go to www.rmhidta.org and click on the Reports tab to read "Colorado Youth Marijuana Use: Up – Down – Flat? Examine the Data and You Decide!" Some of the data in this survey include the following:

Bad News

- Marijuana use among Colorado high school junior and senior students increased 19 percent and 14 percent respectively.
- One out of 3 Denver high school juniors and seniors surveyed are marijuana users, a 20 percent increase.
- There was nearly a 50 percent increase in the Boulder/Broomfield region high school junior and senior marijuana users.
- Colorado mountain resort communities (Region 12) saw a 90 percent increase in marijuana users among their high school seniors and a 54.7 percent increase among sophomores.
- Other rural mountain communities (Region 11) saw increases of 22.2 percent for freshmen, 72.0 percent for sophomores, 18.8 percent for juniors and 57.3 percent for seniors.
- Ten out of the 17 regions, with sufficient participation to be counted, saw an overall increase in marijuana use.

- Only 48 percent of high school students surveyed see marijuana as risky compared to 54 percent of those surveyed two years earlier.

Yes, There is Good News

- The rural western area (Region 10) had a major decrease in marijuana users in all four high school grades. This decrease was 51.8 percent among freshmen to 24.7 percent among seniors.
- Rural mountain communities (Region 17) saw an overall 17.1 percent decrease including a 53.7 percent drop in freshmen marijuana users and a 34.3 percent drop in senior users. However, the survey does show an increase in sophomore users (12.7 percent) and junior users (7.6 percent).
- Seven out of 17 regions, with sufficient participation to be counted, saw an overall decrease in marijuana users.
- The question should be raised as to what message is getting through to students in the regions experiencing overall decreases in marijuana use but missing in those regions experiencing increases in use.

Other Potentially Pertinent Information

- The article cites the Centers for Disease Control's Youth Risk Behavior Survey (YRBS) to indicate that "marijuana use among teens nationwide also remains flat…" They failed to mention that Oregon and Washington, states with legalized marijuana, and Minnesota did not participate in the 2015 YRBS. There were also ten states, including Colorado, with unweighted results because their state survey participation rate did not meet the 60 percent participation standard set by YRBS.
- In 2015 the HKCS survey had a response rate of 46 percent. Even though HKCS samples a large number of students, their participation rate is below the industry standard for weighted data.
- Jefferson County (the 2nd largest school district), Douglas County (the 3rd largest school district), El Paso County (which includes Colorado Springs, 2nd largest metro area), and Weld County results were listed as N/A which means data not available due to low participation in the region. NOTE: This is a similar reason why Colorado results were considered unweighted by the national YRBS survey.

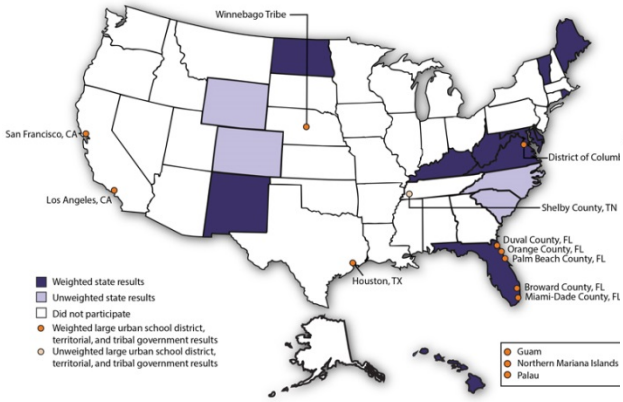
Centers for Disease Control Youth Risk Behavior Survey (YRBS)

In 2015, Colorado fell short of the required 60 percent participation rate and was, therefore, not included with weighted data in this survey. Additionally, upon further review, it was discovered that since 1991 the state of Colorado has only been represented in the High School YRBS survey with weighted data four times. Since 1995, Colorado has only been represented in the Middle School YRBS survey by weighted data twice. States that participated in the 2015 Middle School and High School YRBS surveys are represented in dark purple in the below maps. It should be noted, in 2015, high schools in the following ten states were not included with weighted high school data: Utah, Colorado, Kansas, Texas, Louisiana, Georgia, Iowa, Wisconsin, Ohio, and New Jersey. Washington, Oregon, and Minnesota did not participate in the survey.

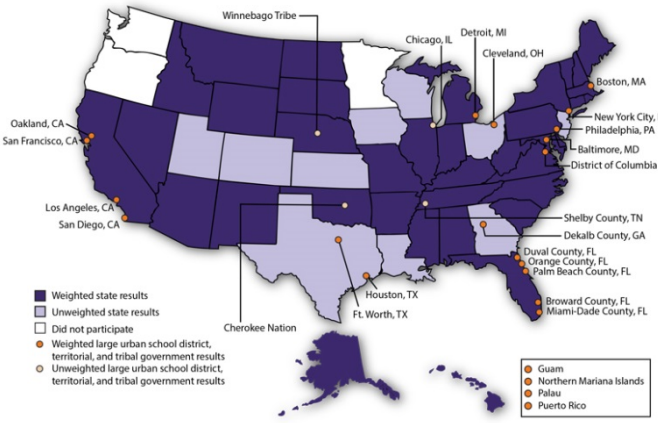
Centers for Disease Control Youth Risk Behavior Survey

2015 YRBS Participation Map

Middle Schools



High Schools



SOURCE: **Centers for Disease Control and Prevention, Adolescent and School Health, YRBS Participation Maps and History <http://www.cdc.gov/healthyyouth/data/yrbs/participation.htm>**

Monitoring the Future (MTF) Study:

Monitoring The Future is designed to be nationally-represented and not state-represented. MTF does not provide usable estimates for the specific state of Colorado because of the state's relatively small size. Colorado is only 1.6 percent of the total U.S. population; thus, the sampling would only be 1.6 percent of Colorado schools (400) or about 6 schools per year. Since 2010, the survey sampled an average of 4.6 Colorado schools. In 2014 and 2015, there were four schools surveyed each year of which three

were eighth grade. Therefore, the MTF study is not useful for state data pertaining to Colorado for school-age drug use data and trends.

Related Material

American Academy of Pediatrics (AAP) – Oppose Legalization: In a policy statement issued by the American Academy of Pediatrics, the organization declares their recommendations regarding legalization of marijuana in regard to the effects on our youth:

"Given the data supporting the negative health and brain development effects of marijuana in children and adolescents, ages 0 through 21 years, the AAP is opposed to marijuana use in this population." Additionally, the AAP declares that they, "Oppose legalization of marijuana because of the potential harms to children and adolescents. The AAP supports studying the effects of recent laws legalizing the use of marijuana to better understand the impact and define best policies to reduce adolescent marijuana use." Furthermore, the AAP, "Opposes the use of smoked marijuana because smoking is known to cause lung damage, and the effects of secondhand marijuana smoke are unknown." Lastly, the AAP discourages the use of marijuana by adults due to the influence on children and adolescent behavior.[1]

American College of Pediatricians (ACP): Marijuana Harmful to Youth, Oppose Legalization: An article published and reviewed by the ACP states, "Although increasing legalization of marijuana has contributed to the growing belief that marijuana is harmless, research documents the risks of its use by youth are grave. Evidence indicates limited legalization of marijuana has already raised rates of unintended marijuana exposure among young children, and may increase adolescent use. Therefore, the American College of Pediatricians supports legislation that continues to restrict the availability of marijuana…"

Supporting evidence that the ACP cites regarding youth marijuana abuse includes:

- According to CDC data, more teens are now smoking marijuana than cigarettes.
- Researchers in Colorado found that approximately 74 percent of adolescents in substance abuse treatment had used someone else's medical marijuana, a potential byproduct of legalization.
- The National Institute of Drug Abuse- (NIDA) funded *Monitoring the Future* study of the year 2012 showed that 12.7 percent of 8th graders, 29.8 percent of 10th graders, and 36.4 percent of 12th graders had used marijuana at least once in the year prior to being surveyed. They also found that 7, 18 and 22.7 percent respectively for these groups used marijuana in the past month.

- The number of current (past month) users aged 12 and up increased from 14.5 to 18.9 million since 2007.
- Marijuana is the leading illicit substance mentioned in adolescent emergency department admissions and autopsy reports, and is considered one of the major contributing factors leading to violent deaths and accidents among adolescents.
- Approximately 9 percent of users overall become addicted to marijuana, about 17 percent of those who start during adolescence become addicted.

In summary, marijuana use is harmful to children and adolescents. For this reason, the American College of Pediatricians opposes its legalization for recreational use and urges extreme caution in legalizing it for medicinal use. Likewise, the American Academy of Child and Adolescent Psychiatry (AACAP) recently offered their own policy statement opposing efforts to legalize marijuana.[2]

Pot Science – Top Marijuana Findings of 2015:[3]

- A study published in the journal *JAMA Psychiatry* examined brain scans in pairs of same-sex siblings, including some sets of twins. The researchers found that teens who had smoked marijuana – even once – had smaller brain volume in the amygdala compared with teens who never tried pot. The amygdala is involved in processing emotions and seeking rewards.
- Researchers have found that marijuana could play a role in cortical thinning (the cortex is the outer layer of the brain), which may alter brain development in teens.
- One in five high school students who use e-cigarettes has also tried using these devices to vape pot, reported a Connecticut study of nearly 4,000 teens (released September 2015).

Democrat Governor – Legalizing Pot Was 'Reckless': In a gubernatorial debate Colorado Governor John Hickenlooper stated, "I think for us to do that [legalize recreational use] without having all the data, there is not enough data, and to a certain extent you could say it was reckless." A study that speaks to this sentiment was published in the *Journal of Addiction* by professor Wayne Hall of Kings College, London shows that marijuana is highly addictive, causes mental health problems and is a gateway drug to other illegal dangerous drugs. The study confirms that regular adolescent marijuana users have lower educational attainment than non-using peers, users are more likely to use other illegal drugs, adolescent use produces 'intellectual impairment,' marijuana use doubles the risk of being diagnosed with schizophrenia, and marijuana use increases the risk of heart attacks in middle-aged adults.[4]

Colorado Educators Concerned About Pot in Public Schools:[5]

- Authorities are referring to marijuana as the No. 1 issue Colorado schools face. According to Christine Harms, director of the Colorado School Safety Resource Center, "Our students are paying the price."
- "At first, I thought it was similar to alcohol and that the kids would do it anyway and all that, but it's like they're disguising alcohol as Kool-Aid and marketing it to kids. These edibles are cookies and gummy bears, and they're filled with high amounts of THC. There's a shift in culture, kids see their parents smoking it and see it marketed everywhere, and they think it's normal and OK for them to do."
    - Jeff Whitmore, director of transportation for Bayfield School District in Southwestern Colorado

Teens Who Use Cannabis at Risk of Schizophrenia:[6]

- In a study performed by researchers from Western University in Ontario, Canada, long-term exposure to THC in mice was linked to several characteristics present in schizophrenics. Adolescent rodents with THC exposure were socially withdrawn and demonstrated increased anxiety, cognitive disorganization and abnormal levels of dopamine, all of which are features of schizophrenia. These changes continued into early adulthood, well past the initial exposure.
- "Adolescence is a critical period of brain development, and the adolescent brain is particularly vulnerable. Health policy makers need to ensure that marijuana, especially marijuana strains with high THC levels, stays out of the hands of teenagers."
    - Steven Laviolette, PhD – led the research at Western University, Ontario, Canada

Something Interesting Happens to Weed After It's Legal: Researchers from the Pardee RAND Graduate School and Carnegie Mellon University examined prices of marijuana in Washington over the course of the first two years of recreational legalization. As one might suspect, prices of both retail and wholesale marijuana have plummeted. Currently, prices are falling at about 2 percent per month, which equates to an approximate 25 percent drop every year going forward. For consumers of pot, the decrease in price will affect different populations in different ways. For example: young users are typically more "price sensitive" consumers; therefore, their use of inexpensive pot may rise over time, as might that of problematic marijuana users.[7]

America's Youth – The Marijuana Martyrs:[8]

- Colorado and Washington, the first two states to legalize, were among the top three states with the largest increases in youth homelessness from 2013 to 2014. In each state, the youth homelessness rate grew by 27 and 13.3 percent respectively in just one year.
- Colorado now ranks number one for regular marijuana use among youth (U.S. Department of Health and Human Services). This proud achievement only came incrementally, though; Colorado once ranked a distant 14th in the country for youth usage. Once again, this jump in the rankings coincided with Colorado's 2012 passage of Amendment 64, which legalized marijuana for recreational use.
- Average use among teens in recreational/medical marijuana states rests at 10.5 percent compared to 8.9 percent in states where it is only legal for medicinal purposes and 6.1 percent in states where the drug is banned altogether. In other words, there is a direct correlation between availability of marijuana and teen usage.
- According to Arapahoe House Treatment network in Colorado, teenage admissions for marijuana addiction in Colorado increased by 66 percent between 2011 and 2014, again correlating with the 2012 passage of Amendment 64.
    - Ninety-five percent of the teenagers treated for substance abuse and addiction in my adolescent substance-abuse treatment clinic at Denver Health are there because of their marijuana use, and because nationwide, 67 percent of teens are referred to substance treatment because of their marijuana use. Marijuana is the No. 1 reason why adolescents seek substance-abuse treatment in the United States. *(Dr. Christian Thurstone, University of Colorado)*
- A comprehensive New Zealand study of 1,000 individuals over many years found that participants who used cannabis heavily in their teens had an astonishing average loss of 8 IQ points.

Impact of Legalization on Youth: In a report written by Dr. Kenneth Finn, MD and Rochelle Salmore, MSN, RN, some effects of marijuana legalization on our youth in CO are described from the eyes of medical professionals:

"The effects on learning and education related to cannabis use have been documented extensively, and Colorado school expulsions for drug related reasons increased 40% between 2008 and 2014, citing marijuana as the most commonly abused substance. In addition, the American Academy of Neurology recently recommended no cannabis use for children, adolescents, or adults until further study is done. Cannabis has a known addictive potential, particularly in the developing brain, and has a well-described withdrawal syndrome. Nationally there are 7.15% adolescents using

cannabis, but in Colorado this figure is 11.16%. Furthermore, the addiction rate is higher for adolescents (approximately 18%) than for adults (approximately 9%)."[9]

Legalizing Marijuana and the Opiate Epidemic: New science suggests that teenagers who use marijuana increase their risk of opiate addiction later in life. For example, a 20-year-old who takes an opiate painkiller for a skiing injury or wisdom tooth removal may be much more at risk of becoming addicted to that painkiller as a result of his or her earlier marijuana use – no matter how insignificant that earlier use may seem. This science puts some teeth behind the old-school term "gateway drug."

A study of rodents, conducted at the Hurd Laboratory at the Mount Sinai School of Medicine, showed that rodents exposed to THC in the adolescent years had offspring that were primed for addiction. The research has yet to be reproduced in humans, but other studies on trans-generational effects of other drugs in humans appear consistent with the discoveries in rodents.[10]

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SECTION 3: Adult Marijuana Use

Some Findings

- College age past month marijuana use increased **17 percent** in the two-year average (2013/2014) since Colorado legalized recreational marijuana compared to the two-year average prior to legalization (2011/2012).
    - Nationally college age past month marijuana use **increased 2 percent** during the same timeframe.

- The latest 2013/2014 results show Colorado college age adults ranked #**1** in the nation for past month marijuana use, up from #**3** in 2011/2012 and #**8** in 2005/2006.

- Colorado college age past month marijuana use for 2013/2014 was **62 percent higher** than the national average compared to **42 percent higher** in 2011/2012.

- Adult past-month marijuana use **increased 63 percent** in the two-year average (2013/2014) since Colorado legalized recreational marijuana compared to the two-year average prior to legalization (2011/2012).
    - Nationally adult past month marijuana use **increased 21 percent** during the same timeframe.

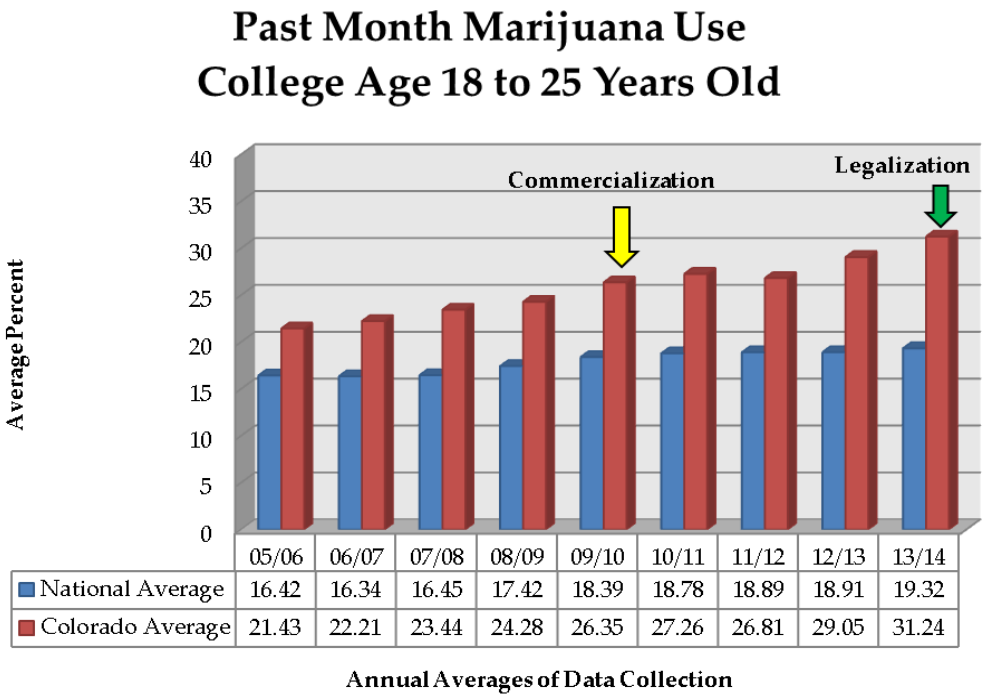
- The latest 2013/2014 results show Colorado adults ranked #**1** in the nation for past month marijuana use, up from #**7** in 2011/2012 and #**8** in 2005/2006.

- Colorado adult past month marijuana use for 2013/2014 was **104 percent higher** than the national average compared to **51 percent higher** in 2011/2012.

- The top ten states for the highest rate of current marijuana use for 2013-2014 were all medical-marijuana states.

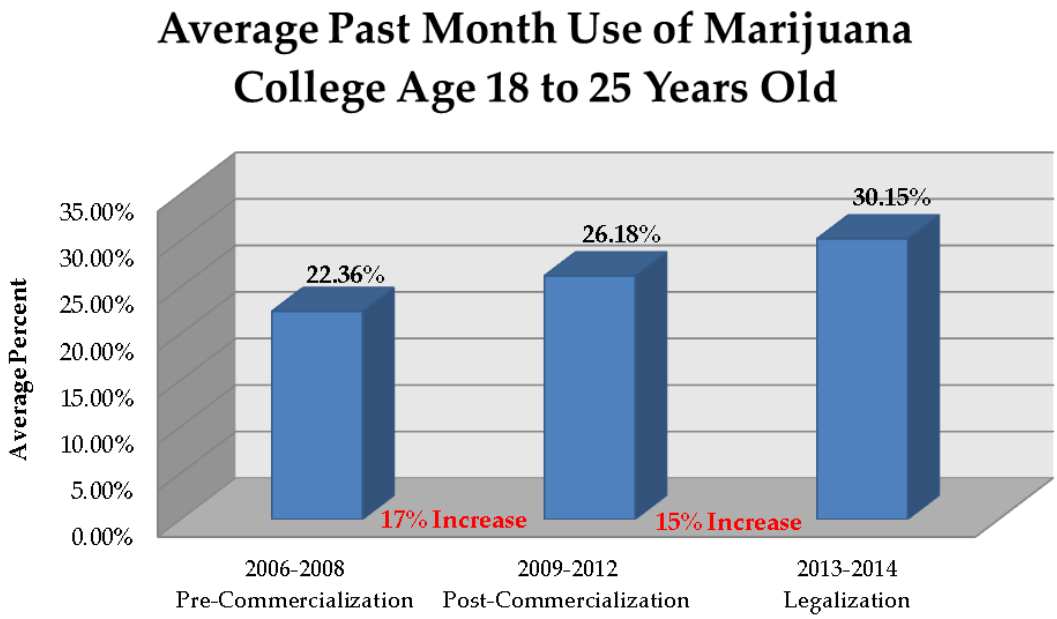
Data

College Age 18 to 25 Years Old

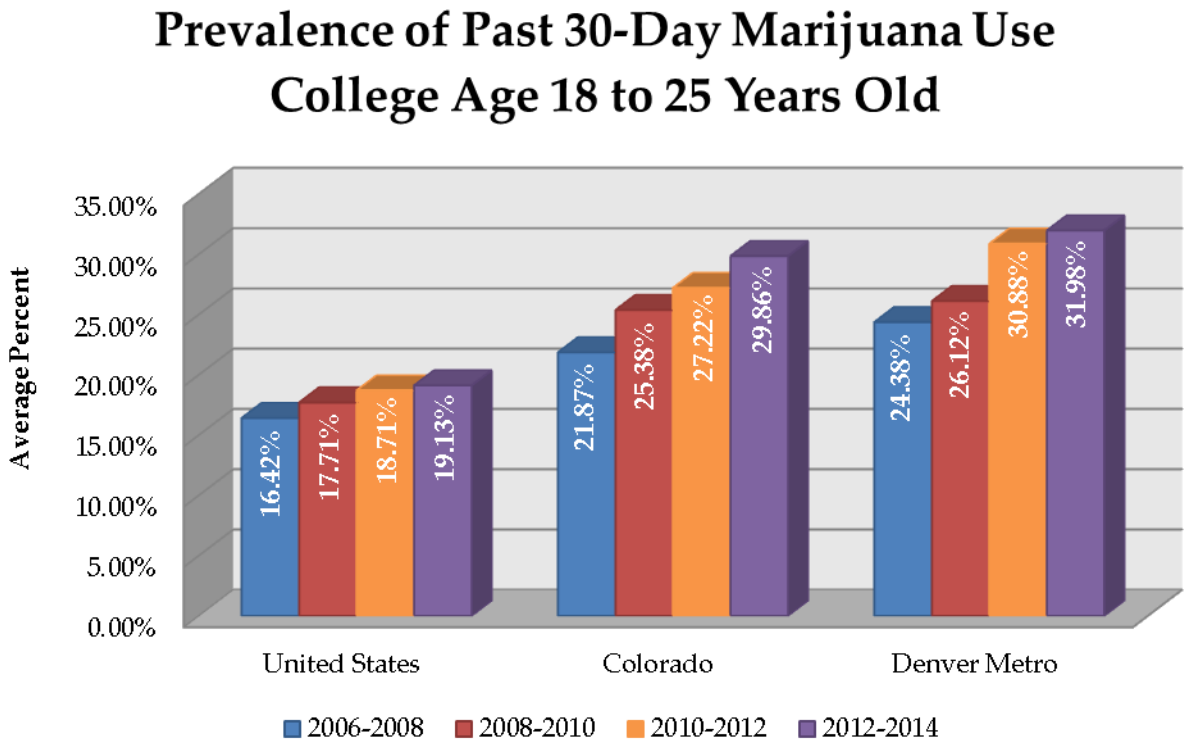


	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
National Average	16.42	16.34	16.45	17.42	18.39	18.78	18.89	18.91	19.32
Colorado Average	21.43	22.21	23.44	24.28	26.35	27.26	26.81	29.05	31.24

SOURCE: SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014

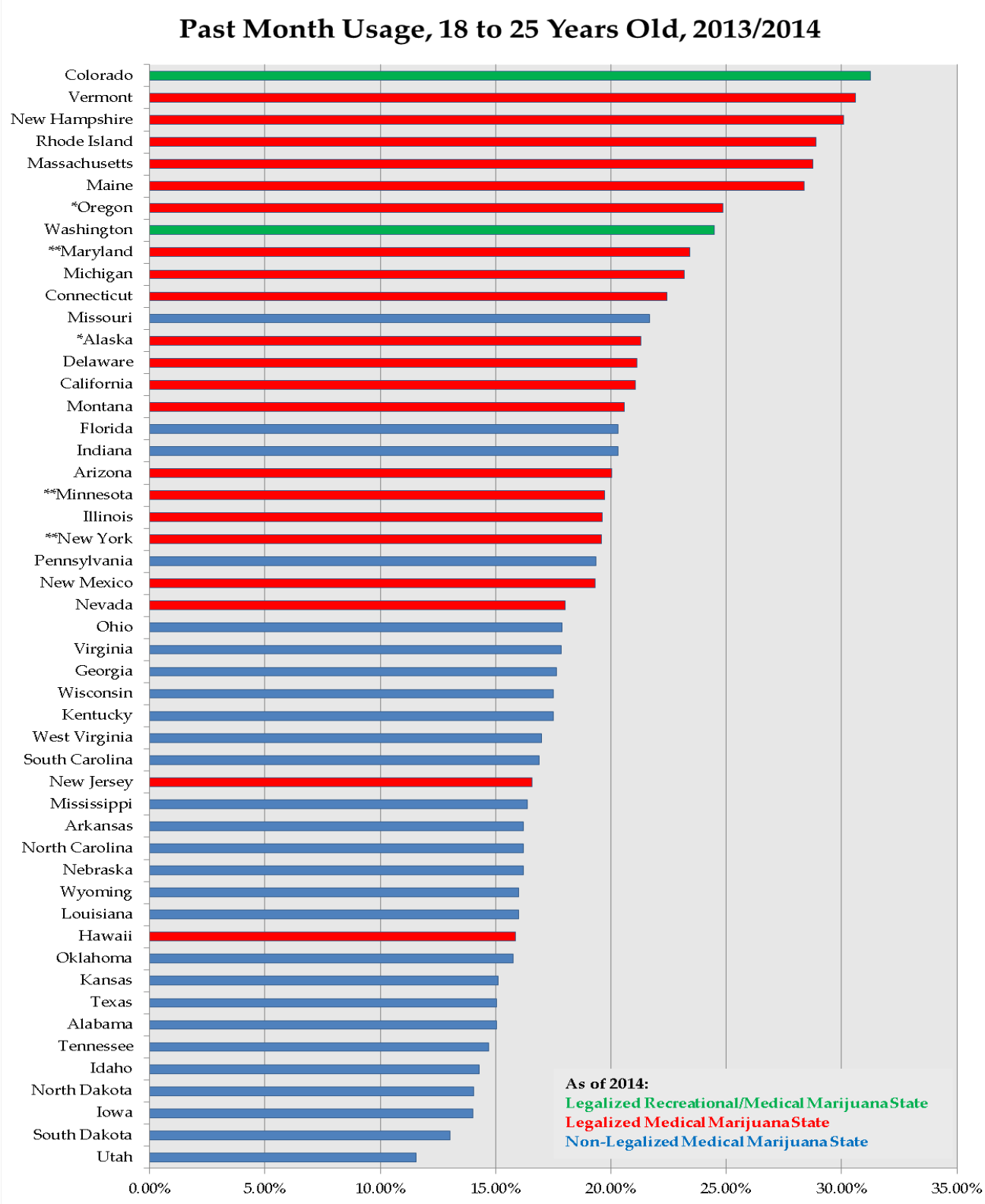


SOURCE: SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014



SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health, Substate Region Estimates 2006-2014**

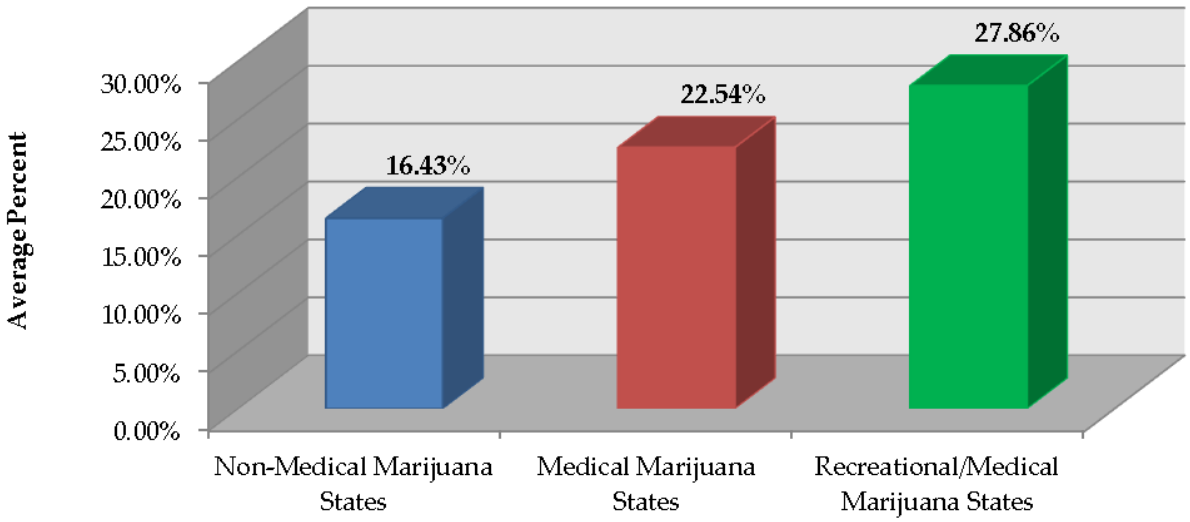
NOTE:	**SUBSTATE DATA IS ONLY AVAILABLE FROM THE NATIONAL SURVEY ON DRUG USE AND HEALTH IN THE ABOVE TIMEFRAMES.**



SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**

NOTE: *Oregon and Alaska voted to legalize recreational marijuana in November 2014
**States that had legislation for medical marijuana signed into effect during 2014

Average Past Month Use
College Age 18 to 25 Years Old, 2013/2014



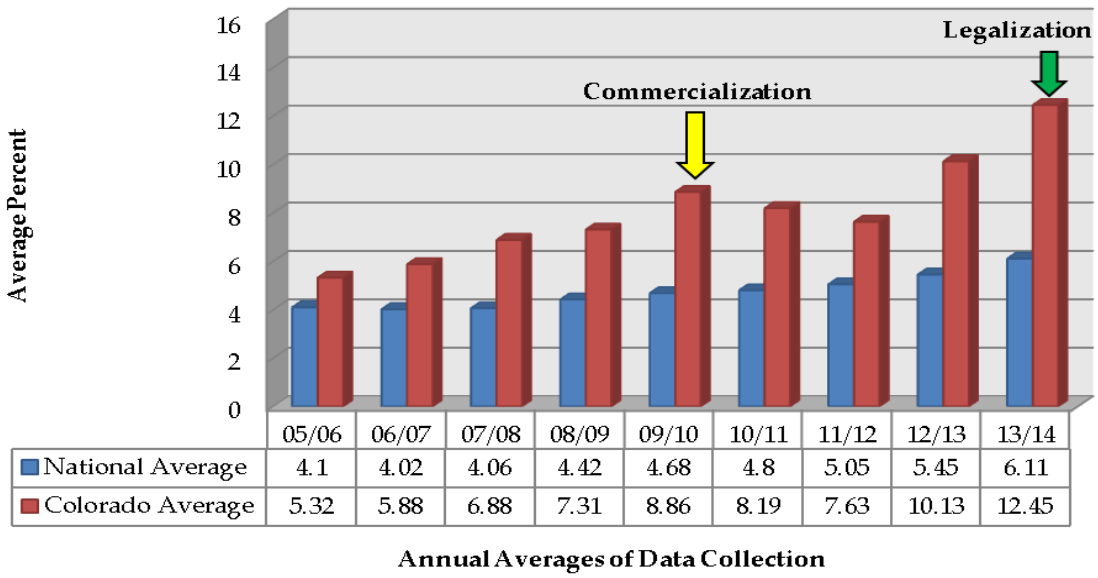
SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**

States for Past Month Marijuana Use
College Age 18 to 25 Years Old, 2013/2014

Top 10 (Medical/Recreational States)	Bottom 10 (Non-Medical or Recreational States)
National Average = 19.32%	
1. Colorado – 31.24%	41. Oklahoma – 15.76%
2. Vermont – 30.60%	42. Kansas – 15.11%
3. New Hampshire – 30.09%	43. Texas – 15.06%
4. Rhode Island – 28.90%	44. Alabama – 15.04%
5. Massachusetts – 28.74%	45. Tennessee – 14.72%
6. Maine – 28.38%	46. Idaho – 14.28%
7. Oregon – 24.85%	47. North Dakota – 14.05%
8. Washington – 24.47%	48. Iowa – 14.01%
9. Maryland – 23.42%	49. South Dakota – 13.02%
10. Michigan – 23.17%	50. Utah – 11.55%

SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**

Adults Age 26+ Years Old



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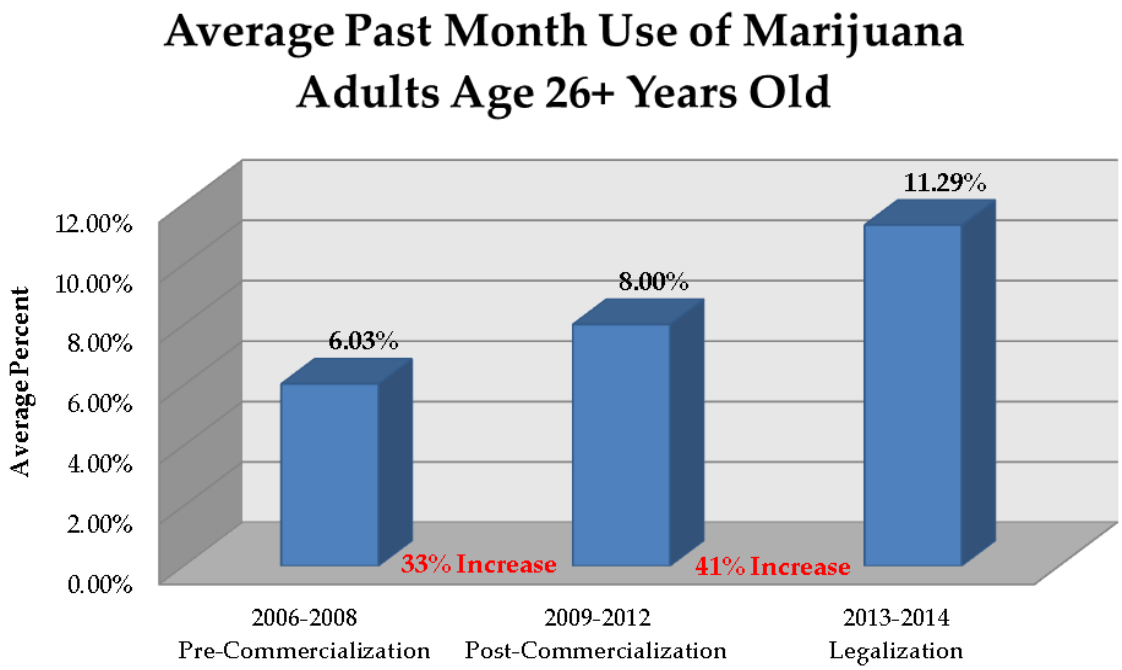
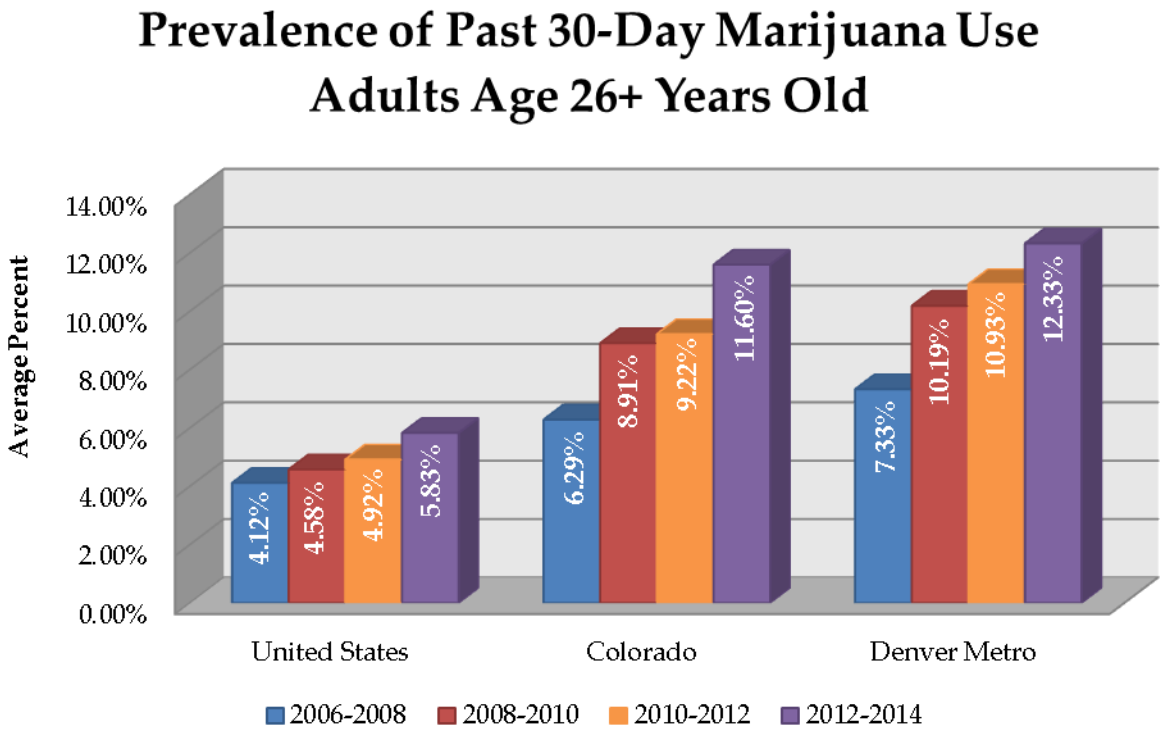
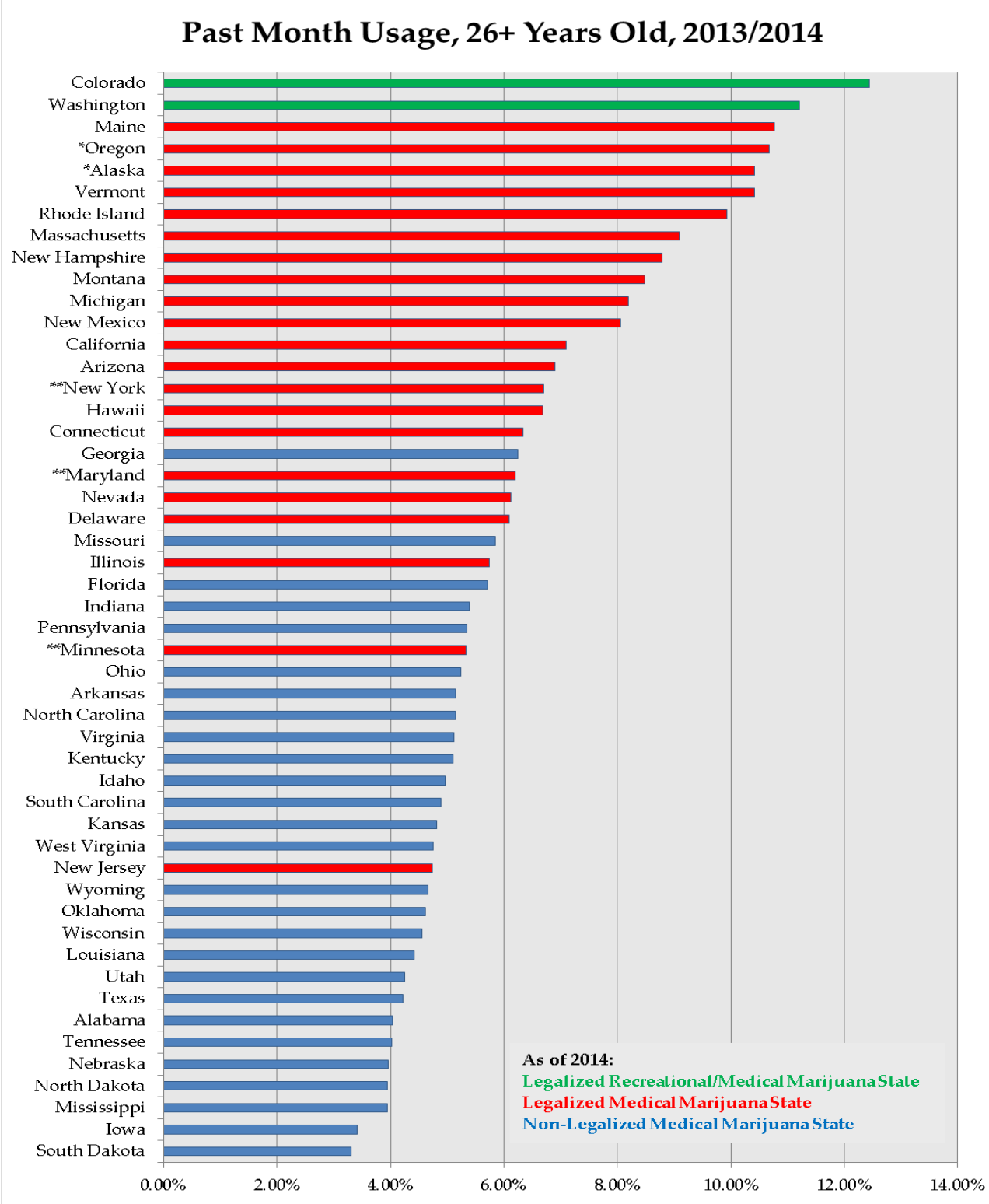


SOURCE: SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014.



SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health, Substate Region Estimates 2006-2014**

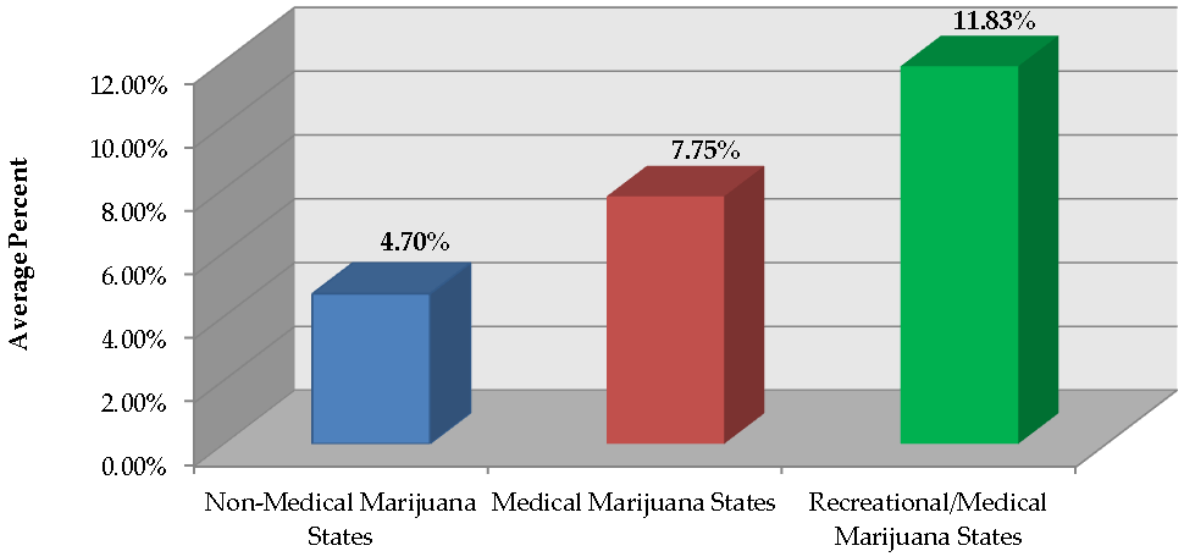
NOTE:	**SUBSTATE DATA IS ONLY AVAILABLE FROM THE NATIONAL SURVEY ON DRUG USE AND HEALTH IN THE ABOVE TIMEFRAMES.**



SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**

NOTE: *Oregon and Alaska voted to legalize recreational marijuana in November 2014
**States that had legislation for medical marijuana signed into effect during 2014

Average Past Month Use
Adults Ages 26+ Years Old, 2013/2014



SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**

States for Past Month Marijuana Use
Adults Ages 26+ Years Old, 2013/2014

Top 10 (Medical/Recreational States)	Bottom 10 (Non-Medical or Recreational States)
National Average = 6.11%	
1. Colorado – 12.45%	41. Louisiana – 4.42%
2. Washington – 11.21%	42. Utah – 4.25%
3. Maine – 10.77%	43. Texas – 4.21%
4. Oregon – 10.68%	44. Alabama – 4.03%
5. Alaska – 10.42%	45. Tennessee – 4.01%
6. Vermont – 10.42%	46. Nebraska – 3.97%
7. Rhode Island – 9.92%	47. North Dakota – 3.95%
8. Massachusetts – 9.08%	48. Mississippi – 3.95%
9. New Hampshire – 8.78%	49. Iowa – 3.40%
10. Montana – 8.49%	50. South Dakota – 3.30%

SOURCE: **SAMHSA.gov, National Survey on Drug Use and Health 2013 and 2014**

Colorado Adult Marijuana Use Demographics[1]

According to the Colorado Behavior Risk Factor Surveillance System, 2014:

- 13.6 percent of adults (18+ years old) are current users of marijuana
- Approximately 1 out of 3 current users report using marijuana daily
- A little less than 1 in 5 (18.8 percent) report driving after using marijuana
- Highest current use demographics:
    - Younger adults (18 to 24 years old)
    - Less than high school education
    - Lower household income
    - Black
    - Gay/Lesbian/Bisexual adults
    - Men
- Three highest current use areas in Colorado:
    - Boulder 18.9 percent
    - Denver 18.5 percent
    - Mountain Area West of Denver 15.6 percent

Related Material

Pot Science: Top Marijuana Findings of 2015:[2]

- A study this year published in the journal of *JAMA Psychiatry* found a doubling of marijuana use among American adults and almost a doubling of problematic use between 2002 and 2013. Earlier studies of adult marijuana use showed a much smaller increase.
    - Alan Budney, professor of psychiatry at the Geisel School of Medicine
- Another big concern on the topic of marijuana is the increase in sales of high-potency products, arriving with the advent of marijuana dispensaries in some states. "Little is known about the impact of these high-potency products compared with the lower-potency marijuana that people may have been using in the past 30 years. It's too early, using the data that's currently available, to know the effects."
    - Alan Budney, professor of psychiatry at the Geisel School of Medicine
- A 2014 survey of more than 1,000 U.S. college students found that the percentage of students who smoked marijuana every day or nearly every day reached its highest level in more than 30 years.

- Young men who smoked pot more than once a week had sperm counts which were about 30 percent lower, on average, than males who used the drug less frequently or not at all. One possible reason for this has to do with the way THC may interact with certain receptors found in the testes.
- A study published in September of 2015 in the journal *Diabetologia*, found that people who used marijuana 100 times or more as young adults were 40 percent more likely to develop prediabetes in middle age compared with individuals who never used the drug.

Number of U.S. Pot Users Doubles Over Three Years: According to a recent Gallup poll, "…the percentage of American adults who say they currently smoke marijuana has nearly doubled over the past three years." The first time the poll was conducted in 2013, only 7 percent of adults said they were marijuana smokers. However, when the poll was taken again in 2016, 13 percent of adults admitted to being current users, which according to the article, works out to be about 33 million adult marijuana users in the United States. "There are currently about 40 million cigarette smokers in the U.S., according to the Centers for Disease Control and Prevention. Given that cigarette use is in decline, marijuana use could become more prevalent than cigarette use in just a few years' time."[3]

Marijuana Does Not Help You Get Good Grades: A study following college students over years to measure the impact of marijuana use found those who smoked it often were more likely to skip class, get worse grades, and take longer to graduate. As use became more frequent, grades tended to drop – as use declined, grades tended to bounce back.[4]

Harvard Scientists Studied the Brains of Pot Smokers, and the Results Don't Look Good: According to a study performed by researchers at Harvard and Northwestern (published 4/15/2014), 18-25 year olds who smoked marijuana only a few times a week had significant brain abnormalities in the areas that control emotion and motivation. Noticeable abnormalities were even observed for those study participants who smoked marijuana only one time per week. Those who smoked more had more significant variations.[5]

Marijuana Use Among U.S. College Students at 35 Year High: A study from the University of Michigan reports that daily marijuana use has surpassed daily cigarette use among students at American universities. Daily, or near daily, pot smoking is at a record high: nearly 6 percent of all college students polled reported that they had used marijuana 20 or more times in the past 30 days. That's close to double the number (3.5 percent) of students in 2007 who said they smoke pot daily. Researchers behind the

Michigan study suggest that the increase in marijuana use is due to decreasing fears of the drugs ill effects. There was a marked decrease in the number of high school graduates who viewed pot as dangerous over the past eight years – from a majority of all students (55 percent) in 2006, to just over a third in 2014.[6]

Long-term Marijuana Use Associated with Worse Verbal Memory in Middle Age: A recent study published in the *JAMA International Medicine* journal examined cognitive performance of subjects who had used marijuana to varying degrees beginning in early adulthood using standardized tests of verbal memory, processing speed and executive function. Of the subjects, 86.3 percent reported past marijuana use but only 11.6 percent reported using marijuana into middle-age. According to Reto Auer, M.D., and co-authors, past exposure to marijuana was associated with diminished verbal memory.

"The public health challenge is to find effective ways to inform young people who use, or are considering using, marijuana about the cognitive and other risks of long-term daily use," said Wayne Hall, Ph.D., of the University of Queensland, Australia, and Michael Lynskey, Ph.D., of Kings College London, in a related commentary.[7]

Smoking Most Prevalent Mode of Lifetime Marijuana Use Among Adults: Slightly more than one-third (35 percent) of adults reported ever using marijuana in 2014. Among these adults, smoking was reported as the most prevalent mode of marijuana use. A majority of users reported smoking joints (89 percent), around one-half reported using bongs, water pipes, or hookahs (49 percent) or bowls or pipes (48 percent), and one-fourth (25 percent) smoked marijuana in blunts. Other modes of marijuana use included ingesting marijuana in edibles or drinks (30 percent) and vaporizing marijuana (10 percent).[8]

2015 National Poll Finds More Than Four in Ten U.S. Adults Report Ever Trying Marijuana: Forty-four percent of U.S. adults have ever tried marijuana, according to a nationwide July 2015 telephone poll. When the question was first asked in 1969, only 4 percent admitted to trying marijuana. The percentage increased sharply from 1973 (12 percent) to 1985 (33 percent), and then remained relatively stable until reaching a high of 44 percent in 2015.[9]

Marijuana Use More than Doubles from 2001 to 2013: The estimated prevalence of adults who used marijuana in the past year more than doubled in the United States between 2001 and 2013, according to an article published online by *JAMA Psychiatry*. Increases were particularly notable among women and individuals who were black, Hispanic, living in the South, middle-aged or older, according to the authors. Additionally, nearly 3 of every 10 Americans who used marijuana in the past year had a diagnosis of a marijuana use disorder, which equates to about 6.8 million Americans.

"In summary, while many in the United States think prohibition of recreational marijuana should be ended, this study and others suggest caution and the need for public education about the potential harms in marijuana use, including the risk for addiction. As is the case with alcohol, many individuals can use marijuana without becoming addicted. However, the clear risk for marijuana use disorders among users (approximately 30 percent) suggests that as the number of U.S. users grows, so will the numbers of those experiencing problems related to such use."[10]

Poorer Users Smoking the Most: A study published "…in the *Journal of Drug Issues* found that the proportion of marijuana users who smoke daily has rapidly grown, and that many of those frequent users are poor and lack a high school diploma." According to the study the profile of marijuana users is much closer associated to that of cigarette smokers than alcohol drinkers, "…and that a handful of users consume much of the marijuana used in the U.S." Also, 29 percent of all marijuana use across the county is from households with an annual income of less than $20,000. "The concentration of use among poorer households means that many marijuana users are spending a high proportion of their income on their marijuana habit. Users who spend fully one quarter of their income on weed account for 15 percent of all marijuana use."[11]

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[11] *The Washington Post* as published in *The Denver Post*, August 14, 2016, "Study: Poorer marijuana users smoking the most," <http://www.denverpost.com/2016/08/14/study-poorer-marijuana-users-smoking-the-most/>, accessed August 15, 2016

SECTION 4: Emergency Department and Hospital Marijuana-Related Admissions

- **2015 marijuana-related emergency department and hospitalization data for the state of Colorado was not available at the time this publication was released.**

Some Findings

- Colorado Emergency Department visits per year related to marijuana:
  - 2013 – **14,148**
  - 2014 – **18,255**

- Emergency Department rates likely related to marijuana increased **49 percent** in the two-year average (2013-2014) since Colorado legalized recreational marijuana compared to the two-year average prior to legalization (2011-2012).

- In 2014, when retail marijuana businesses began operating, the rate of emergency department visits likely related to marijuana increased **25 percent** in one year.

- Emergency Department visits related to marijuana per 100,000 in 2013:
  - Denver rate – **415.46**
  - Colorado rate – **248.32**
    - Denver's rate was **67 percent** higher than Colorado's rate and increased **25 percent** when recreational marijuana was legalized in 2013.

- Number of hospitalizations related to marijuana:
  - 2011 – **6,305**
  - 2012 – **6,715**
  - 2013 – **8,272**
  - 2014 – **11,439**

- Hospital rates likely related to marijuana increased **32 percent** in the two-year average (2013-2014) since Colorado legalized recreational marijuana compared to the two-year average prior to legalization (2011-2012).

- In 2014, when retail marijuana stores began operating, the rate of hospitalizations likely related to marijuana increased **20 percent** in only one year.

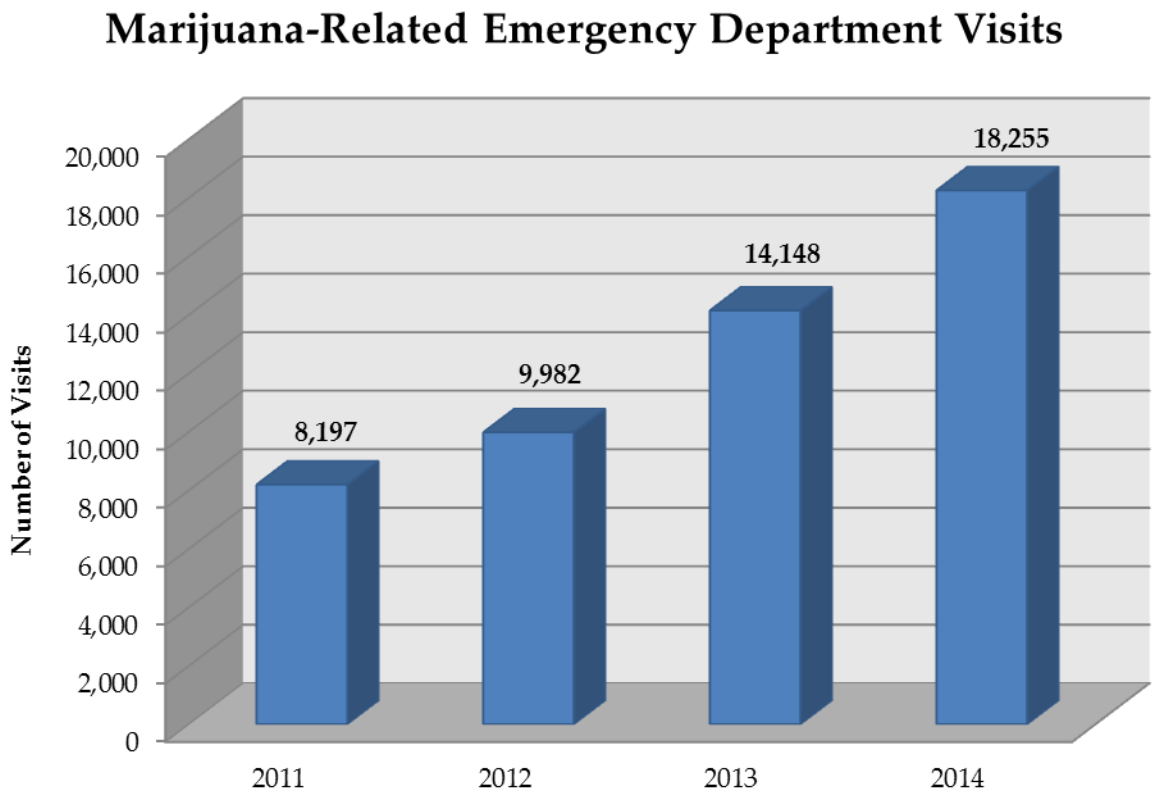
- Hospital discharges related to marijuana per 100,000 in 2013:
  - Denver rate – **245.94**
  - Colorado rate – **148.80**
    - Denver's rate was over **65 percent higher** than Colorado's rate and increased **29 percent** when recreational marijuana was legalized in 2013.

- Children's Hospital Colorado reported **1** marijuana ingestion among children under 9 years old in 2009 compared to **16** in 2015.

Definitions

Marijuana-Related: Also referred to as "marijuana mentions." This means the data could be obtained from lab tests, self-admitted or some other form of validation by the physician. That does not necessarily prove marijuana was the cause of the emergency admission or hospitalization.

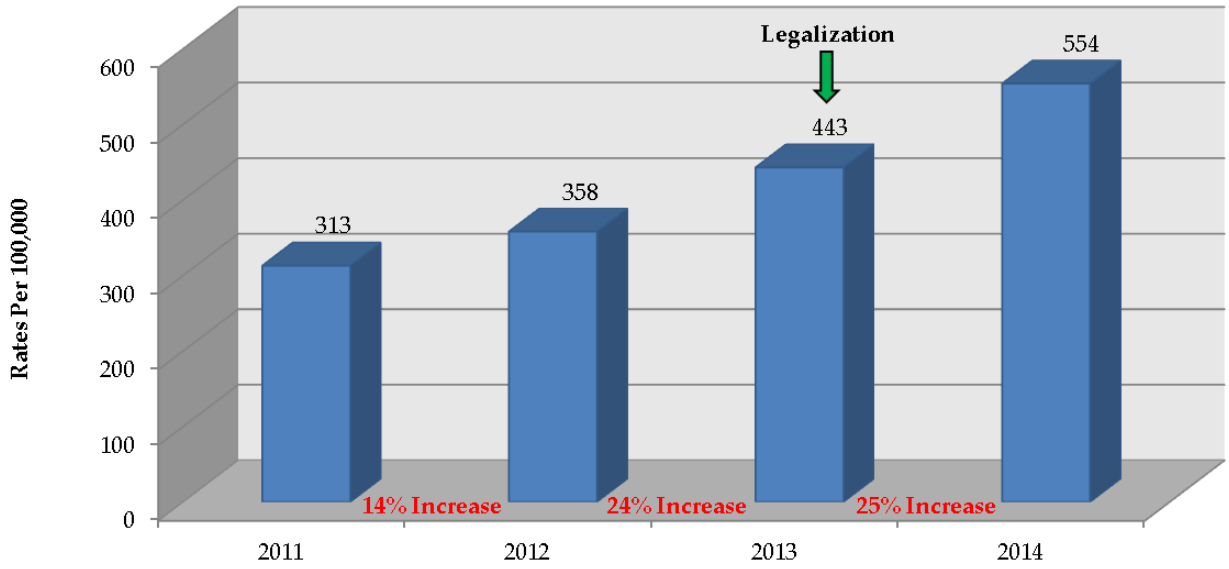
Emergency Department Data



SOURCE: **Colorado Hospital Association, Emergency Department Visit Dataset. Statistics prepared by the Health Statistics and Evaluation Branch, Colorado Department of Public Health and Environment**

NOTE: **2011 AND 2012 EMERGENCY DEPARTMENT DATA REFLECTS INCOMPLETE REPORTING STATEWIDE. INFERENCES CONCERNING TRENDS, INCLUDING 2011 AND 2012, SHOULD NOT BE MADE.**

Colorado Emergency Department Rates that are Likely Related to Marijuana*



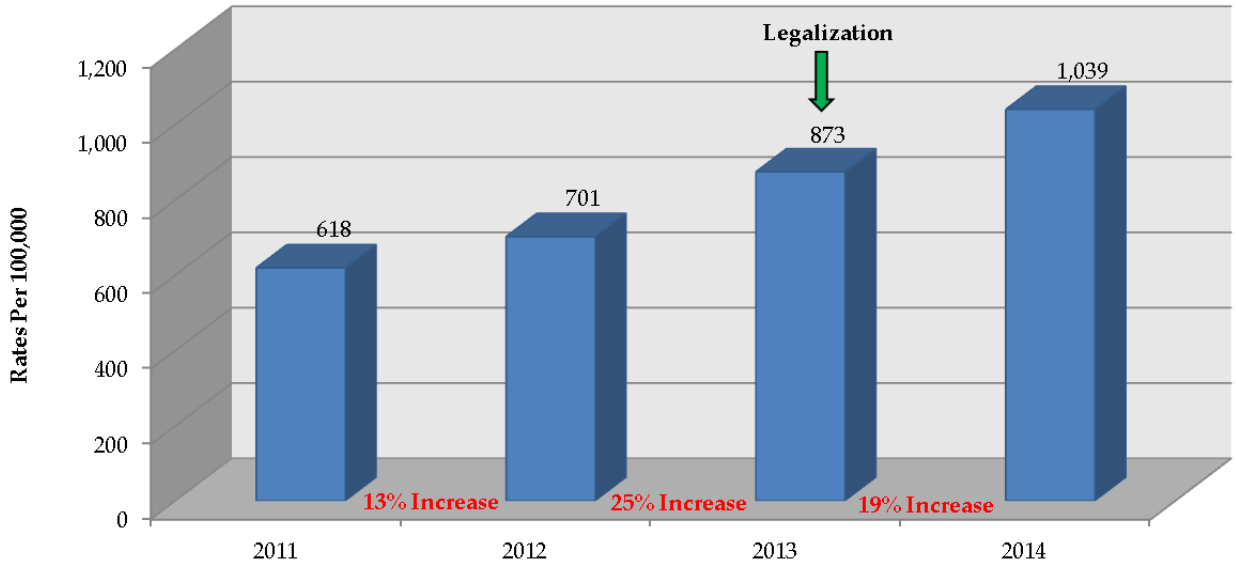
*Rates of Emergency Department (ED) Visits with Possible Marijuana Exposures, Diagnoses, or Billing Codes in the *First Three Diagnosis Codes* per 100,000 ED Visits by Year in Colorado

SOURCE: Colorado Department of Public Health and Environment, *Monitoring Health Concerns Related to Marijuana in Colorado: 2014*

NOTE: "POSSIBLE MARIJUANA EXPOSURES, DIAGNOSES, OR BILLING CODES IN THE FIRST THREE DIAGNOSIS CODES: THESE DATA WERE CHOSEN TO REPRESENT THE HD AND ED VISITS WHERE MARIJUANA USE WAS LIKELY A CAUSAL OR STRONG CONTRIBUTING FACTOR TO THE UNDERLYING REASON FOR THE HD AND ED VISIT. THESE DATA CONSISTED OF HD AND ED VISITS CODED WITH DISCHARGE CODES RELATED TO POISONING BY PSYCHODYSLEPTICS OR SEPARATE CODES RELATED TO CANNABIS ABUSE IN THE FIRST THREE DIAGNOSIS CODES WHICH ARE MORE LIKELY TO BE CLINICALLY SIGNIFICANT CODES." - *COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, MONITORING HEALTH CONCERNS RELATED TO MARIJUANA IN COLORADO: 2014*

NOTE: DATA NOT AVAILABLE PRE-2011.

Colorado Emergency Department Rates that Could be Related to Marijuana*



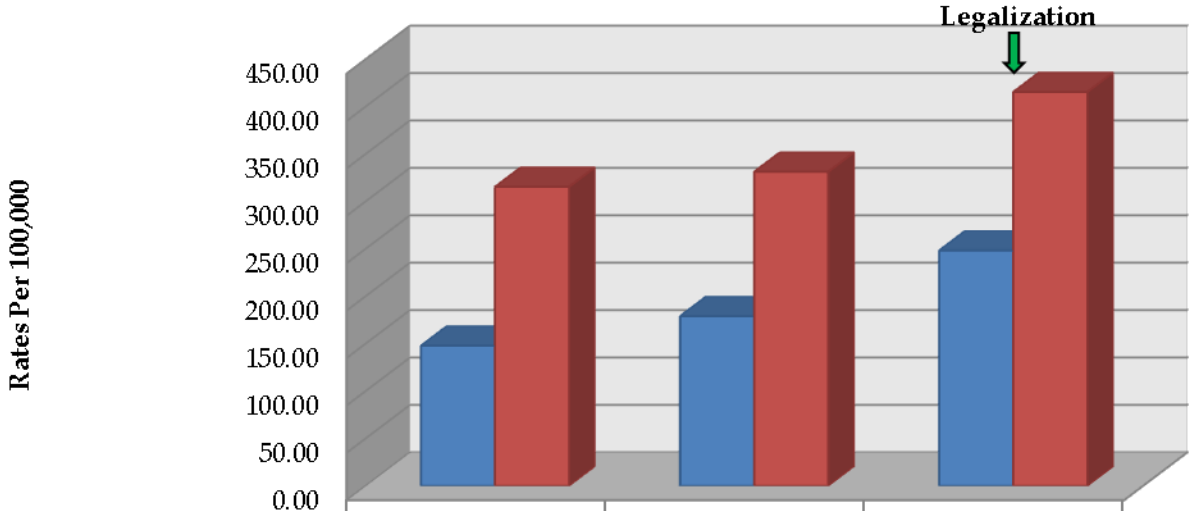
*Rates of Emergency Department (ED) Visits with Possible Marijuana Exposures, Diagnoses, or Billing Codes per 100,000 ED Visits by Year in Colorado

SOURCE: Colorado Department of Public Health and Environment, *Monitoring Health Concerns Related to Marijuana in Colorado: 2014*

NOTE: "POSSIBLE MARIJUANA EXPOSURES, DIAGNOSES, OR BILLING CODES IN ANY OF LISTED DIAGNOSIS CODES: THESE DATA WERE CHOSEN TO REPRESENT THE HD AND ED VISITS WHERE MARIJUANA COULD BE A CAUSAL, CONTRIBUTING, OR COEXISTING FACTOR NOTED BY THE PHYSICIAN DURING THE HD OR ED VISIT. FOR THESE DATA, MARIJUANA USE IS NOT NECESSARILY RELATED TO THE UNDERLYING REASON FOR THE HD OR ED VISIT. SOMETIMES THESE DATA ARE REFERRED TO AS HD OR ED VISITS WITH ANY MENTION OF MARIJUANA." - *COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, MONITORING HEALTH CONCERNS RELATED TO MARIJUANA IN COLORADO: 2014*

NOTE: DATA NOT AVAILABLE PRE-2011.

Emergency Department Rates Per 100,000 Marijuana-Related



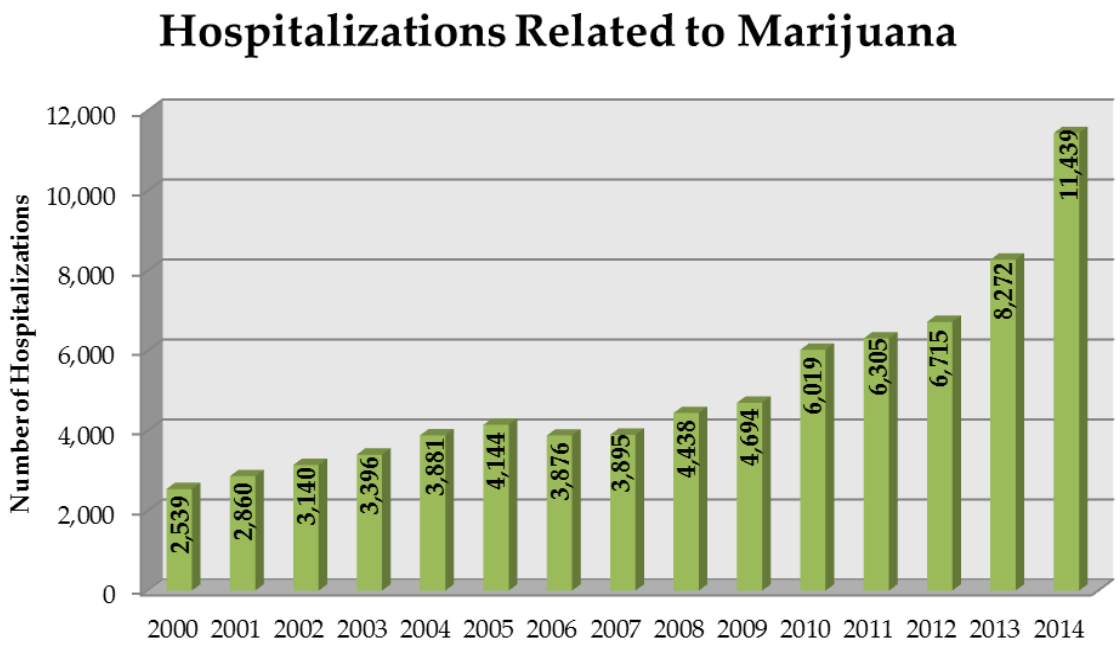
	2011	2012	2013
Colorado	147.80	179.00	248.32
Denver City and County	315.34	331.22	415.46

SOURCE: **Denver Office of Drug Strategy, The Denver Drug Strategy Commission, *Proceedings of the Denver Epidemiology Work Group (DEWG),* October 29, 2014**

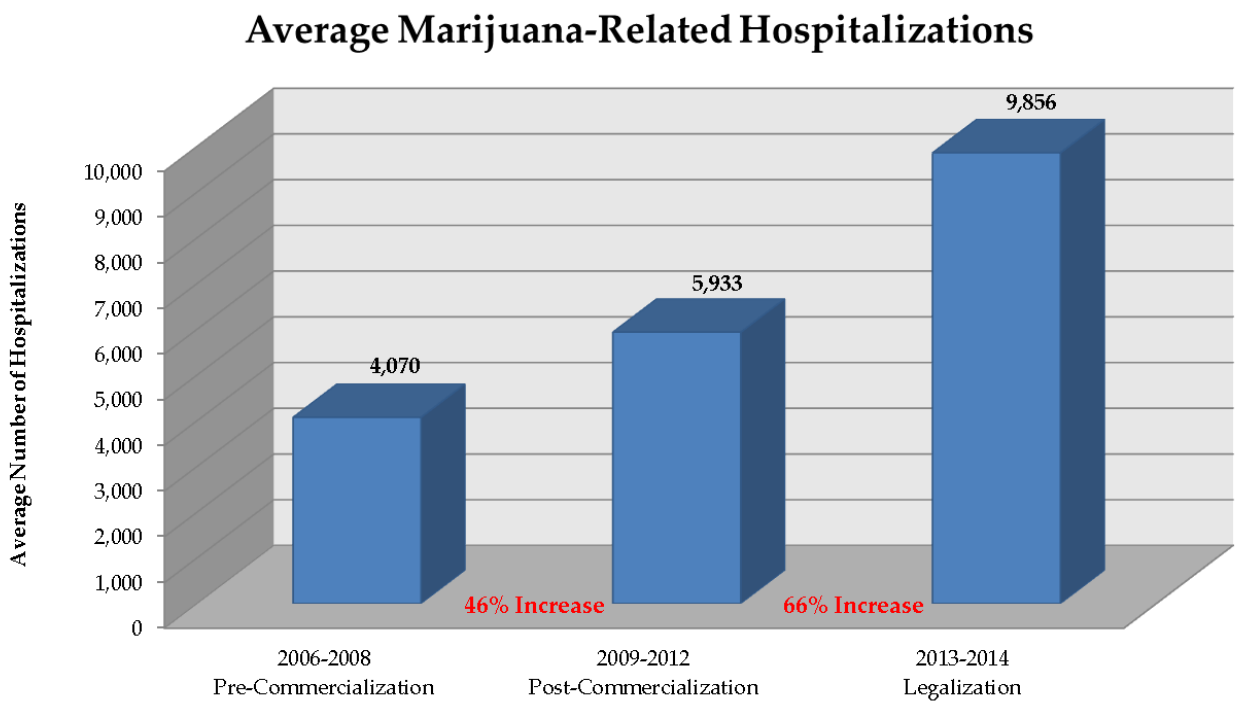
- **The highest rates from 2011 to 2013 were among young adults (18 to 25 years).**

NOTE: **2011 AND 2012 EMERGENCY ROOM DATA DOES NOT REPRESENT COMPLETE, STATEWIDE PARTICIPATION. INCREASES OBSERVED OVER THESE THREE YEARS MAY BE DUE PARTLY, OR COMPLETELY, TO INCREASES IN REPORTING BY EMERGENCY ROOMS.**

Hospitalization Data

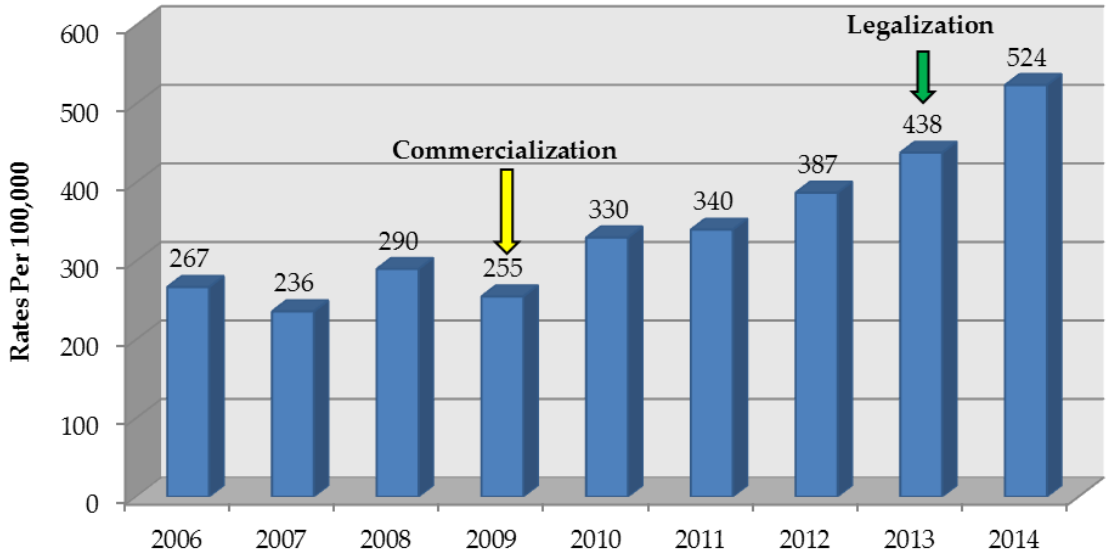


SOURCE: **Colorado Hospital Association, Hospital Discharge Dataset. Statistics prepared by the Health Statistics and Evaluation Branch, Colorado Department of Public Health and Environment**



SOURCE: **Colorado Hospital Association, Hospital Discharge Dataset. Statistics prepared by the Health Statistics and Evaluation Branch, Colorado Department of Public Health and Environment**

Colorado Hospitalization Rates that are Likely Related to Marijuana*

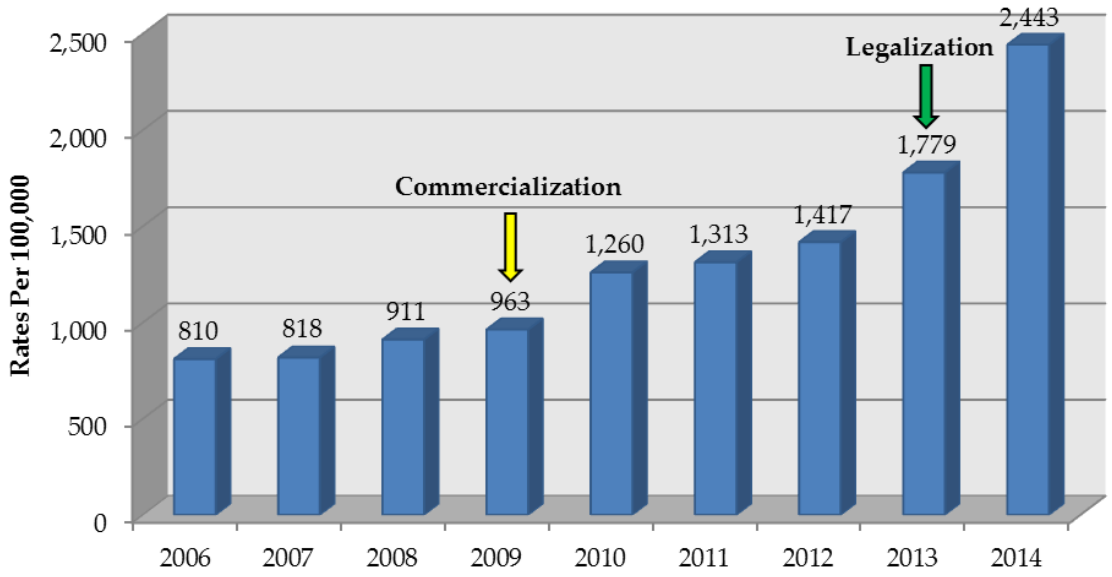


*Rates of Hospitalization (HD) Visits with Possible Marijuana Exposures, Diagnoses, or Billing Codes in the *First Three Diagnosis Codes* per 100,000 HD Visits by Year in Colorado

SOURCE: Colorado Department of Public Health and Environment, *Monitoring Health Concerns Related to Marijuana in Colorado: 2014*

NOTE: "POSSIBLE MARIJUANA EXPOSURES, DIAGNOSES, OR BILLING CODES IN THE FIRST THREE DIAGNOSIS CODES: THESE DATA WERE CHOSEN TO REPRESENT THE HD AND ED VISITS WHERE MARIJUANA USE WAS LIKELY A CAUSAL OR STRONG CONTRIBUTING FACTOR TO THE UNDERLYING REASON FOR THE HD AND ED VISIT. THESE DATA CONSISTED OF HD AND ED VISITS CODED WITH DISCHARGE CODES RELATED TO POISONING BY PSYCHODYSLEPTICS OR SEPARATE CODES RELATED TO CANNABIS ABUSE IN THE FIRST THREE DIAGNOSIS CODES WHICH ARE MORE LIKELY TO BE CLINICALLY SIGNIFICANT CODES." - *COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, MONITORING HEALTH CONCERNS RELATED TO MARIJUANA IN COLORADO: 2014*

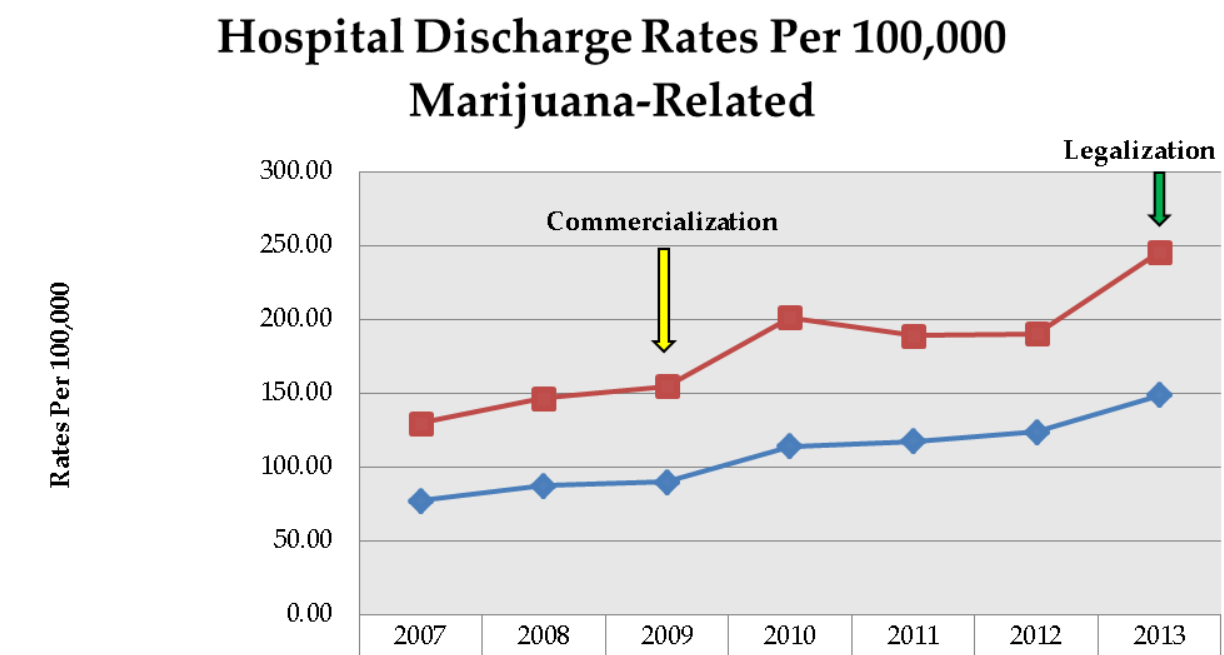
Colorado Hospitalization Rates that Could be Related to Marijuana*



*Rates of Hospitalization (HD) Visits with Possible Marijuana Exposures, Diagnoses, or Billing Codes per 100,000 HD Visits by Year in Colorado

SOURCE: Colorado Department of Public Health and Environment, *Monitoring Health Concerns Related to Marijuana in Colorado: 2014*

NOTE: "POSSIBLE MARIJUANA EXPOSURES, DIAGNOSES, OR BILLING CODES IN ANY OF LISTED DIAGNOSIS CODES: THESE DATA WERE CHOSEN TO REPRESENT THE HD AND ED VISITS WHERE MARIJUANA COULD BE A CAUSAL, CONTRIBUTING, OR COEXISTING FACTOR NOTED BY THE PHYSICIAN DURING THE HD OR ED VISIT. FOR THESE DATA, MARIJUANA USE IS NOT NECESSARILY RELATED TO THE UNDERLYING REASON FOR THE HD OR ED VISIT. SOMETIMES THESE DATA ARE REFERRED TO AS HD OR ED VISITS 'WITH ANY MENTION OF MARIJUANA.'" - *COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, MONITORING HEALTH CONCERNS RELATED TO MARIJUANA IN COLORADO: 2014*



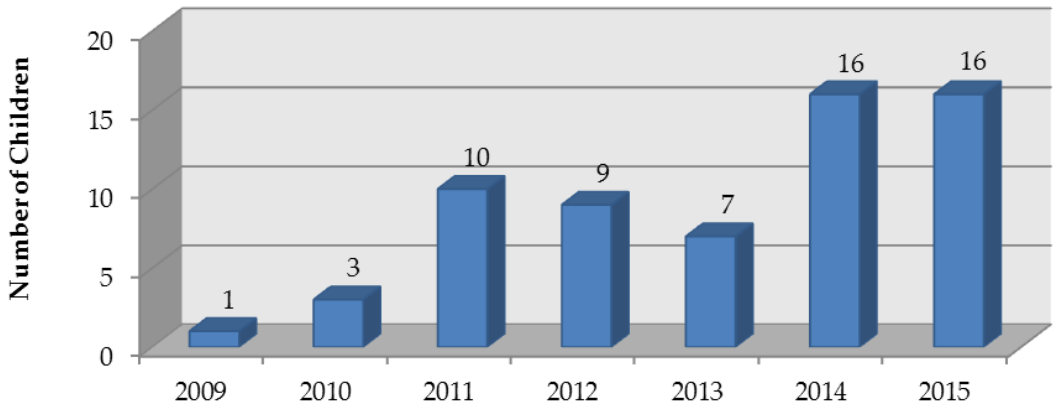
	2007	2008	2009	2010	2011	2012	2013
Colorado	77.15	87.50	89.88	114.18	117.48	123.65	148.80
Denver City and County	129.90	146.76	154.81	201.20	189.08	190.51	245.94

SOURCE: **Denver Office of Drug Strategy, The Denver Drug Strategy Commission,** ***Proceedings of the Denver Epidemiology Work Group (DEWG),*** October 29, 2014

- **The highest rates from 2011 to 2013 were among young adults (18 to 25 years).**

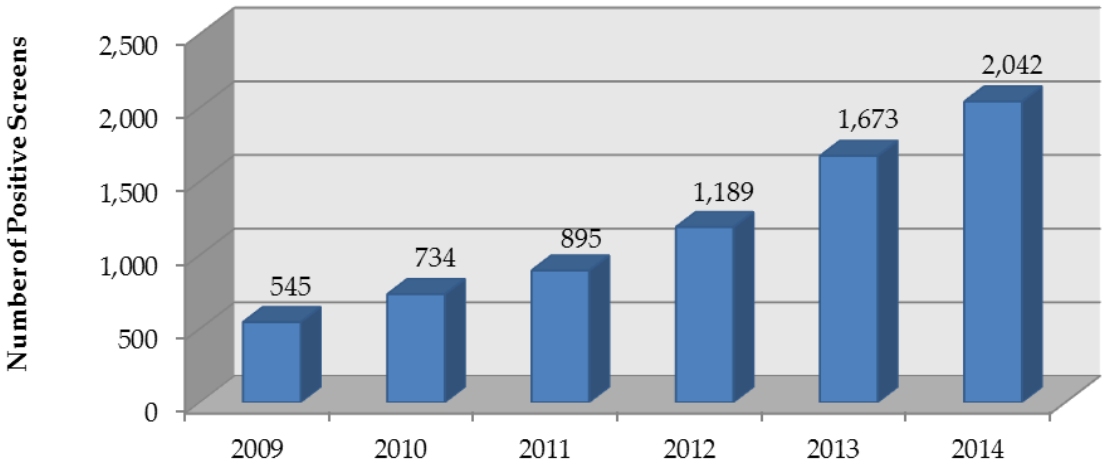
NOTE: HOSPITAL DISCHARGE DATA REPRESENTS AN INDIVIDUAL'S INPATIENT STAY AT A HOSPITAL REQUIRING, AT MINIMUM, AN OVERNIGHT STAY AND IS IN REFERENCE TO WHEN THE PATIENT LEAVES THE HOSPITAL. A CODE IS ASSIGNED AS TO WHY THE PATIENT WAS IN THE HOSPITAL, CALLED THE ICD-9 CODE, WHICH IS USED FOR BOTH THE PATIENT'S MEDICAL RECORD AND FOR BILLING PURPOSES.

Children's Hospital Marijuana Ingestion Among Children Under 9 Years Old



SOURCE: George Sam Wang, MD, Marie-Claire Le Lait, MS, Sara J. Deakyne, MPH, Alvin C. Bronstein, MD, Lalit Bajaj, MD, MPH, Genie Roosevelt, MD, MPH, July 25, 2016

Penrose Hospital (Colorado Springs) Urine Drug Screens Positive for Cannabis



SOURCE: Kenneth Finn, M.D., president, Springs Rehabilitation, PC

Cost

Cost of Emergency Room: A study was conducted of a cross section of ER encounters from 2006 to 2008. The study found that, "During our study period, the median charge for outpatient conditions in the emergency room was $1,233."[1]

Related Material

Pueblo Hospitals Against Marijuana Commercialization: Parkview Medical Center, St. Mary-Corwin Medical Center and Pueblo Community Health Center, three local Pueblo, Colorado hospitals, announced their support for a ballot measure aimed at ending commercialization and the promotion of recreational marijuana in the city and county of Pueblo. "All three organizations spoke on behalf of their community boards and strongly believe the impact of retail marijuana is endangering the health of the Pueblo community and draining precious health resources." Data in support of their position includes a 51 percent increase in the number of children 18 and younger that have been treated at Parkview's emergency room as well as the fact that nearly half of the newborns who were tested for prenatal drug exposure in March 2016 at St. Mary-Corwin tested positive for marijuana. Pueblo Community Health Center also experienced concerning health trends such as frequent use of marijuana in the prenatal population as well as increased incidence of mental health disorders related to marijuana. According to local doctors in the community:

"We are experiencing a dramatic increase in newborns who test positive for marijuana along with an increase in teenage suicide attempts," said Steve Simerville, MD, medical director of St. Mary-Corwin's neonatal intensive care unit and pediatric service line. "While it is not clear that marijuana is directly the cause of all these problems, one might conclude that this surge is the result of the high-risk culture that commercialization of marijuana helps to promote and is not in the best interest of the Pueblo community."

"The emergency department has seen increased visits for primary care needs, breathing problems related to inhalation of marijuana, including asthma, bronchitis, upper respiratory tract infections, as well as psychiatric needs, accidental or intentional overdoses and, unfortunately, increased pediatric patients with issues related to marijuana," said Karen Randall, MD, a physician with Southern Colorado Emergency Medical Associates, who treats patients at Parkview Medical Center's Emergency Department.[2]

More Kids in the Emergency Room Due to Marijuana: A study conducted by a group of Colorado doctors found that the number of children's hospital visits increased between the two years prior to legalization and the two years after legalization. Further, "fifteen of the 32 exposures seen in the children's hospital in 2014 and 2015 were from recreational marijuana, suggesting that legalization of recreational marijuana did affect the incidence of pediatric exposures." The study also found that compared with other unintentional pediatric exposures, symptoms after marijuana exposure can be severe for these young patients. "…35% of patients presenting to the hospital required admission, increasing the hospital burden and using more health financial resources." Additionally the study points out that "ingestion of edible products continues to be a major source of marijuana exposures in children and poses a unique problem because no other drug is infused into a palatable and appetizing form." As well as, "dosing a drug in a 'serving size' less than typically recommended for an equivalent food product also can be a source of confusion."[3]

More Colorado Kids in Hospital for Marijuana Since Legalization, Study Says: A study conducted by a group of Colorado doctors found that "the number of Colorado children who've been reported to a poison control center or examined at a hospital for unintentional marijuana exposure annually has spiked since the state legalized recreational cannabis…" The study found that, "eighty-seven cases of children ages 9 and younger ingesting, inhaling or otherwise exposed to cannabis were called in to the state's regional poison control center from 2014 through 2015 – more than the 76 total cases in the four years preceding legalization, the study says. Exposure-related visits for the same age range also rose at Children's Hospital Colorado in Aurora: 32 visits for the first two years after legalization, against 30 visits for the four years prior. Nearly half of the hospital visits since 2009 involved edibles such as brownies and candies. And almost half of the hospital cases in 2014 and 2015 involved recreational, as opposed to medical marijuana…"[4]

Public Health Researchers Look at Rise in Marijuana-Related Hospitalizations: "The prevalence of marijuana use in the U.S. more than doubled between 2001 and 2013, according to a study published in October 2015 by *JAMA Psychiatry*. Hospital utilization related to the drug appears to have increased in tandem, according to a new analysis, presented at the American Public Health Association's annual meeting, held in Chicago in November." Dr. He Zhu, a postdoctoral associate at Duke University Medical Center in Durham, NC, was responsible for the new analysis. According to Dr. Zhu, "The use of cannabis has been found to be associated with adverse physical and mental health outcomes in both the short term and the long term." She also noted that "…it can be linked to drug use disorder, anxiety, psychotic symptoms, breathing problems, increased heart rate, impaired driving, and an increased risk of other

substance abuse. Thus, the increase of cannabis use and its adverse health effects will potentially place more burden on health care systems."[5]

Emergency Room Visits Double for Colorado Tourists: "Emergency department visits involving marijuana-using visitors doubled from 2013 to 2014, the first year cannabis use was legalized in Colorado, a team of Denver-area doctors said." According to Dr. Andrew Monte, an emergency room toxicologist at the University of Denver, "At our institution, the rate of ED visits possibly related to cannabis use among out-of-state residents doubled from 85 per 10,000 visits in 2013 to 168 per 10,000 visits in 2014, which was the first year of retail marijuana sales." Specific reasons for the ED visit generally range from the marijuana use causing an exacerbation of an existing medical condition, intoxication and fear associated with use, or injuries directly related to using the drug. "'These would be things like motor vehicle collisions when they are high or smoking,' Monte said. 'Cyclic vomiting, which can come with heavy daily use, is another issue,' Monte said."[6]

The Hidden Costs of Marijuana Use in Colorado: One Emergency Department's Experience: According to a recent study on the economic impact of marijuana use within Colorado, from 2009 to 2014 Penrose-St. Francis Hospital (Colorado Springs, Colorado) reported a true loss of $20 million in uncollected charges. Additionally, the study demonstrated an increasing number of patients who are seen in the emergency room also have used cannabis. These patients are not always able to pay their bills, resulting in a financial loss to the hospital.

Visits where a diagnosis related to cannabis was identified at the study hospital increased from 545 to 2,042, a 275 percent increase between 2009 and 2014. The percent of cannabis subjects admitted as inpatients from the Emergency Department increased from 9 percent to 15.3 percent during the study period. Emergency Department charges unable to be collected increased 192 percent.

Furthermore, there is data to support transmission of THC to the fetus in pregnant mothers using cannabis. The American Congress of Obstetricians and Gynecologists (ACOG) published a Committee Opinion citing numerous studies to support their recommendations to discourage use of cannabis during pregnancy and lactation, including use of medical cannabis.

Fetal cortical growth may be affected; long-term effects of these children are not fully known or understood, but previous studies report findings that suggest behavioral abnormalities including hyperactivity, difficulty with executive functions into adolescence, depression even if they are not using, and early adolescent addiction.[7]

Sources

[1] Caldwell N, Srebotnjak T, Wang T, Hsia R (2013 "How Much Will I get Charged for This?" Patient Charges for Top Ten Diagnoses in the Emergency Department, Plops ONE 8(2): e55491. Doi:10.1371/journal.pone.0055491, accessed January 2015

[2] SAMVermont, April 27, 2016, "Health Care Leaders Announce Support of Ballot Measure To Opt Out Of Marijuana Commercialization," < http://sam-vt.org/2016/04/28/health-care-leaders-announce-support-of-ballot-measure-to-opt-out-of-marijuana-commercialization/>, accessed April 27, 2016

[3] George Sam Wang, MD, Marie-Claire Le Lait, MS, Sara J. Deakyne, MPH, Alvin C. Bronstein, MD, Lalit Bajaj, MD, MPH, Genie Roosevelt, MD, MPH, July 25, 2016, *JAMA Pediatrics* doi: 10.1001/jamapediatrics.2016.0971, "Unintentional Pediatric Exposures to Marijuana in Colorado, 2009-2015", <http://archpedi.jamanetwork.com/article.aspx?articleid=2534480>, accessed July 25, 2016

[4] Jason Hanna, CNN, July 27, 2016, "More Colorado kids in hospital for marijuana since legalization, study says", http://www.cnn.com/2016/07/27/health/colorado-marijuana-children/, accessed July 28, 2016

[5] Mollie Durkin, January ACP Hospitalist by the American College of Physicians, "Public health researchers look at rise in marijuana-related hospitalizations", <http://www.acphospitalist.org/archives/2016/01/conference-coverage-public-health-marijuana.htm>, accessed August 9, 2016

[6] Maggie Fox, NBC News, February 25, 2016, "Emergency Room Visits Double for Marijuana-Using Colorado Visitors", <http://www.nbcnews.com/storyline/legal-pot/emergency-room-visits-double-marijuana-using-colorado-visitors-n525081>, accessed February 26, 2016

[7] Kenneth Finn, M.D., January 26, 2015, "The Hidden Costs of Marijuana Use in Colorado: One Emergency Department's Experience," *The Journal of Global Drug Policy and Practice*, <http://www.globaldrugpolicy.org/Issues/Vol%2010%20Issue%202/Articles/The%20Hidden%20Costs%20of%20Marijuana%20Use%20in%20Colorado_Final.pdf>, accessed May 17, 2016

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SECTION 5: Marijuana-Related Exposure

Some Findings

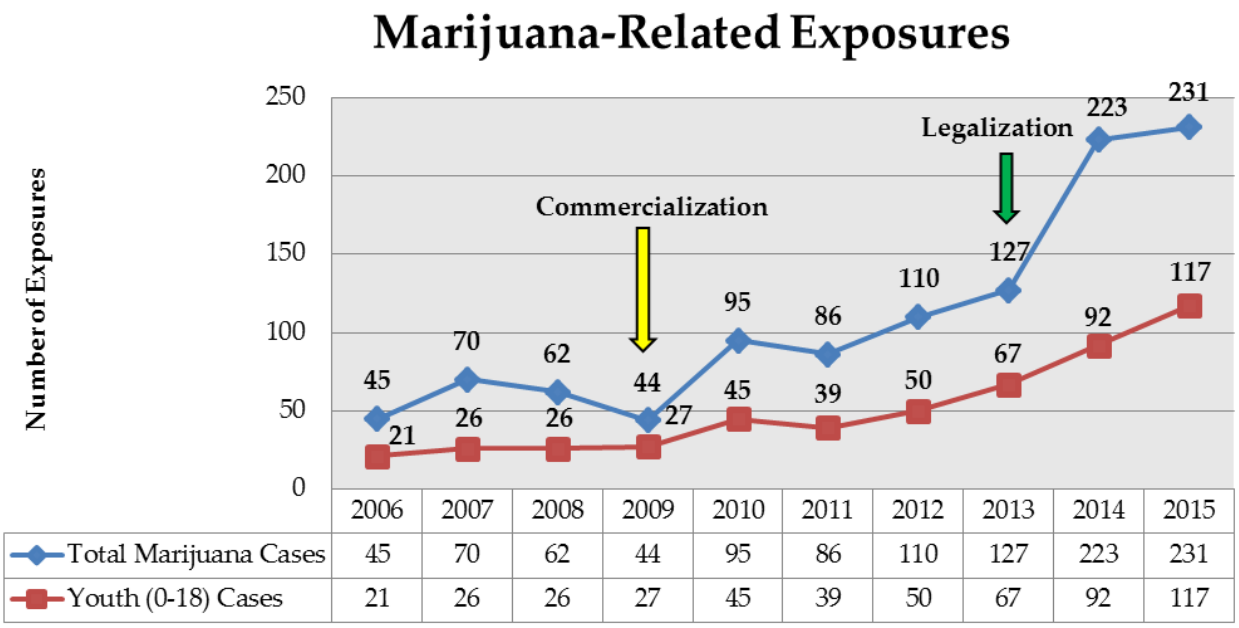
- Marijuana-related exposures increased **100 percent** in the three-year average (2013-2015) since Colorado legalized recreational marijuana compared to the three-year average (2010-2012) prior to legalization.

- Marijuana only exposures increased **155 percen**t in the three-year average (2013-2015) since Colorado legalized recreational marijuana compared to the three-year average (2010-2012) prior to legalization.

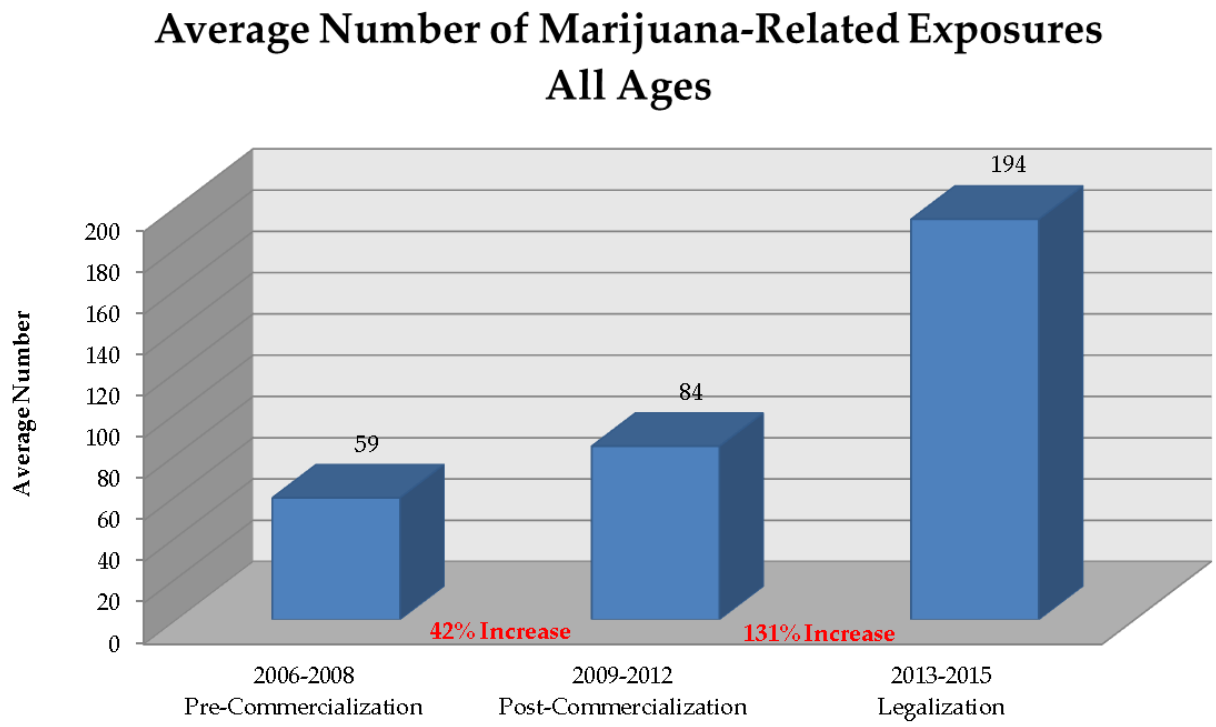
- Children ages 0 to 5 years old marijuana-related exposures increased **169 percent** after legalization of recreational marijuana in Colorado.

- In the years medical marijuana was commercialized (2009–2012), marijuana-related exposures averaged a **42 percent** increase from prior years (2006–2008) average.

Data

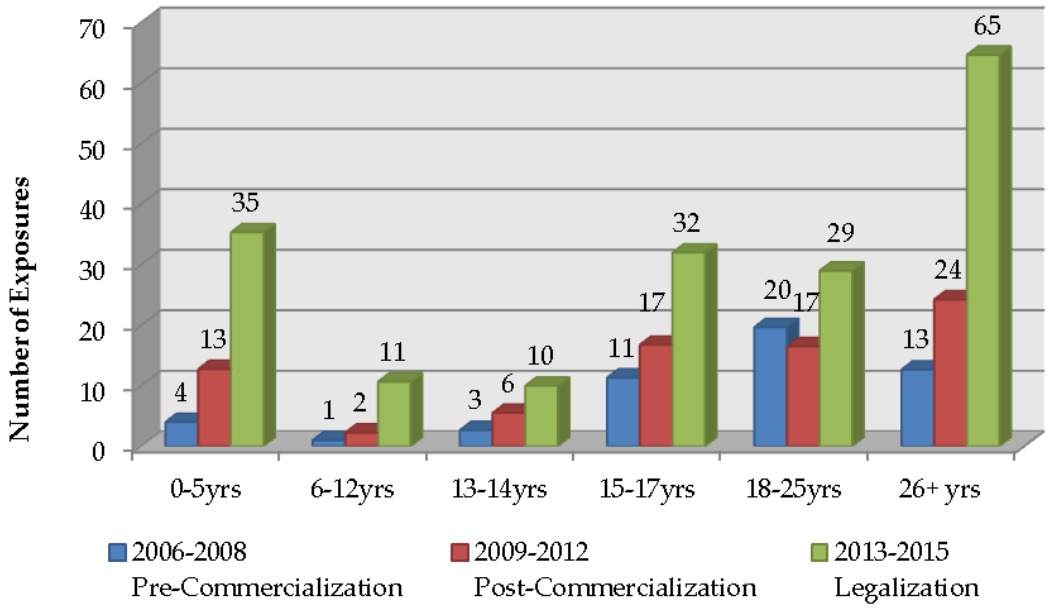


SOURCE: **Rocky Mountain Poison and Drug Center Report, Colorado Marijuana Statistics for 2015**



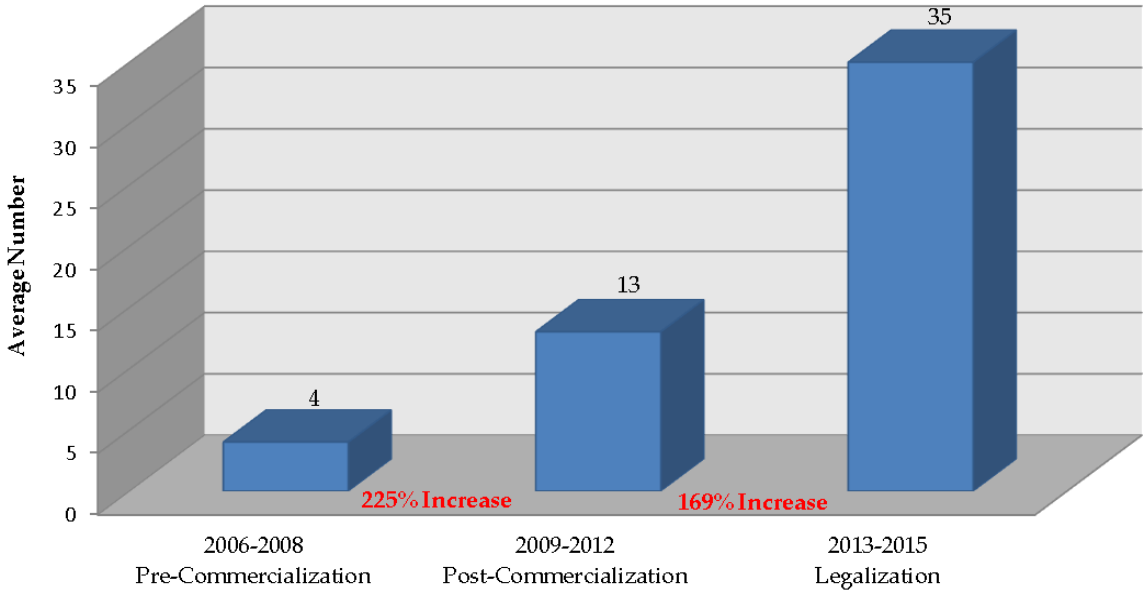
SOURCE: **Rocky Mountain Poison and Drug Center**

Marijuana-Related Exposures, By Age Range



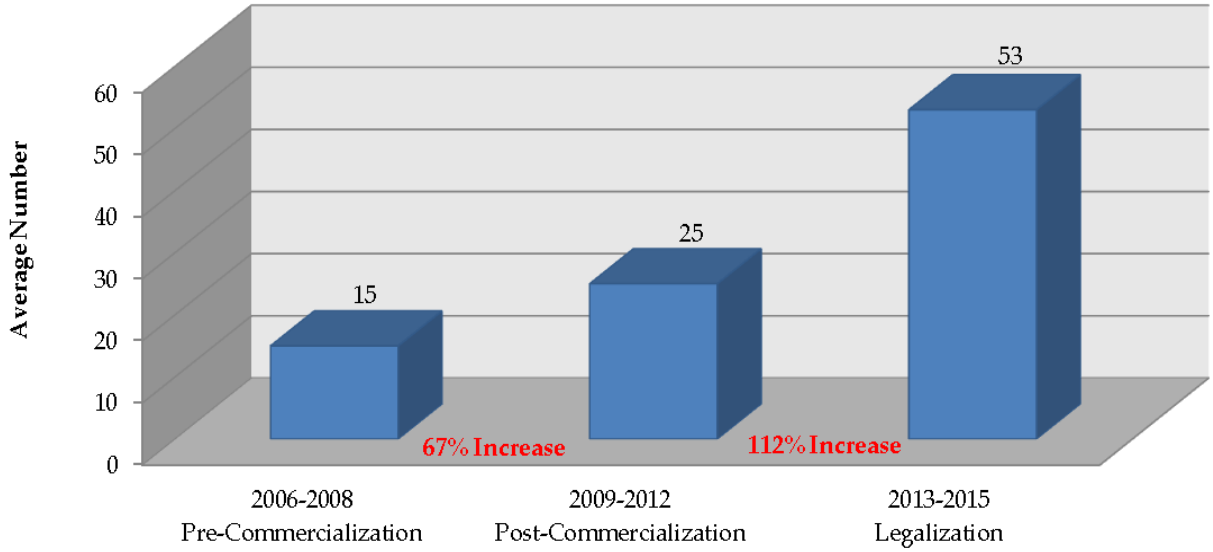
SOURCE: **Rocky Mountain Poison and Drug Center**

Average Number of Marijuana-Related Exposures Children Ages 0 to 5 Years Old



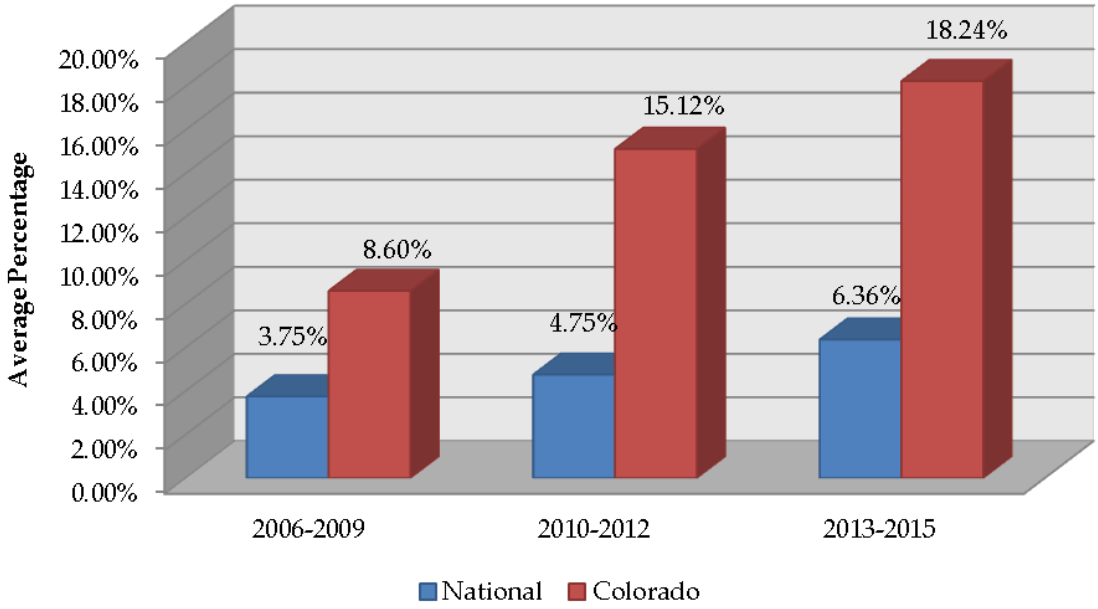
SOURCE: **Rocky Mountain Poison and Drug Center**

Average Number of Marijuana-Related Exposures Youth Ages 6 to 17 Years Old

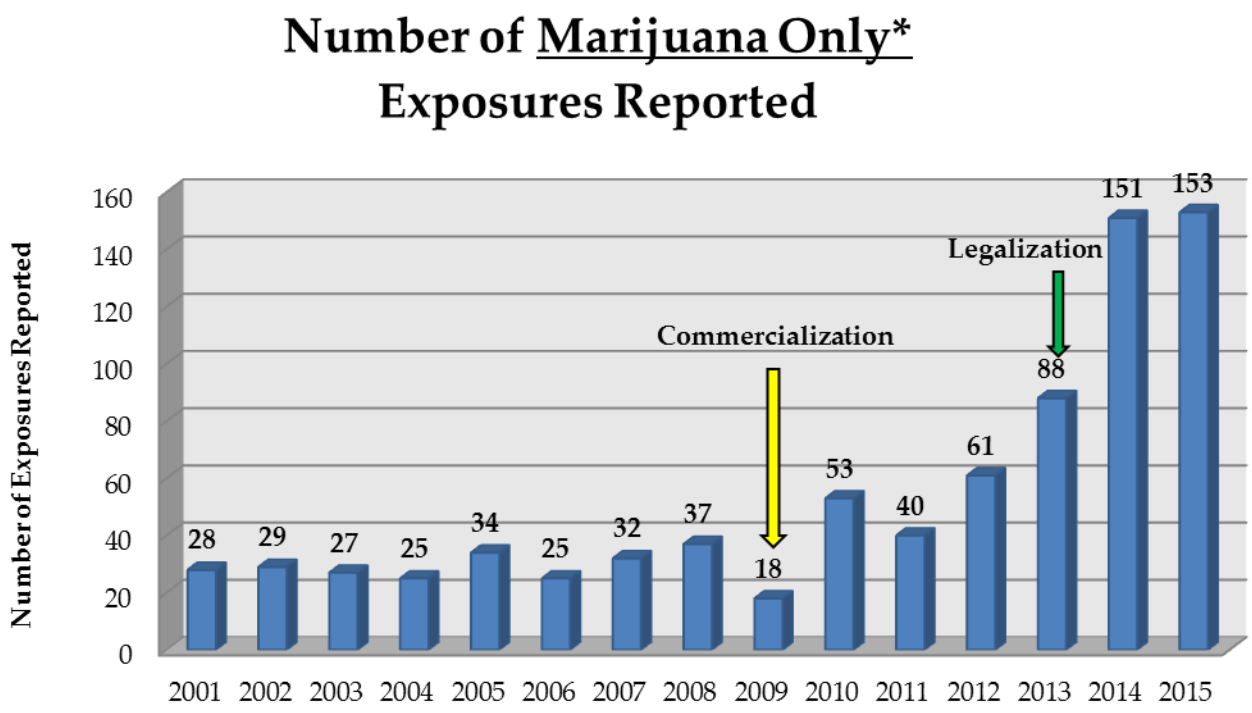


SOURCE: **Rocky Mountain Poison and Drug Center**

Average Percent of All Marijuana-Related Exposures, Children Ages 0 to 5 Years Old



SOURCE: **Rocky Mountain Poison and Drug Center**



*Marijuana was the only substance referenced in the call to the poison control center

SOURCE: Rocky Mountain Poison and Drug Center

Related Material

Pot Science – Top Marijuana Findings of 2015:[1]

- Between 2003 and 2013, accidental marijuana exposure to youth under age six increased by about 150 percent. More than 75 percent of these exposures involved children younger than three, who accidentally swallowed pot likely found in marijuana brownies, cooked and other food products.
- Exposure rates in children climbed an average of 16 percent a year from 2003 to 2013 in states that legalized marijuana, compared with a rise of about 5 percent in states where pot remained illegal.

Study Finds Sharp Increased in Marijuana Exposure Among Colorado Children: A study published in the *JAMA Pediatrics* journal found that, "…in Colorado the rates of marijuana exposure in young children, many of them toddlers, have increased 150 percent since 2014, when recreational marijuana products, like sweets, went on the market legally." Symptoms from these unintentional exposures can be anything from lethargy or agitation to vomiting and loss of balance. "A handful of patients were admitted to intensive care units and intubated." While doctors and researchers were

anticipating a rise in the number of these cases after Colorado voted to legalize recreational marijuana,"'…we were not prepared for the dramatic increase,' said the senior author of the study, Dr. Genie E. Roosevelt, an associate professor of emergency medicine at the University of Colorado School of Medicine and Denver Health Medical Center."[2]

Rocky Mountain Poison and Drug Center Report:[3] "In 2015, there were 231 human exposures involving marijuana, 12 exposures involving dogs and 1 exposure to a cat.

- 91 of these cases involved an 'edible' marijuana product such as marijuana-infused brownies, cookies, candies, beverages, etc.
- Of the 231 exposures, 117 (51%) involved children 0 to 18 years of age.
    - The age group with the most marijuana cases (26%) was for individuals 13 to 19 years of age."

Pot-Related Calls to Colorado and Washington Poison Centers Up: In a *Denver Pos*t article dated January 25, 2015 by Gene Johnson of the Associated Press, it cites the substantial increase in calls to poison control centers related to marijuana. "The spike in numbers since marijuana was legalized includes a troubling jump in cases involving young kids." Calls to the Colorado poison center in 2014 almost doubled the number of calls in 2013 and tripled the calls in 2012. Calls to the Washington poison center jumped about 50 percent from 2013 to 2014. Calls involving children nearly doubled in both states.[4]

Child Marijuana Poisoning Incidents Increase After States Legalize Pot: A study by researchers at the Nationwide Children's Hospital report, "More young children are exposed to marijuana in states after the drug had become legal for medical or recreational use…" This study, in the journal *Clinical Pediatrics* found: "the rate of marijuana exposures among children 5 years old and under increased 16 percent each year after legalization in those states." According to the National Poison Database System, child exposures increased 147 percent from 2006- 2013.[5]

Children and THC-Infused Edibles: According to a Colorado Springs *Gazette* Op/Ed dated June 21, 2015, titled 'THC extracts concentrate problems': "In Colorado, the number of exposures to THC-infused edibles in your children increased fourfold in one year, from 19 cases in 2013 to 95 in 2014, according to the Rocky Mountain Poison and Drug Center."[6]

Sources

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[2] Jan Hoffman, *The New York Times*, July 25, 2016, "Study Finds Sharp Increase in Marijuana Exposure Among Colorado Children," http://www.nytimes.com/2016/07/26/health/marijuana-edibles-are-getting-into-colorado-childrens-hands-study-says.html?_r=0, accessed July 25, 2016

[3] Rocky Mountain Poison and Drug Center, "Colorado Marijuana Statistics for 2015"

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[6] Editorial Board members Wayne Laugesen and Pula Davis in collaboration with journalist Christine Tatum, *The Gazette*, June 21, 2015, "THC extracts concentrate problems," <http://gazette.com/thc-extracts-concentrate-problems/article/1554097>, accessed June 2, 2015

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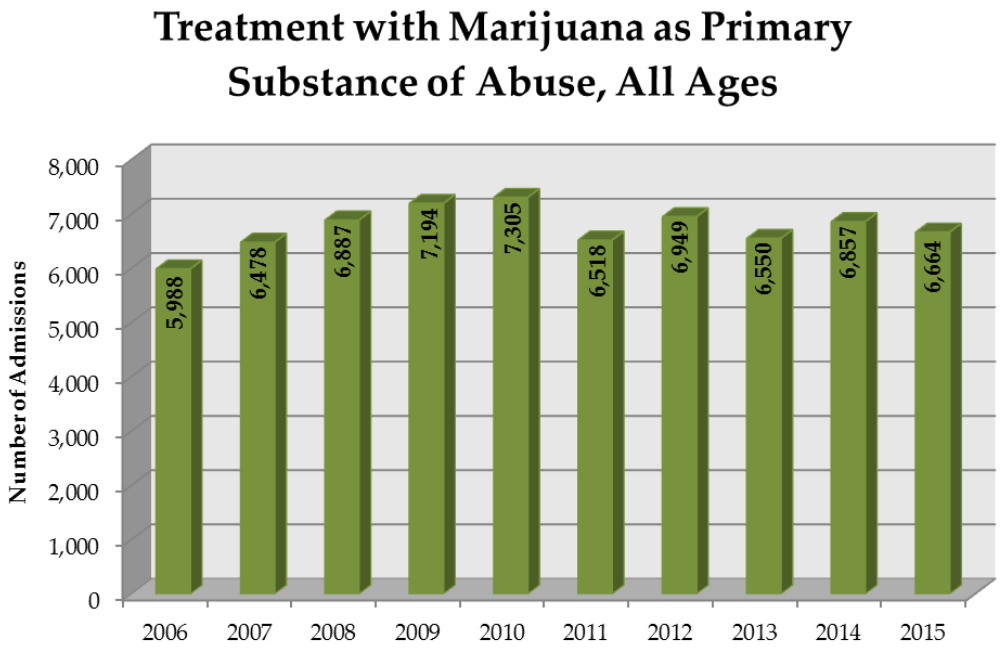
SECTION 6: Treatment

Some Findings

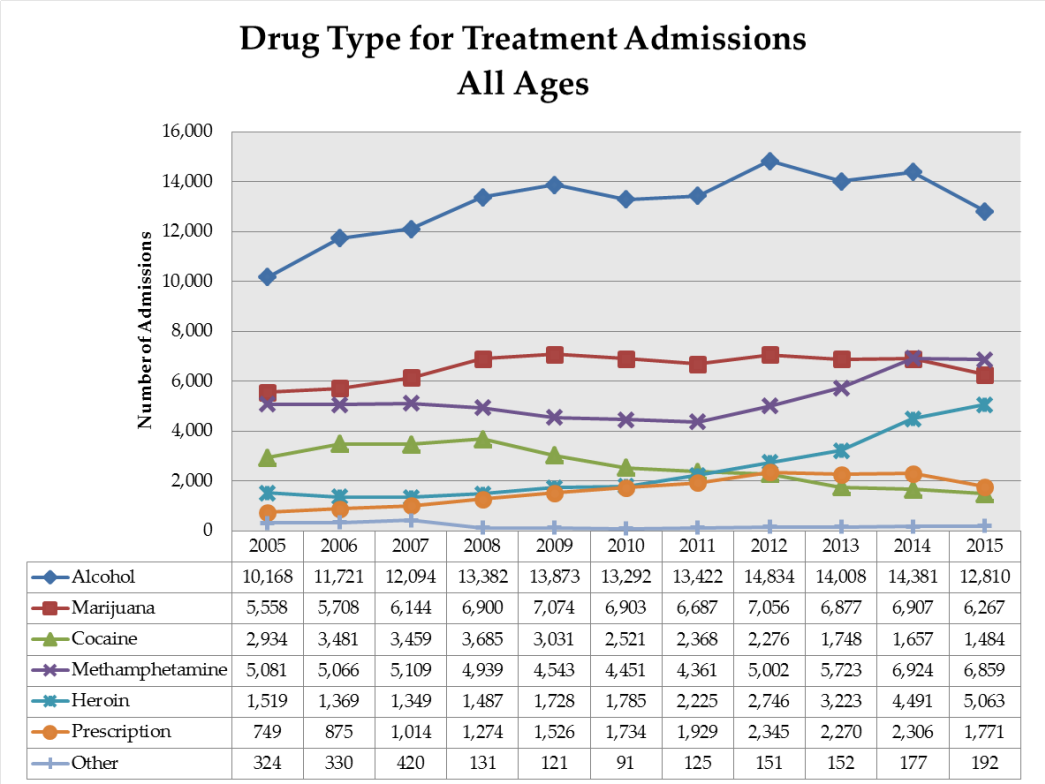
- Marijuana treatment data from Colorado in years 2005–2015 does not appear to demonstrate a definitive trend. Colorado averages approximately **6,500** treatment admissions annually for marijuana abuse.

- Over the last ten years, the top three drugs involved in treatment admissions, in descending order, were alcohol (average **13,382**), marijuana (average **6,652**) and methamphetamine (average **5,298**).

Data



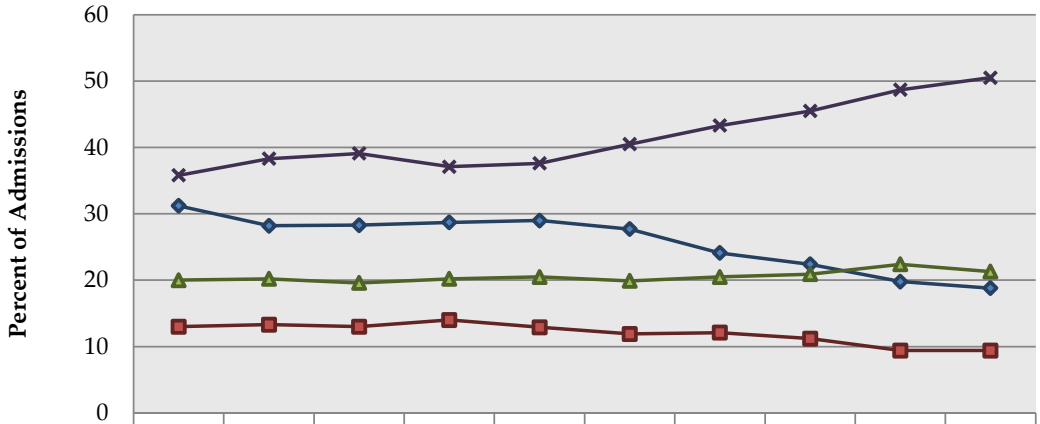
SOURCE: **Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS) Based on administrative data reported by States to TEDS through May 13, 2016**



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Alcohol	10,168	11,721	12,094	13,382	13,873	13,292	13,422	14,834	14,008	14,381	12,810
Marijuana	5,558	5,708	6,144	6,900	7,074	6,903	6,687	7,056	6,877	6,907	6,267
Cocaine	2,934	3,481	3,459	3,685	3,031	2,521	2,368	2,276	1,748	1,657	1,484
Methamphetamine	5,081	5,066	5,109	4,939	4,543	4,451	4,361	5,002	5,723	6,924	6,859
Heroin	1,519	1,369	1,349	1,487	1,728	1,785	2,225	2,746	3,223	4,491	5,063
Prescription	749	875	1,014	1,274	1,526	1,734	1,929	2,345	2,270	2,306	1,771
Other	324	330	420	131	121	91	125	151	152	177	192

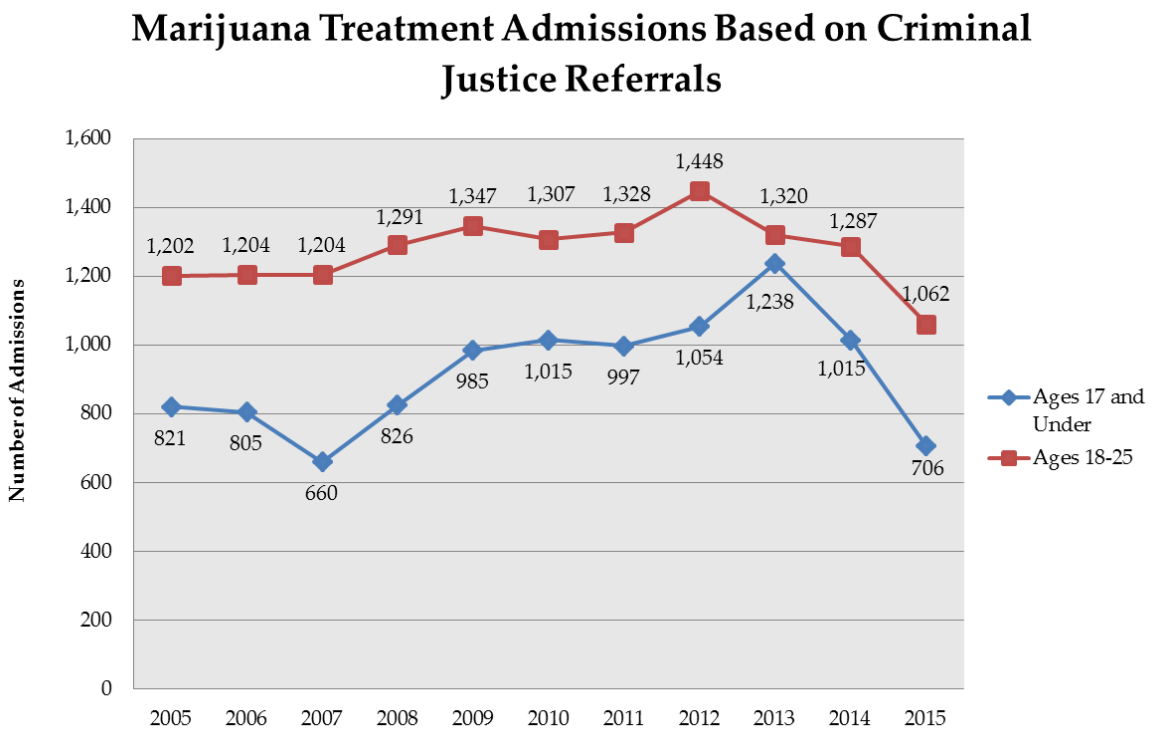
SOURCE: **Colorado Department of Health Services, Office of Behavioral Health, 2005-2015**

Percent of Marijuana Treatment Admissions by Age Group



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
12-17	31.2	28.2	28.3	28.7	29	27.7	24.1	22.4	19.8	18.8
18-20	13	13.3	13	14	12.9	11.9	12.1	11.2	9.4	9.4
21-25	20	20.2	19.6	20.2	20.5	19.9	20.5	20.9	22.4	21.3
26+	35.8	38.3	39.1	37.1	37.6	40.5	43.3	45.5	48.7	50.5

SOURCE: **Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS) Based on administrative data reported by States to TEDS through May 13, 2016**



SOURCE: **Colorado Department of Health Services, Office of Behavioral Health, 2005-2015**

Comments from Colorado Treatment Providers

"…Symptoms Are So Debilitating…": "Many patients minimize the consequences of cannabis use, yet they consistently report that they have become isolated, paranoid and unable to effectively interact with the outside world. In treatment, there has been a consistent increase in psychosis associated with patients who use cannabis. Thought broadcasting, thought insertion, ideas of reference and command hallucinations are not uncommon. These symptoms often occur in the absence of any other psychiatric disorder. The symptoms appear to decrease over time, with more time in recovery, but it is unclear whether the symptoms are long lasting. Since these symptoms are so debilitating, it is crucial to learn more about the long term effects of cannabis use."[1]

"…Lives Have Been Completely Disrupted…": "In my professional experience, have definitely seen more cannabis use in the individuals I am treating. I've also seen an increasing number of young men coming into treatment with symptoms of mania, psychosis and dangerous behaviors associated with cannabis use. Their lives have been completely disrupted due to the cannabis use. Unfortunately, abstinence from the cannabis use alone is not enough to make the symptoms go away. They require mood

stabilizing and anti-psychotic medications to get to a point that they can communicate coherently enough and trust others enough to participate in therapy. I do think this is related to the increased availability and potency, and this is consistent with the scientific literature.

On a personal note, my 10 and 11 year old children know what cannabis smoke smells like, identifying cannabis in the area rather than wondering if it is a skunk. Public use occurs everywhere. Children call each other, 'vapers,' in their less kind moments, and children with anything green are made fun of. One of my 11 year old's friends since preschool was allegedly expelled for selling cannabis on the 5th grade campus. As a parent, I'm terrified for the future of our children."[2]

"…Psychosis and Cannabis is Well Documented…": "We recently reviewed data for patients receiving treatment in the residential portion of our substance abuse treatment center, CeDAR. What we found was that patients who met criteria for a cannabis use disorder were markedly younger than those that did not, were much more likely to have other substance use disorders (an average of 2.8 substance use disorder diagnoses vs 1.9 substance use disorder diagnoses when cannabis use disorder was excluded) and there was a trend towards more mental health pathology in this data set as well.

Anecdotally, I and my colleagues have seen the number of patients with cannabis use disorder admitted to our facility increase over time. The amount of cannabis that patients describe consuming is also increasing, while the age they report first starting to use is decreasing. Overall the severity of cannabis use disorder we see appears more severe as do the psychosocial sequelae of this addiction. The link between psychosis and cannabis is well documented and it is becoming routine to admit young men who have used cannabis since early adolescence and who present with psychosis. Many of these patients may suffer long standing neuropsychiatric symptoms as the result of cannabis use. The burden of this illness is disproportionately falling on our younger population."[3]

Related Material

Students "Getting Bored" with Marijuana and "Graduating on to Something Stronger": When Colorado Matters host Ryan Warner asked Amanda Ingram, a Denver Health therapist staffed at the substance abuse clinic at Bruce Randolph School, in a radio interview about the role of legal marijuana in addiction, she stated:

"What I'm hearing from the children is that it's legal, it's OK to use now, it's also natural. And because it's legal and their families and adult friends are using it, they feel like it's justified. And what they're doing is they're using so much of it now that they're

kind of getting bored with it and graduating on to something stronger. This is just what I'm seeing in Bruce Randolph alone. I can't speak for the state of Colorado."[4]

America's Youth: The Marijuana Martyrs: According to data from Arapahoe House, a treatment network in Colorado, "…teenage admissions for marijuana addiction in Colorado increased by 66 percent between 2011 and 2014, correlating with the 2012 passage of Amendment 64." Dr. Christian Thurstone of the University of Colorado stated that, "…95 percent of the teenagers treated for substance abuse and addiction in my adolescent substance-abuse treatment clinic at Denver Health are there because of their marijuana use, and because nationwide, 67 percent of teens are referred to substance treatment because of their marijuana use. Marijuana is the No. 1 reason why adolescents seek substance-abuse treatment in the United States."[5]

Former National Institute on Drug Abuse (NIDA) Director's Take on Legalized Marijuana: The lack of public awareness and lack of media attention regarding "…the near-doubling of past year marijuana use nationally among adults age 18 and older and the corresponding increase in problems related to its use," has allowed for a shift in public perception about marijuana according to Robert L. DuPont, M.D (member, RiverMend Health Scientific Advisory Board; President, Institute for Behavior and Health Inc.; First Director, National Institute on Drug Abuse). "Because the addiction rate for marijuana remains stable—with about one in three past year marijuana users experiencing a marijuana use disorder – the total number of Americans with marijuana use disorders also has significantly increased. It is particularly disturbing that the public is unaware of the fact that, of all Americans with substance use disorders due to drugs other than alcohol, nearly 60 percent are due to marijuana. That means that more Americans are addicted to marijuana than any other drug, including heroin, cocaine, methamphetamine, and the nonmedical use of prescription drugs."[6]

Legal and Addictive: "We have noticed that those presenting with Cannabis Use Disorder are more committed to their use and harder to get through to than in years past. Patients tell us regularly that they will give up other drugs/alcohol but not marijuana and remind us of its legal status. This logic would obviously hold no water with alcohol and is a disturbing trend given that patients telling us this are often in dire straits. Their use/addiction has had and is having extremely detrimental effects on their lives yet they tell us it can't be an issue because marijuana is 'legal and non-addictive.'"[7]

Youth in Treatment: Denver Health Clinic youth are male (73.6 percent), mean age (15.8 years) and there primarily for cannabis use disorder (98.1 percent). Other psychiatric diagnoses include: attention-deficit/hyperactivity disorder, anxiety disorder, major depressive disorder and post-traumatic stress disorder.[8]

Sources

[1] Bari K Platter, MS, RN, PMHCNS-BC, Clinical Nurse Specialist, Center for Dependency, Addiction and Rehabilitation (CeDAR), University of Colorado Health, Aurora, Colorado, August 2016

[2] Laura F. Martin, M.D. Distinguished Fellow of the American Psychiatric Association, American Board of Addiction Medicine Diplomate Medical Director, Center for Dependency, Addiction and Rehabilitation (CeDAR), Associate Professor, Department of Psychiatry, University of Colorado School of Medicine, August 2016

[3] Ruth Marie Huhn, M.D., Board Certified Attending Psychiatrist at the Center for Dependency, Addiction and Rehabilitation (CeDAR), Instructor, Department of Psychiatry, University of Colorado School of Medicine, August 2016

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[8] Thurstone C, Hull M, LeNoue S, Brand N, Riggs PD (accepted for publication), "A Completer's Analysis of an Integrated Psychiatric/Substance Treatment for Adolescents and Young Adults," *University of Colorado Journal of Psychiatry and Psychology*

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SECTION 7: Diversion of Colorado Marijuana

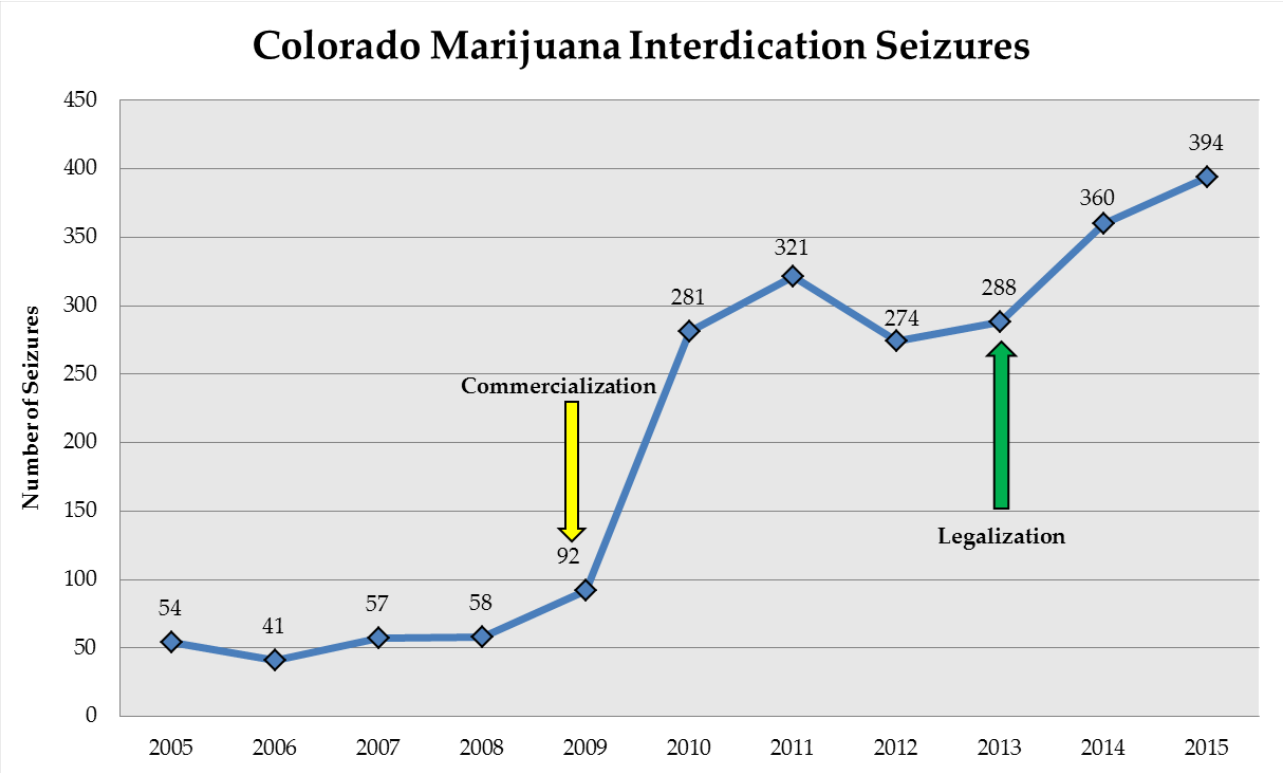
Definitions

Colorado Marijuana Interdiction Seizures: Incidents where state highway patrols stopped a driver for a traffic violation and subsequently found Colorado marijuana destined for other parts of the country. These interdiction seizures are reported on a voluntary basis to the National Seizure System (NSS) managed by the El Paso Intelligence Center (EPIC). These are random traffic stops, not investigations, and do not include local law enforcement data.

Some Findings

- During 2009–2012, when medical marijuana was commercialized, the yearly average number interdiction seizures of Colorado marijuana increased **357 percent** from **53** to **242** per year.
- Highway patrol interdiction seizures of Colorado marijuana increased **37 percent** from **288** to **394** during 2013–2015, when recreational marijuana was legalized.
- The total average number of pounds of Colorado marijuana seized from 2005–2008 compared to 2009–2015 increased **30 percent** from **2,763 pounds** to **3,586 pounds**.
- Of the **394** seizures in 2015, there were **36** different states destined to receive marijuana from Colorado. The most common destinations identified were Missouri, Illinois, Texas, Iowa and Florida.
- More than half of all seizures containing Colorado marijuana originated from Denver.

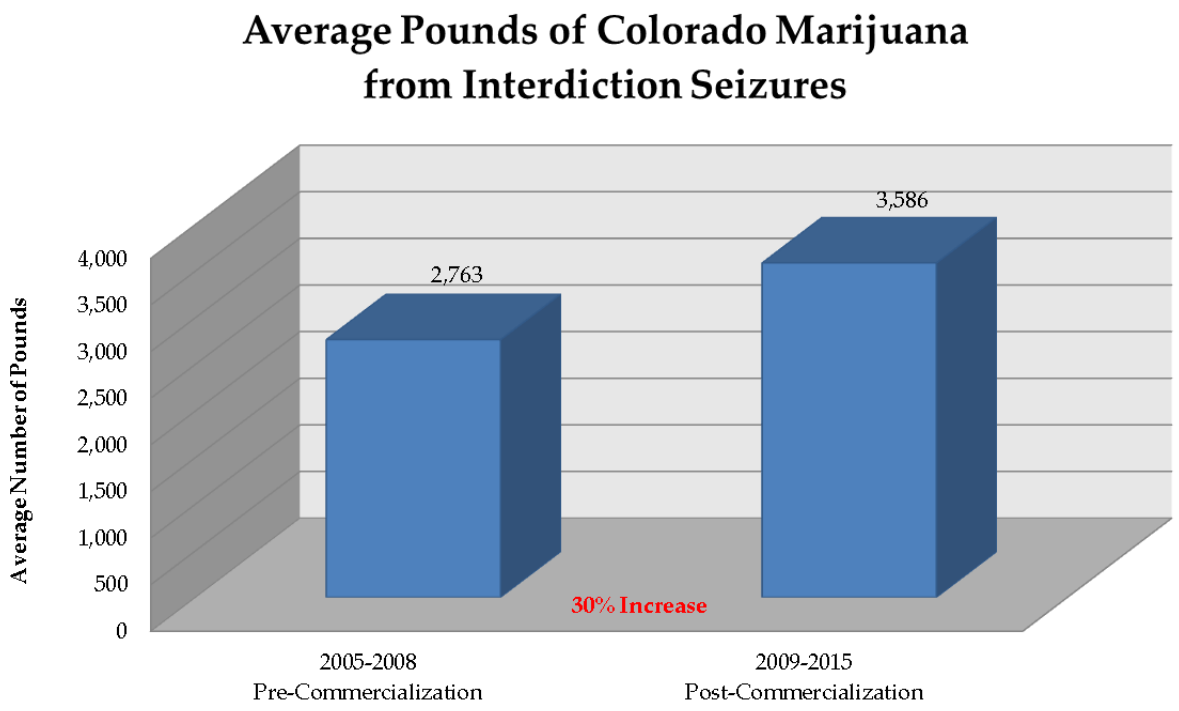
Data



SOURCE: El Paso Intelligence Center, National Seizure System, as of August 15, 2016

- **A 2014 survey of approximately 100 interdiction experts estimates they seize 10 percent or less.**

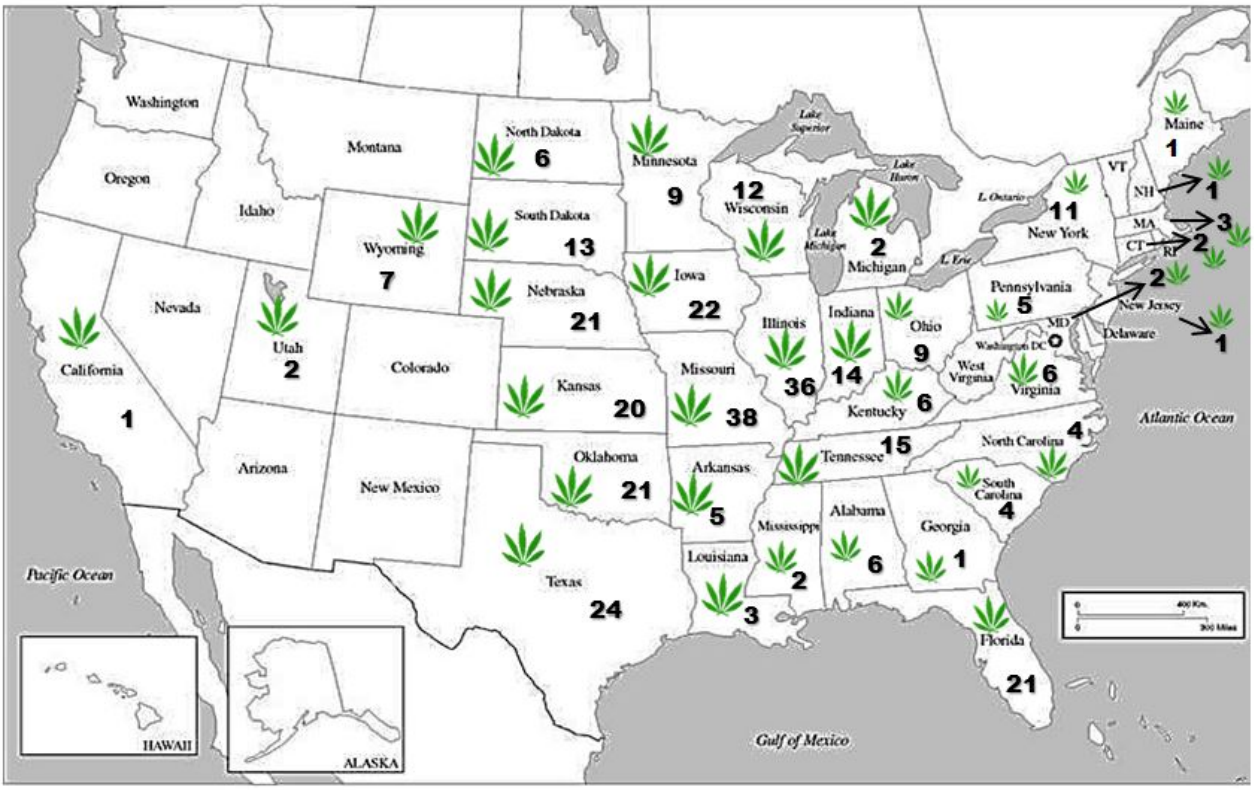
NOTE: THE CHARTS ONLY INCLUDE CASES WHERE COLORADO MARIJUANA WAS ACTUALLY SEIZED AND REPORTED. IT IS UNKNOWN HOW MANY COLORADO MARIJUANA LOADS WERE NOT DETECTED OR, IF SEIZED, WERE NOT REPORTED.



SOURCE: **El Paso Intelligence Center, National Seizure System, as of August 15, 2016**

- **In the three years (2013-2015) of legalized recreational marijuana in Colorado, highway patrol seizures have resulted in approximately 4.5 tons of Colorado marijuana being seized.**

States to Which Colorado Marijuana Was Destined (2015)
(Total Reported Incidents per State)



SOURCE: **El Paso Intelligence Center, National Seizure System, as of August 15, 2016**

- **There were 38 seizures for which the destination was unknown.**

Top Three Cities for Marijuana Origin

Originating City Ranking	Number of Seizures from Originating City	Percentage
1. Denver	178	65%
2. Colorado Springs	22	8%
3. Aurora	10	4%

* Of the 394 seizures, only 272 seizures had an origin city associated to them. The numbers above represent the top three cities where marijuana seizures originating from within Colorado.

A Few Examples of Interdictions

150 Pounds of Colorado Marijuana Destined for Missouri: In December of 2015, a Kansas Highway Patrol trooper stopped a tractor trailer traveling eastbound on I-70 through Kansas. Upon further investigation, 150 pounds of hydroponic-grade marijuana was discovered in the load. The marijuana was from Denver, Colorado and was headed to **Missouri**.

100 Pounds of Colorado Marijuana: In December 2015, Wichita drug task force seized 100 pounds of Colorado marijuana being transported in a Cadillac Escalade bound for **Tampa, Florida**. The three Cuban males from Florida claimed they did not know who the drugs belonged to but found it in a dumpster.

Marijuana as a Christmas Present: On December 22, 2015, an Oklahoma Highway Patrol trooper stopped a vehicle traveling eastbound along I-40. When questioned about a Christmas present in the vehicle, the driver became nervous and provided an improbable reason for the package. A service dog performed an "air sniff" on the vehicle and its contents, indicating on the Christmas present only. Inside the package was approximately 3 pounds of hydroponic marijuana and 40 small containers of THC wax. The male driver was traveling from Colorado Springs, Colorado to **Seale, Alabama**.

Felon with a Gun: On December 22, 2015, a Nebraska State Patrol trooper stopped a vehicle with two adult males and one woman traveling from Arvada, Colorado to **Sioux Falls, South Dakota**. Upon further investigation, the occupants were found to be in possession of 4 pounds of hashish, 4 pounds of marijuana and a .40 caliber Glock firearm. Both males were arrested for possession with intent to deliver and possession of a firearm while committing a felony. The woman was released. One of the males was from Colorado and one from South Dakota.

Edibles and Wax to Oklahoma: In July of 2016, a Kansas Highway Patrol trooper stopped a vehicle for traffic violations. Subsequent to the stop, the trooper discovered 5 pounds of marijuana, 5 pounds of marijuana-infused edibles and 69 grams of THC wax inside the vehicle. This vehicle, registered in Oklahoma, was coming from Denver, Colorado en route to **Oklahoma**.

11 Pounds to Kentucky: On January 8, 2015, a Colorado State Patrol officer conducted a traffic stop of a vehicle traveling from Colorado Springs, Colorado to **Kentucky** resulting in the arrest of the driver and the seizure of 11 pounds marijuana.

The marijuana was vacuum sealed and concealed in a duffel bag. It is suspected that the marijauna came from a grow operation a residence in Colorado Springs.

Two Iowa Dealers Purchase 33 Pounds of Marijuana in Colorado for $50,000: In late October of 2015, two Iowa men were pulled over by local law enforcement in Douglas County, Nebraska. The two were heading eastbound along I-80 after departing Colorado and heading for **Fort Dodge, Iowa**. After the Douglas County deputy sheriff smelled marijuana coming from inside the vehicle, a search revealed more than 33 pounds of marijuana. The two men admitted to bringing $50,000 with them to purchase marijuana from a Colorado source for the purpose of re-selling it in the Fort Dodge area.[1]

123 Pounds of Marijuana Found in Car with Colorado Plates During Ohio Traffic Stop: On January 13, 2016, a Subaru station wagon with Colorado license plates was pulled over on I-70 between Dayton and Columbus, Ohio for following too closely. A search warrant was obtained after a drug-sniffing dog alerted to the vehicle. A total of 123 pounds of marijuana (a $615,000 value) was discovered inside the vehicle. The two men, both Colorado residents, face charges for possession and trafficking marijuana.[2]

Florida to Receive 75 Pounds of Marijuana: On January 22, 2016, a Missouri State Patrol trooper stopped a rental vehicle registered in Colorado for a traffic violation. A subsequent search revealed 75 pounds of marijuana dispursed between three duffle bags located in the rear cargo area of the vehicle. The vehicle was coming from Denver, Colorado en route to **Miami, Florida**.

37 Pounds of Marijuana at a Bus Depot: On November 20, 2015, a Kansas City, Missouri Police Department Interdiction Squad officer located a suspicious bag at a commercial bus depot. A subsequent search revealed 37.4 pounds of marijuana inside the bag. The baggage was coming from Denver, Colorado en route to **Knoxville, Tennessee**.

Speeding to Texas: In August of 2015, Texas Highway Patrol pulled over a driver for speeding while the subject was traveling southbound along US Route 81 near Rhome, Texas. Upon further investigation, 25.5 pounds of marijuana was being transported in the vehicle. The vehicle was from Texas, and the driver was traveling from Denver, Colorado to **Dallas, Texas**.

Marijuana Seeds Destined for the East Coast: On March 14, 2016, a Missouri State Highway Patrol trooper stopped a vehicle registered in Colorado for a traffic violation. A subsequent search revealed 70 marijuana seeds, 2 ounces of marijuana, 3 vials of THC

oil and 40 ml of psilocybin mushrooms spores hidden inside a locked safe in the trunk of the vehicle. The vehicle was coming from Boulder, Colorado en route to **Sterling, Virginia**.

New York Jet-Setters: In August of 2015, an Iowa State Patrol trooper pulled-over a vehicle traveling eastbound on I-80 while following another vehicle too-closely. During the investigation, it was discovered that the subjects in the vehicle had flown from New York to Denver and were now driving back to **New York** in a rental car. The subjects provided consent to search the vehicle. When the search was performed, officers found 55 syringes containing cannabis oil, 10 containers of THC containing gummies, and approximately 6 pounds of THC infused edibles.

Marijuana and THC Wax Found in Autotransport: In February of 2016, a Kansas Highway Patrol trooper stopped a vehicle registered in Massachusetts for a traffic violation. A subsequent search revealed 41 pounds of marijuana and 2.5 pounds of THC wax was concealed in duffle bags located in the trunk of the vehicle being hauled by the tractor trailer. The vehicle was coming from Denver, Colorado en route to **Massachusetts**.

15 Pounds of Colorado Marijuana to Florida: In August of 2016, a 27-year-old man was arrested in Colorado Springs, Colorado on suspicion of attempting to transport 15 pounds of marijuana to **Florida**. When police contacted the suspect, he was drunk, had $28,000 U.S. currency, 3 grams of cocaine and a pistol.[3]

Marijuana by Train: In November 2015, Kansas City Police Interdiction Squad arrested a 62-year-old Colorado woman traveling on an Amtrak train from Boncarbo, Colorado to **St. Louis, Missouri**. In her suitcases were several vacuum-sealed packages containing 5 pounds of high-grade marijuana and 50 grams of THC wax.

A Few Examples of Investigations

NOTE: THE EXAMPLES BELOW ARE ONLY A SMALL SAMPLE OF THE MANY INVESTIGATIONS INVOLVING COLORADO MARIJUANA CITED BY VARIOUS DRUG UNITS.

Increase in Organized Crime: "Since 2014, there has been a notable increase in organized networks of sophisticated residential grows in Colorado that are orchestrated and operated by drug trafficking organizations. These organizations currently operate hundreds of large-scale home grows throughout Colorado. Harvested marijuana is

shipped or transported out of Colorado to markets in the Midwest and East Coast. Home grows have significantly increased illicit production of marijuana in Colorado."[4]

Organized Crime Comes to Colorado to Cash in on Illegal Marijuana Home Grows: "On March 31, [2016] sheriff's deputies from the Special Investigations Narcotics Section raided a single-family home that was in the process of being converted into a 'grow house'. Authorities discovered 127 marijuana plants, over $100,000 in growing equipment, and two Cuban nationals." In the following weeks four more individuals were arrested in regards to similar cases. Like the first two, all of the individuals had similar backgrounds, were Cuban nationals, were transforming residential homes into elaborate marijuana grow operations, and all were recent transplants to Colorado. According to DEA Assistant Special Agent in Charge Kevin Merrill, "It's not just Cubans. We have Vietnamese-based organizations, Russian organized people. But we have seen a large influx of Cubans coming here. And we believe that all the organizations are here because we have a perceived lack of enforcement."

Colorado Springs Mayor John Suthers, who previously served 10 years as attorney general of Colorado, "…calls 'the total nightmare' scenario a byproduct of the state's recent legalization of first medicinal, and later recreational, marijuana. People from out of town or even foreign countries move to Colorado and 'buy or lease houses by the hundreds if not thousands'," explains Suthers. This type of criminal activity is undermining a key argument used for legalizing marijuana in the first place, which is to eliminate the black market. These new Colorado residents are converting residential homes to industrial grow operations and then "…transporting it out of state to marijuana markets nationally and internationally."[5]

Diversion of Colorado Marijuana Violates Both State and Federal Laws: Organized crime elements with out-of-state ties increasingly are using Colorado homes to grow large amounts of marijuana illegally for transport and sale across the nation. "Anytime there's money to be made, crime comes with it," said Huerfano County (Colorado) Sheriff Bruce Newman. "There's a lot of law enforcement activity focused on this," said John Walsh, Colorado's U.S. attorney. "These operations violate federal law but also state law."

In the past, many of these illicit operations gravitated to rural areas of Colorado; however this trend has shifted to criminals renting or buying homes and quickly converting the homes to begin cultivating hundreds, or even thousands, of plants.

"Law enforcement flexed its muscle Thursday [April 14, 2016] morning by raiding about 30 locations — many of them homes — between El Paso County and the north Denver area as part of an operation targeting a pot trafficking organization." In each of the eight cases the county sheriff's office discovered that the residents were not only

from out of state, but many had international ties. "Their plan is to send it out of state," said Pueblo County Sheriff Kirk Taylor. "That's well-documented."

"They can kind of hide in plain sight," said Barbra Roach, special agent in charge of the Drug Enforcement Administration's (DEA) Denver division. "They don't try to abide by the law in any way. For a while, they were going into warehouses. Now they are just going into homes." "Roach said the unintended consequences of the illicit grows can be vast, from fires to water pollution to devaluing rental property."

Walsh said "The DEA has been working with local police departments and sheriff's offices to address the problem. He pointed to an operation last year that targeted 20 people in southern Colorado's Fremont and Custer counties accused of harvesting marijuana at eight properties and shipping it to Florida via UPS. Federal agents and local police confiscated 28 guns, more than $25,000 and 50 pounds of processed marijuana as part of that case."[6]

Drug Traffickers Hiding in Plain Sight: In April 2016, a multi-state investigation into the illegal distribution of marijuana outside Colorado resulted in police and federal agents arresting more than 40 people and seized piles of pot plants. "Officers searched about 30 properties during the raids, which spanned from the Denver area south to Colorado Springs."

"The case involved people who moved to Colorado from Texas specifically to grow marijuana that would be illegally exported."

"Authorities described the case as the latest example of drug traffickers seeking safe haven in the state's flourishing marijuana industry in order to ship the drug out of state, where it can sell for more than double what it would in Colorado."

"Traffickers hide among the state's sanctioned warehouses and farms, but also in neighborhoods where concerned neighbors sometimes tip police, authorities say."[7]

Criminal Organization Coordinated Marijuana to North Carolina: In January 2016, a member of a criminal organization coordinated a delivery of marijuana with the driver of a tractor trailer at a truck stop in Denver. The driver of the tractor trailer was stopped in Kansas in route to North Carolina with 27 pounds of marijuana hidden in the tractor's cab.[8]

Interstate Drug Trafficking Organization: In April 2015, an interstate marijuana trafficking organization headed by a Denver-based trafficker identified ten to fifteen marijuana grow houses in the Denver and Colorado Springs metro areas. This drug trafficking organization utilized several rental properties for their marijuana-grow operations. The organization grew marijuana in Colorado and then distributed their finished product to customers in other states that included North Carolina, Georgia and

Texas. The marijuana was transported to the other states by tractor trailer, personal vehicles and other mail service.[8]

City of Pueblo Cracking Down: Pueblo authorities were notified by concerned citizens regarding illegal marijuana home grows. Between March and August 2016, authorities targeted various illegal home grows. Search warrants for over 30 residential homes were executed. First responders entered homes that were overrun with marijuana plants and various grow equipment, worth well over $450,000 in value, throughout the house. The homes were primarily occupied by growers for the sole purpose of cultivating marijuana and exporting the finished products for profit. Approximately 82 pounds of prepackaged marijuana ready for distribution was seized during this timeframe. In some cases, there were children living in these toxic environments. Several of these homes were declared condemned by the health department for excessive mold and unsafe electrical work. In some cases, high-volume THC extraction labs were located. To date, 41 arrests have been made. Parties arrested were primarily from Florida, Cuba, Russia and Vietnam. Over 7,250 plants were seized from various Pueblo neighborhoods.[9]

$620,000 and Over 2,000 Marijuana Plants: In June 2015, numerous agencies investigated a multi-faceted marijuana cultivation and drug trafficking organization. This enterprise grew marijuana in numerous warehouses and residences in the greater Denver metro area, then shipped the marijuana to Texas, Kansas, Ohio, New York and Nebraska for retail distribution. Money laundering was identified when members of the drug trafficking organization used businesses and financial institutions to launder the illegal drug proceeds. A coordinated take down of the organization occurred at 11 marijuana grow warehouses, 21 residences, 15 bank accounts and 4 safe deposit boxes. "As a result agents and detectives seized $620,000 cash; 2,139 marijuana plants; 438 pounds of finished marijuana; 20 vehicles; one boat; two jet skis; one snowmobile; approximately 600 grow lights and 600 ballasts; jewelry with an estimated value of over $100,000; silver coins and silver bullion. Arrests were not made at this time as the investigation is ongoing. It is anticipated that indictments an arrests will occur in the coming months."[10]

5 Tons of Illegal Marijuana: As of March 2016, Pueblo County authorities have conducted 17 illegal marijuana home grow eradication operations resulting in 25 arrests and over 5,100 illegal marijuana plant seizures from the home grows.[11]

It Wasn't Supported to Work This Way: Authorities were notified of a possible illegal grow operation by a local vigilant in Pueblo, CO just days before 127 marijuana plants, over $100,000 in growing equipment, and two Cuban nationals were discovered

by sheriff's deputies. The single family home that was occupied by 28-year-old Adriel Trujillo Daniel and 41-year-old Leosbel Ledesma Quintana was in the process of being converted into a "grow" house. Over the course of the next few weeks, authorities discovered several other instances of Cuban transplants moving to Colorado in order to set up illegal marijuana grow houses.

"We have quite a bit of evidence" to believe they are member of "Cuban cartels," Pueblo Sheriff Kirk Taylor stated in an interview.

Local, state, and federal officials believe it's not just isolated to Pueblo. "It's across the entire state of Colorado," DEA assistant special agent in charge Kevin Merrill says. "It's just basically taken over the state, these residential grows."

It is what Colorado Springs Mayor John Suthers calls "the total nightmare" scenario, a byproduct of the state's recent legalization of first medicinal, and later recreational, marijuana.

People from out of town or even foreign countries move to Colorado and "buy or lease houses by the hundreds if not thousands," explains Suthers, who previously served 10 years as attorney general of the state.[12]

Seven Men Indicted for Illegal Marijuana Home Grows: In March 2016, Southern Colorado DEA Drug Task Forces secured search warrants and raided five homes in Pueblo West. Some of these illegal home grow operations are located directly across the street from each other. Authorities seized 1,879 marijuana plants, butane hash oil lab equipment, 16 pounds of processed marijuana and nine hand guns and shotguns. Seven men have been indicted in Denver U.S. District Court on 13 counts of illegal marijuana production and distribution to Florida.[13]

Anticipate Hundreds of Marijuana Busts: In March 2016, Colorado Springs Mayor John Suthers will be targeting unregistered, commercial-sized operations run by out-of-state residents, mainly from Florida and with ties to cartels. "Florida's proximity to Cuba has increasingly made it an entry point for drug cartels looking to penetrate markets in the U.S., officials say. 'If you look at who is being busted in Pueblo and who will be busted in Colorado Springs over the summer, you can tell: These are organized crime,' Suthers said."

The Denver Drug Enforcement Agency agents said they have identified at least 186 large-scale marijuana grows operating in Colorado Springs and trafficking products to the Midwest and East Coast.

"Since March 31, the Pueblo County Sheriff's Office and DEA agents have raided 23 illegal grows and arrested 35 people. Of those arrests, 26 people have been from out of state, all but one with ties to Florida. At least six residents were Cuban nationals, the sheriff's office said."

Tim Scott, resident agent in charge for DEA's Colorado Springs Bureau told the City Council in April, "You have to understand what Colorado is. Afghanistan is the source country for heroin. Venezuela and Columbia are source countries for cocaine. Mexico is the source country for methamphetamines. You [Colorado] are the source state for marijuana."[14]

Georgia Couple Traveling with Infant Trafficking Colorado Marijuana: In February 2016, a couple and their infant traveled in a vehicle from Georgia to Colorado Springs to purchase marijuana. During their time in Colorado Springs, the couple made multiple cash deposits at several banks totaling about $20,000, which was payment for marijuana. The couple later met in Colorado Springs with a courier who delivered to them three suitcases filled with marijuana. The couple was later stopped in Kansas en route to Georgia with 32 pounds of marijuana contained in the suitcases.[15]

Floridians Moving to Colorado for Drug Trafficking: In June 2016, DEA's Grand Junction, Colorado Office seized 675 illegal marijuana plants, 3 guns and 3 ounces of cocaine from 5 different residential rental properties in Mesa and Delta counties Colorado. Turns out the group of Cuban nationals rented the homes for the sole purpose of setting up illegal marijuana home grows. These individuals obtained doctor recommendations to grow or to possess up to 99 plants for personal use when in reality this marijuana was being shipped to Florida and New Jersey. "…despite having doctor recommendations to use marijuana for chronic pain, there was no items located during the search warrants that indicated any of the defendants were using any marijuana at all."[16]

2,700 Pot Plants Seized: In July 2015, Delta County (Colorado) Sheriff's Office served a search warrant on an illegal marijuana home grow. Authorities seized 2,700 pot plants. Sheriff Mckee said the agencies were worried that the marijuana was being processed with the intent to distribute, which is banned in Delta County. "Two people were investigated, but charges or citations have yet to be issued."[17]

Drugs, Guns and Money: "Throughout 2015, DEA Denver and counterparts in Larimer and Douglas counties investigated a network of marijuana grows operated by an out-of-state drug trafficking organization. The marijuana was going to Chicago and to Florida. In August, September, and December, state search warrants resulted in the seizures of over 1,800 plants, over 100 pounds of processed marijuana, almost $1 million in assets, and 45 firearms, many of which were military-style automatic rifles."[18]

Home Grow Owner Kills to Protect His Illegal Marijuana: In March 2016, three individuals attempted to burglarize an illegal home grow containing 400 marijuana

plants. The Florida residents occupying the home shot and killed one of the three. The residents have been arrested on charges linked to the marijuana operation. Huerfano County Sheriff Newman attributes this incident to the influx of Florida residents moving to Colorado to illegally grow marijuana and taking it back to their states.[19]

Licensed Marijuana Store Source for Diversion?: In July 2016, an eye witness reports a young man enter a medical marijuana dispensary and order one pound of marijuana. This was well beyond the legal limit for possession and for distribution at any single transaction. The customer argued with the clerk about price and they agreed on a price of $2,500. The young man walked happily out the front door of the medical marijuana dispensary with one entire pound of marijuana in his hand.[20]

Residents Harassed by Marijuana Growers: "In September 2015, the DEA Colorado Springs Resident Office investigated a network of marijuana grow houses in southern Colorado. At least nine marijuana grows houses were operated by members of a Florida-based drug trafficking organization who had recently relocated to Colorado to produce large amounts of marijuana for their customers along the East Coast. During the investigation, one of the grow houses was destroyed by fire, and neighbors were repeatedly intimidated and harassed by the growers. In September 2015, the execution of search warrants at the grow sites resulted in the seizure of over 1,000 marijuana plants, 50 pounds of harvested marijuana, and 28 firearms".[21]

Money Laundering Schemes: "The financial system is often exploited by marijuana traffickers based in Colorado and their customers in other states. A myriad of money laundering schemes are used to integrate marijuana cash into the financial system. Most recently, there is widespread use of funnel accounts. Cash from marijuana purchases is deposited into the sources' bank accounts at branches throughout the Midwestern and eastern U.S. Within a day or two, the money is withdrawn at ATMs in Colorado or transferred to additional accounts. Reporting by banks documents millions of dollars in cash deposits related to out-of-state marijuana sales on a monthly basis."[21]

12-Pound Seizure Leads to a Large-Scale Drug Trafficking Operation: In February 2016, Texas State Patrol conducted a traffic stop resulting in 12 pounds of high grade marijuana being seized in route from Colorado destined for Florida. This led to the identification of 5 homes in Pueblo, Colorado that were actively cultivating marijuana with the intent to transport to Florida. In March 2016, search warrants were executed at the five properties resulting in the seizure of 2 active BHO extraction labs, 1,895 marijuana plants, approximately 17 pounds of processed marijuana and a small amount of marijuana "shatter." In addition, approximately $75,000 worth of marijuana grow equipment, approximately $2,000.00 USC and 9 firearms were seized from the

properties. Seven defendants were arrested on various charges to include possession with intent to manufacture or distribute marijuana.[22]

Comments

Kansas Attempting to Prove Colorado Marijuana is Wreaking Havoc on the State: As of January of 2016, Derek Schmidt, Kansas Attorney General, is in the process of gathering evidence related to the illegal export of marijuana from the neighboring state of Colorado. The Kansas Office of the Attorney General has recently announced that it is sending surveys to prosecutors and law enforcement officials within the state. The underlying purpose of the efforts to collect information on the negative effect of Colorado marijuana is geared towards supporting a lawsuit filed with the U.S. Supreme Court by Oklahoma and Nebraska. Currently, criminal justice information systems are not tracking the origin of marijuana encountered by Kansas law enforcement.

"There are numerous and persistent anecdotal accounts of marijuana acquired in Colorado and illegally transported into Kansas causing harm here," Schmidt is quoted as saying. "But because of technology limits, the confirming data is elusive. Since Colorado's experiment with legalization is affecting Kansas, we need to know more about what is actually happening here so policymakers can make informed decisions."[23]

Nebraska Resources Inundated by Colorado Marijuana: "Nebraska Sheriff Adam Hayward says his resources have been stretched thin as more marijuana legally purchased in Colorado crosses into Nebraska."

Potential pot customers will see a handmade sign in retail dispensaries: "It is illegal to take marijuana out of the state." But this does not stop individuals from breaking the law. Since legalization, Nebraska law enforcement across the border is busier than ever, as eastward drivers attempt to leave Colorado with their pot products. In January of this year, Nebraska authorities booked 23 possession of marijuana cases coming from Colorado. Licensed dispensary products such as joints to psychedelic glass pipes to edibles, such as cannabis-infused gummy bears, chips and cookies are the items being purchased in Colorado and immediately become illegal contraband once it crosses over to Nebraska.

"Sheriff Hayward says most drivers who are caught with weed are pulled over for basic traffic violations like speeding or failing to signal a lane change."

"During a recent traffic stop, Sheriff Hayward confiscated four large plastic bags with six pounds of marijuana. The driver, who Hayward said purchased the cannabis from a Colorado dispensary and planned to sell it in Nebraska, was convicted on felony charges."[24]

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SECTION 8: Diversion by Parcel

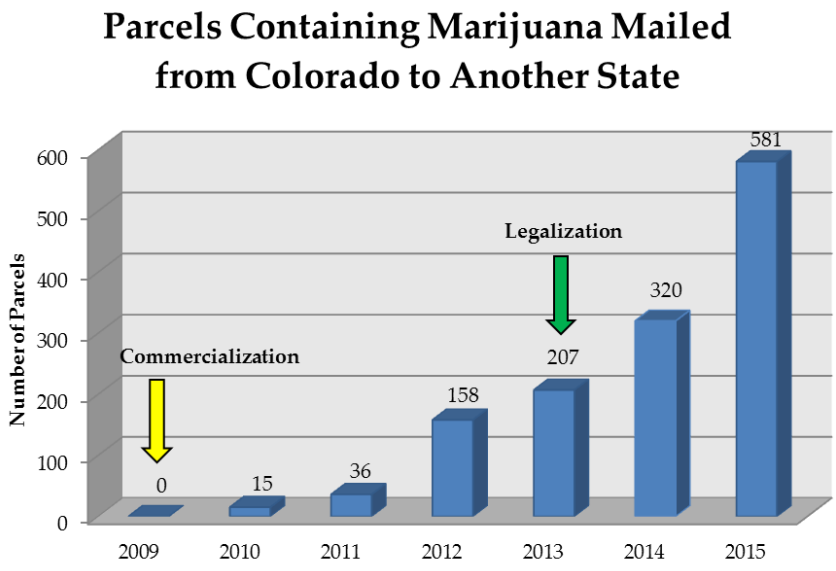
Some Findings

- Seizures of Colorado marijuana in the U.S. mail has **increased 427 percent** from an average of 70 parcels (2010-2012) to 369 parcels (2013-2015) in the three-year average that recreational marijuana has been legal.

- Seizures of Colorado marijuana in the U.S. mail has **increased 471 percent** from an average of 129 pounds (2010-2012) to 736 pounds (2013-2015) in the three-year average that recreational marijuana has been legal.

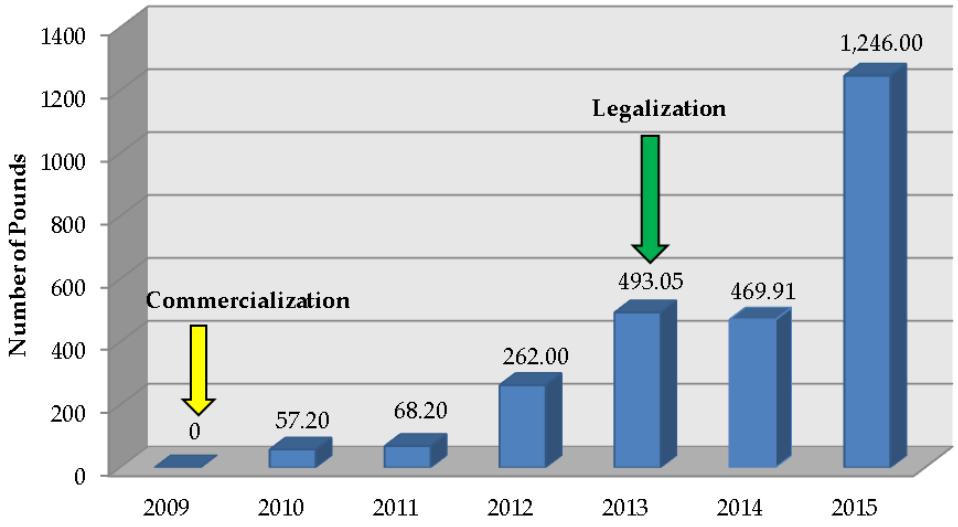
Data

NOTE: THESE FIGURES ONLY REFLECT PACKAGES SEIZED; THEY DO NOT INCLUDE PACKAGES OF COLORADO MARIJUANA THAT WERE MAILED AND REACHED THE INTENDED DESTINATION. INTERDICTION EXPERTS BELIEVE THE PACKAGES SEIZED WERE JUST THE "TIP OF THE ICEBERG."



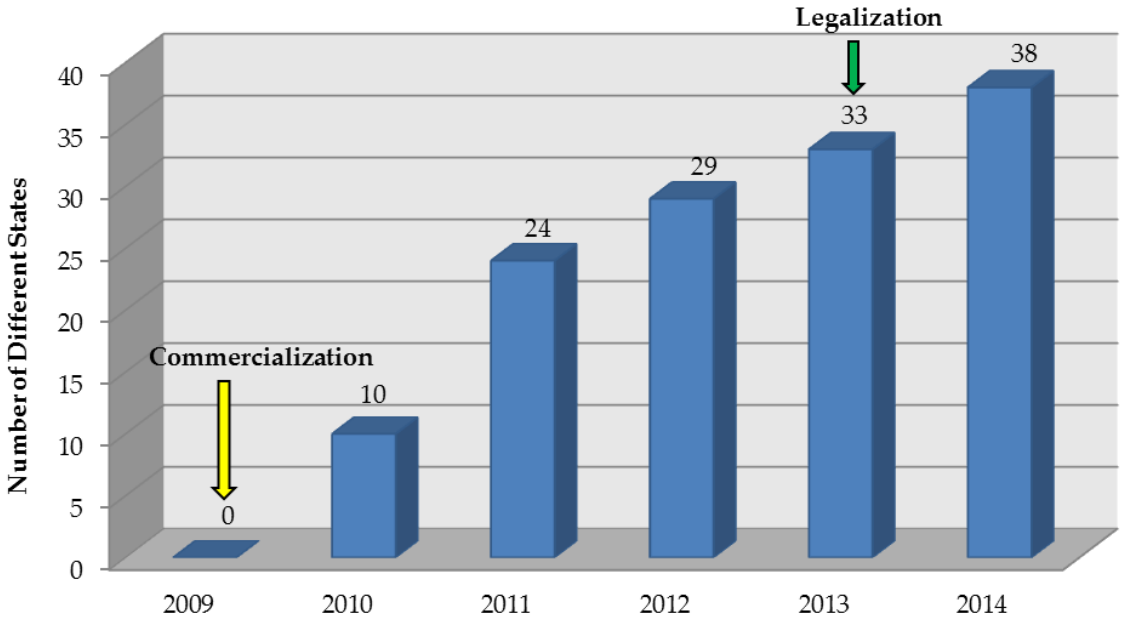
SOURCE: United States Postal Inspection Service, Prohibited Mailing of Narcotics

Pounds of Colorado Marijuana Seized by the U.S. Postal Inspection Service



SOURCE: United States Postal Inspection Service, Prohibited Mailing of Narcotics

Number of States Destined to Receive Marijuana Mailed from Colorado



SOURCE: United States Postal Inspection Service – Prohibited Mailing of Narcotics

Private Parcel Companies

- **There are courier delivery service companies, with locations throughout the country, from which Colorado marijuana destined for other states have been seized. Unlike the U.S. Postal Service, a central data system does not exist for these various private couriers.**

An inquiry of some HIDTAs related to the random seizure of Colorado marijuana in their region through parcel services other than the U.S. Postal Service:

Appalachia: 14 packages of marijuana weighing a total of 80 pounds with a third of the packages destined for Florida.

Chicago: 24 packages of bulk marijuana, concentrate, and edibles weighing a total of 10.5 pounds.

Gulf Coast: 85 packages of bulk marijuana, concentrates, and edibles weighing a total of 97 pounds with 31 different states identified as the destinations.

Houston: 7 packages of bulk marijuana and concentrates weighing a total of 8 pounds.

Midwest: 8 packages with various forms of marijuana headed to Missouri weighing a total of 8 pounds.

Ohio: 18 packages of bulk marijuana and edibles weighing a total of 21 pounds.

Washington/Baltimore: 12 packages with marijuana weighing a total of 4 pounds.

Some Examples

North Metro Task Force Parcel Seizures: During calendar year 2015, North Metro Drug Task Force worked closely with FedEx, UPS and USPIS. North Metro intercepted 32 separate packages containing marijuana from Colorado that were destined to 17 different states. The combined weight of these packages exceeded 84 pounds.[1]

Bad Luck in Marijuana Industry Leads to Arrest: In April 2015, a major parcel company alerted Chicago Police to a package coming from Colorado that had a strong odor of marijuana. Police obtained a search warrant and seized nearly 7 pounds of marijuana. The individual to whom the package was delivered was arrested. This individual was identified as part of the young entrepreneurs who went to Colorado about five years prior to make money in the medical marijuana industry. Apparently he moved to Colorado and grew marijuana plants in a warehouse outside of Denver. At the same time, his wife operated a small medical marijuana dispensary in Denver. Prior to this arrest in 2015, he was arrested in 2010 by Chicago Police for a parcel post package containing 40 pounds of marijuana. The individual reflected on his hard luck in the medical marijuana business and stated, "Some people in the industry have gotten lucky. Other guys like me have gotten caught in the system."[2]

Medical Marijuana Store Owner to Receive $16,000: In February 2015, three suspicious parcels were identified. A search warrant was obtained and revealed the packages contained over $16,000 in cash. These three parcels, all coming from different locations including Idaho, Pennsylvania and Illinois, were destined for a Colorado Springs metro area medical marijuana store owner.[1]

22 Pounds of Boulder (Colorado) Marijuana Sent to New Jersey: "Police arrested a 26-year-old man they say was running a pot-distribution operation out of a Lawrence [New Jersey] home after he claimed a 22-pound package of marijuana that came through the mail Wednesday. Michael Lester, who faces seven drug charges, was released on $75,000 bail. His arrest followed a six-month investigation by Lawrence police and the Mercer County Narcotics Task Force. Police say the package had more than 300 edible marijuana products with a street value of $9,000. During a search of the Greenfield Avenue home, police also uncovered additional edible marijuana products, marijuana extracts, hashish and oils, packaging materials, scales, packing machines, a money counter and more than $50,000 in cash. Two vehicles were also seized as suspected narcotics proceeds, police said." It was later determined through investigation that the marijuana came from Boulder, Colorado.[4]

Colorado Marijuana to Texas: In February 2015, a Texas man was arrested for trying to send himself marijuana and marijuana products he purchased in Pueblo, Colorado. Apparently the subject purchased the marijuana in Pueblo and then mailed it to himself in San Angelo, Texas where he resides. The package, when seized, contained 9 pounds of "high-grade marijuana" and marijuana edibles as well as cough syrups, skin patches and "wax" that had been "legally purchased" from two separate dispensaries in Pueblo. This individual was arrested in Texas.[5]

Traffic Stop Leads to Parcel Interception: In September 2015, "Federal prosecutors charged 20 people in Colorado suspected of trafficking marijuana out of state." A traffic stop in Pennsylvania revealed 34 pounds of marijuana. "Authorities say they also followed a vehicle to a Colorado Springs UPS store and found the suspects intended to ship marijuana to Florida. Authorities say warrants conducted in the southern Colorado towns of Cotopaxi and Westcliffe led to the seizure of 1,000 marijuana plants, 50 pounds of dried marijuana, and 28 firearms."[6]

Brownies to Florida: In March 2015, the West Metro Task Force responded to a parcel company that opened a suspicious package and found two baggies with marijuana brownies, along with a business card. The card read "Sweet Mary Jane – Merciful Chocolate." The package was destined for Sulphur Springs, Florida.[1]

Stuffed Animals with Marijuana: In June 2015, Loveland Police Department was called out on a suspicious package from a parcel company. They discovered that the package contained stuffed animals full of marijuana and weighing over 2 ounces. The package was coming from Colorado en route to Navarre, Florida.[1]

Helping a Friend: In September 2014, West Metro Task Force investigators responded when a 29-year-old male attempted to send an overnight package containing miscellaneous food items and marijuana concentrate. When arrested, the individual told the investigators he was attempting to "help" a friend who lived in Hawaii.[1]

Suspicious Package Contained Colorado Marijuana: In January 2016, Kansas City Missouri Police Department Interdiction Squad located a suspicious parcel at the commercial sorting hub. The package was seized and contained 10.4 pounds of Colorado marijuana. The package originated out of Lakewood, Colorado and destined for Kansas City, Missouri.[6]

K-9 Alerts on High Grade Marijuana: In November 2015 a Washington/Baltimore HIDTA interdiction team intercepted a package from Aurora, Colorado destined for Blacksburg, Virginia. A canine alerted to the package, which was subsequently found to contain approximately ½ pound of high-grade marijuana and about 1 pound of marijuana edibles.[7]

Aspen, Colorado to Neptune Beach, Florida: In March 2016, a North Florida HIDTA interdiction team seized a little over 11 pounds of high-grade marijuana sent from Aspen, Colorado to an address in Neptune Beach, Florida.[8]

Over 30 Pounds of Marijuana to the East Coast: In May 2015, an Appalachia HIDTA interdiction unit seized over 33 pounds of marijuana coming from Denver, Colorado en route to New York.[9]

K9 Alert in Kansas City, Missouri: In December 2015, a canine alerted to a parcel with 24 pounds of marijuana that was destined to Georgia from Denver, Colorado.[6]

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[7] Washington/Baltimore High Intensity Drug Trafficking Area

[8] North Florida High Intensity Drug Trafficking Area

[9] Appalachia High Intensity Drug Trafficking Area

SECTION 9: Related Data

Topics

- Crime
- Revenue
- Event Planners' Views of Denver
- Homeless
- Suicides
- Environmental Impact
- THC Potency
- Marijuana Use and Alcohol Consumption
- Medical Marijuana Registry
- Licensed Marijuana Businesses as of January 2015
- Business Comparisons as of January 2015
- Demand and Market Size
- 2014 Reported Sales of Marijuana in Colorado
- 2014 Price of Marijuana
- Local Response to the Medical and Recreational Marijuana Industry in Colorado

NOTE: SOME OF THE DATA REPORTED IN THIS SECTION IS BECAUSE THERE HAVE BEEN SO MANY INQUIRIES ON THE PARTICULAR SUBJECT, SUCH AS CRIME AND SUICIDES. THIS IS NOT TO INFER THAT THE DATA IS DUE TO THE LEGALIZATION OF MARIJUANA.

Some Findings

- Crime in Denver and Colorado has increased from 2013 to 2015.

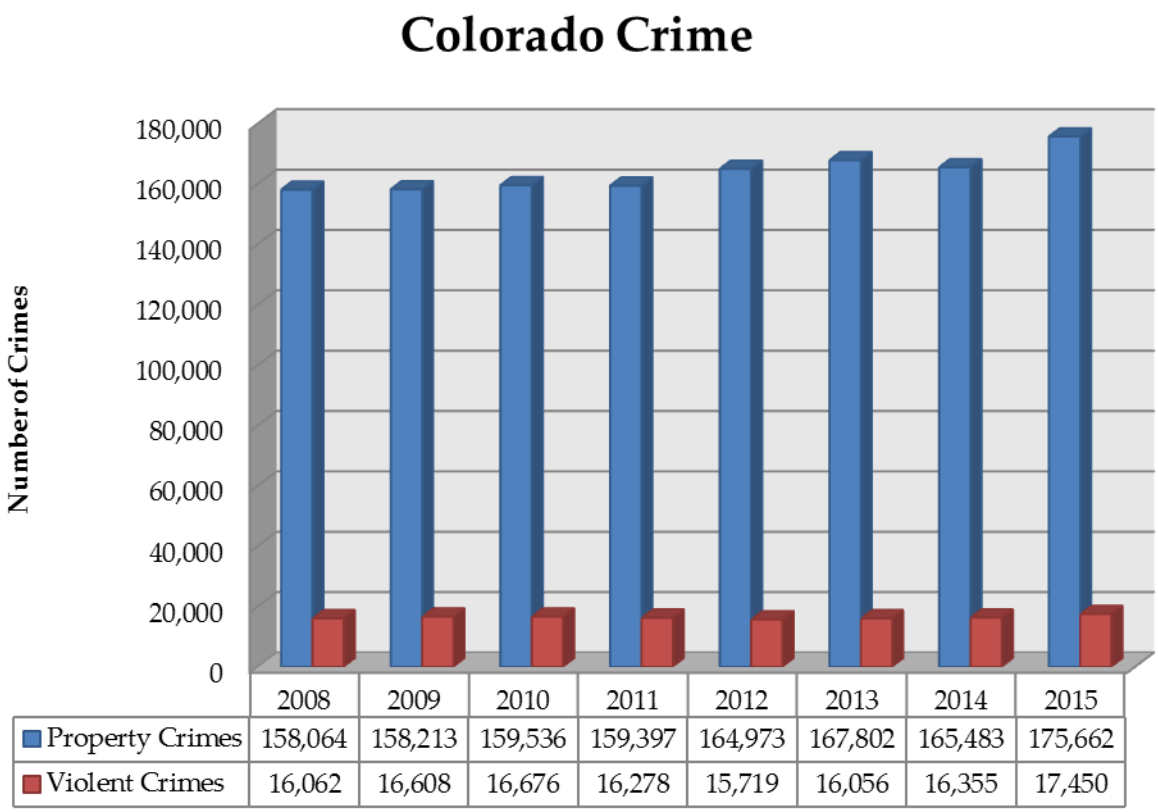
- Colorado annual tax revenue from the sale of recreational and medical marijuana was $115,579,432 (CY2015) or about **0.5 percent** of Colorado's total statewide budget (FY2016).

- "Denver is losing visitors and valuable convention business as a result of these overall safety (or perception of safety) issues..." – VISIT DENVER report

- As of January 2016, there were **424 retail marijuana stores** in the state of Colorado compared to **322 Starbucks** and **202 McDonald's**.

- **68 percent** of local jurisdictions have banned medical and recreational marijuana businesses.

Crime

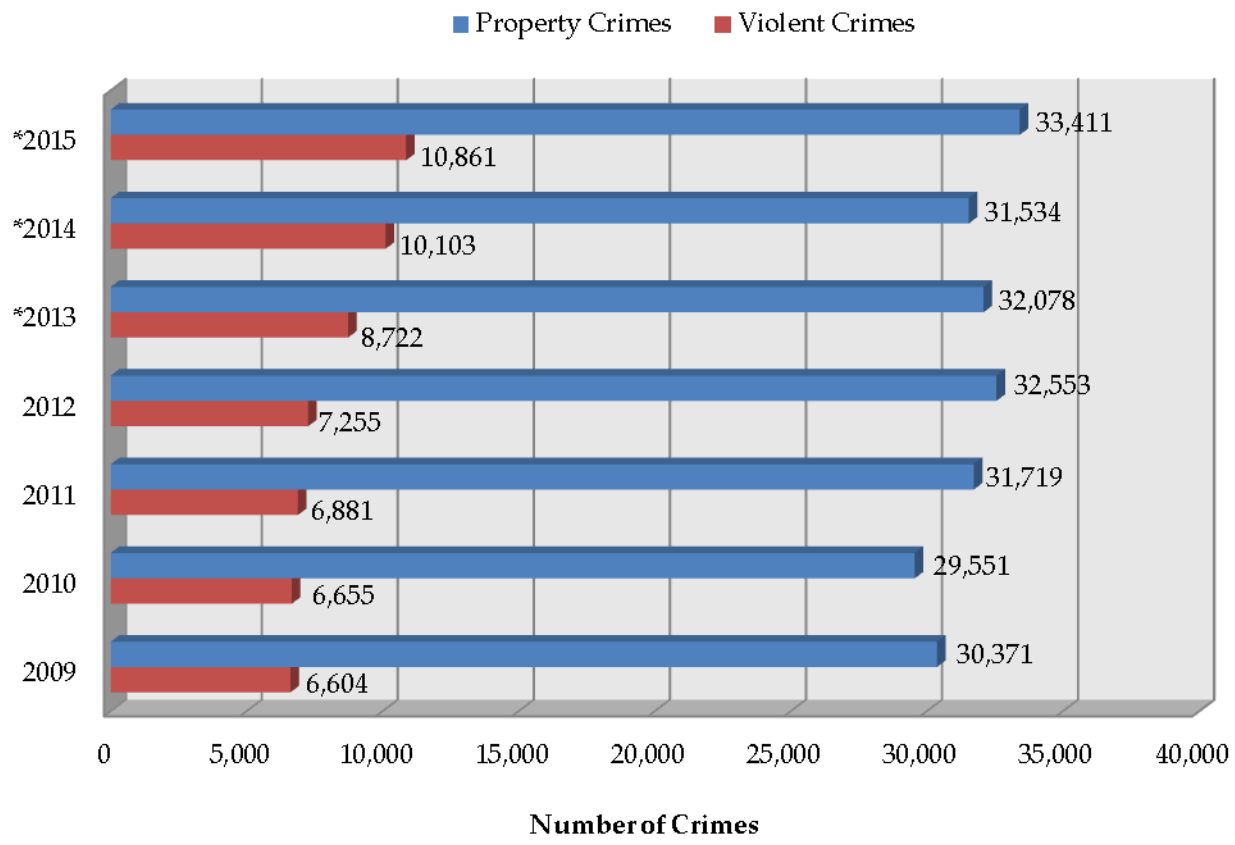


	2008	2009	2010	2011	2012	2013	2014	2015
Property Crimes	158,064	158,213	159,536	159,397	164,973	167,802	165,483	175,662
Violent Crimes	16,062	16,608	16,676	16,278	15,719	16,056	16,355	17,450

SOURCE: **Colorado Bureau of Investigation, http://crimenco.cbi.state.co.us/**

- **From 2014 to 2015:**
  - **Property crime increased 6.2 percent**
  - **Violent crime increased 6.7 percent**
  - **All crime increased 6.2 percent**

City and County of Denver Crime



*In May 2013 the Denver Police Department implemented the Unified Summons and Complaint (US&C) process. This process unifies multiple types of paper citations, excluding traffic tickets, into an electronic process. That information is transmitted to the Denver Sheriff, County Court, City Attorney and District Attorney through a data exchange platform as needed. As a result of this process a reported offense is generated which was previously not captured in National Incident Based Reporting System (NIBRS).

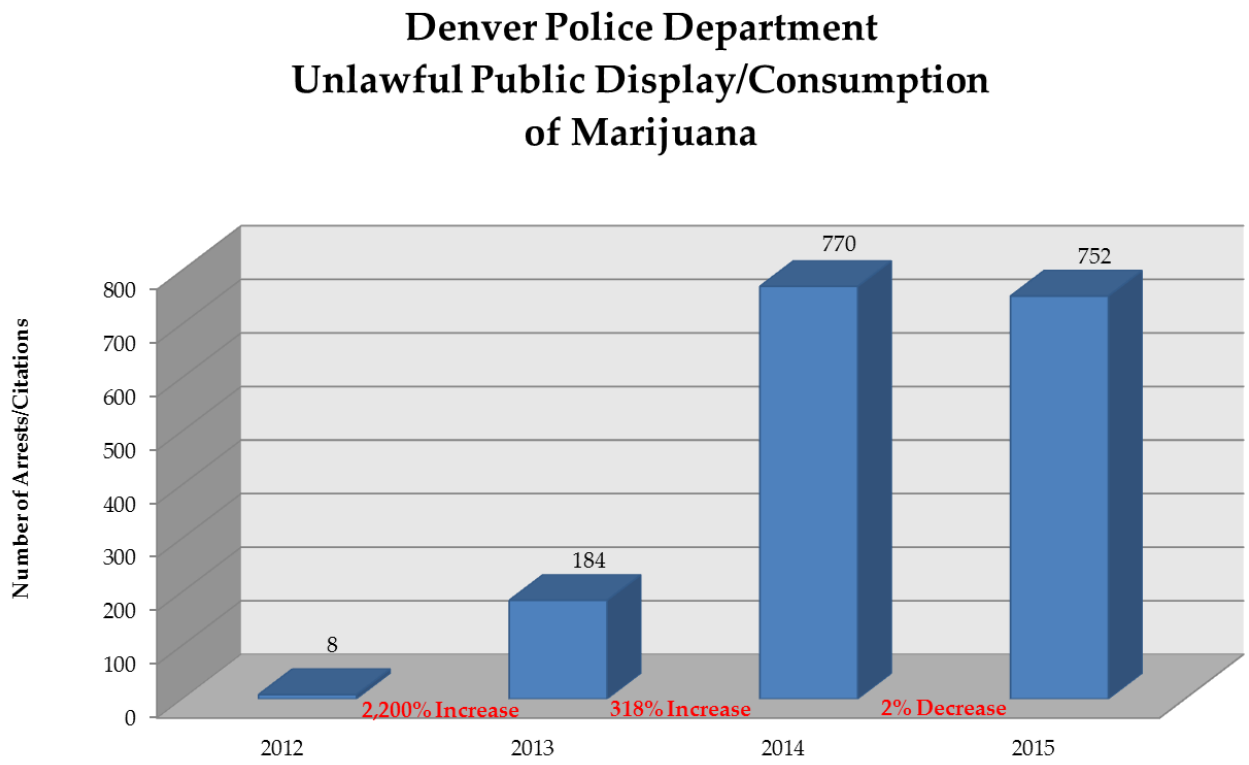
SOURCE: **City and County of Denver, Denver Police Department, Crime Statistics and Maps, April 2016**

*All Reported Crime in Denver			
2013	2014	2015	
55,115 reported crimes	61,276 reported crimes	63,816 reported crimes	8,701 reported crimes increase from 2013 to 2015 (16 percent increase)

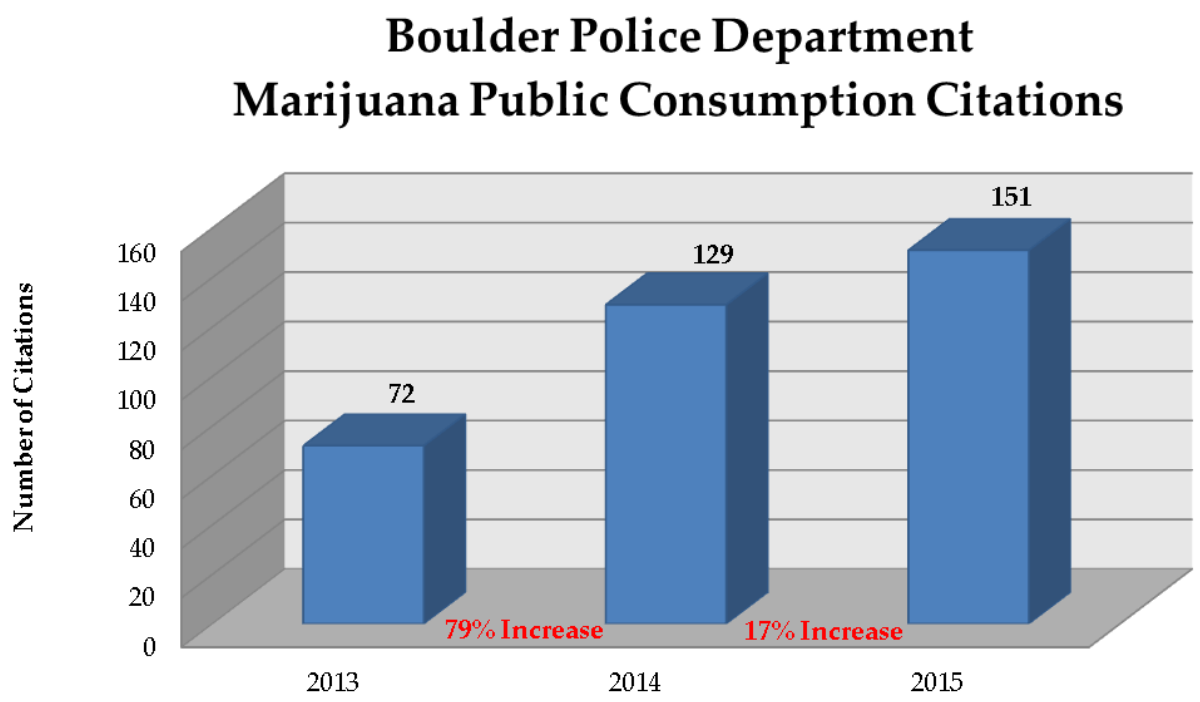
* Actual number of crimes in Denver (new process began in May 2013)

- From 2014 to 2015:
  - Crimes against persons increased 7.5 percent
  - Crimes against property increased 6 percent
  - Crimes against society increased 15.6 percent
  - All other offenses decreased 5.7 percent
  - All Denver crimes increased 4.1 percent

SOURCE: National Incident Based Reporting System definitions in the City and County of Denver, April 2016



SOURCE: Denver Police Department, Traffic Operations Bureau/Vice/Drug Bureau via Data Analysis Unit



SOURCE: Boulder Police Department, Records and Information Services

NOTE: THE CITY OF BOULDER DID NOT HAVE A MUNICIPAL STATUTE SPECIFIC TO PUBLIC CONSUMPTION OF MARIJUANA UNTIL MID-2013.

Related Material

Legalized Marijuana Brings Violence to Downtown Denver's 16th Street Mall: Video was posted to Facebook of a man wielding PVC pipes and violently swinging them at anyone within reach. According to police, the man from Indiana had only been in Denver for a week before the incident occurred. In response to the attack, Denver Mayor Michael Hancock stated, "Let's be clear. Marijuana is drawing people to the mall. The travelers are very clear. I can tell you this because I've talked to the travelers," said Hancock. "This is one of the results of the legal marijuana industry in Denver and we're going to have to deal with it." Due to several such incidents occurring in the area the Mayor and Denver Police Department announced they would be increasing patrols on the 16th Street Mall. "The strategy for improved safety involves spending over half a million dollars to increase police patrols and add resources."[1]

Violent Crimes are Up in Colorado: According to the Colorado Bureau of Investigation's annual crime report, "officials say homicides increased by nearly 15

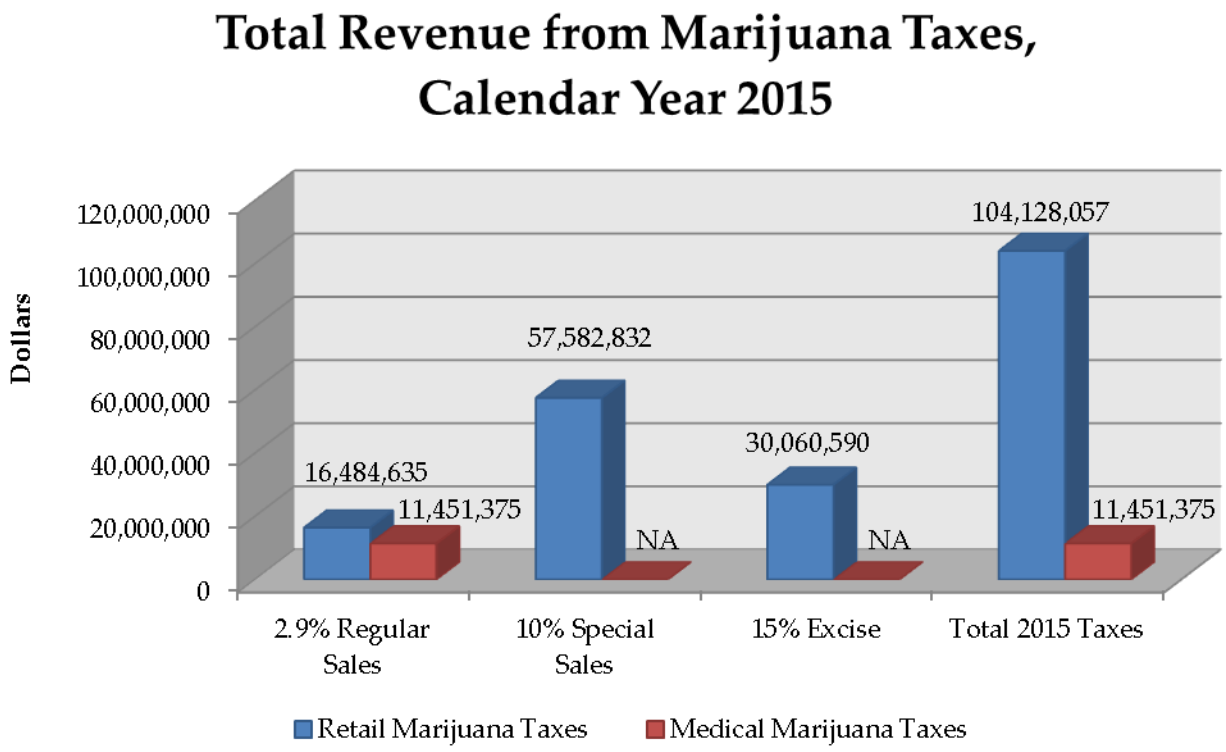
percent statewide last year while rapes increased by almost 11 percent." Additionally, "Robberies rose nearly 10 percent and motor vehicle thefts rose about 28 percent. Burglaries were up about 1 percent." Compared with 2014 numbers, overall crimes in Colorado rose more than 6 percent in 2015. "The report is based on statistics from 245 law-enforcement agencies statewide," and "It didn't speculate on the reasons behind any of the trends."[2]

Halloween Mass Shooter: On October 31, 2015, a Colorado Springs man shot and killed three people in a rampage that ended in a shootout with police. Noah Harpham was seen pacing outside of his home with an AR-15 in hand. Concerned bystanders reported the situation to police but were initially turned away because Harpham did not appear threatening to anyone at the time. Minutes later, the shooter got into a confrontation with a passing bicyclist. With little warning, the shooter fired five rounds, striking and killing the three-tour Iraq War veteran. The gunman then walked down the street and opened fire on two innocent women sitting out in front of their residence. Both women died shortly after due to their injuries. Police officers responding to the call confronted the gunman, killing him after being shot at several times.

An investigative report released by authorities included a toxicology report on the shooter. The shooter tested positive for marijuana only, which may have been a contributing factor to the rampage which claimed the lives of four.[3]

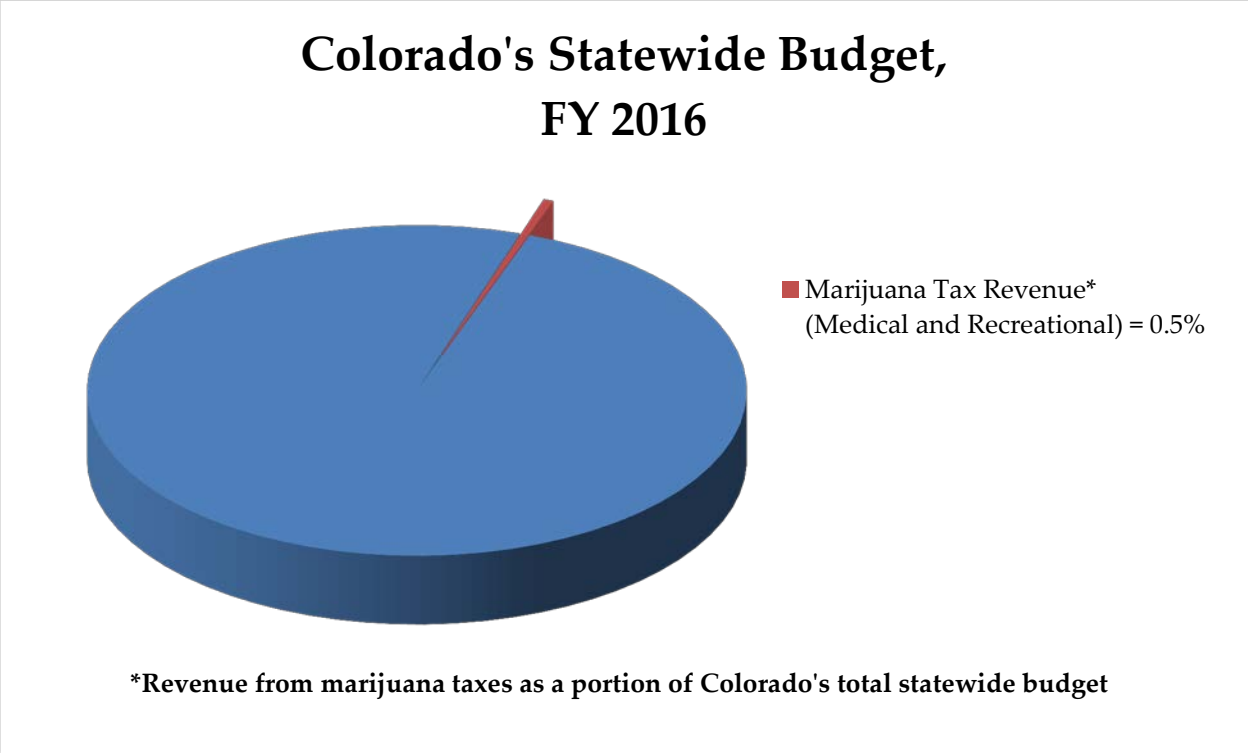
Marijuana-Motivated Armed Robbery: In August 2016, five males armed with firearms assaulted, robbed and burglarized an ex-Crip gang member for marijuana in Adams County, Colorado. The victim was shot three times and severely beaten on his porch by the five assailants. The victim was targeted because his residence is known for dealing drugs, especially marijuana. Suspects admitted that this was premeditated as they sat and watched six cars drive up to the residence with several individuals walking away with "baggies" in their hands. The suspects were primarily after marijuana, money and any valuables. One individual had the assignment of duct-taping the victim's wife and children if they were present at the time of the attack.[4]

Revenue



SOURCE: **Department of Revenue, Monthly Marijuana Taxes, Licenses and Fees Transfers and Distribution**

NOTE: **FIGURES DO NOT INCLUDE ANY CITY TAXES: THE STATE DOES NOT ASSESS OR COLLECT THOSE TAXES.**



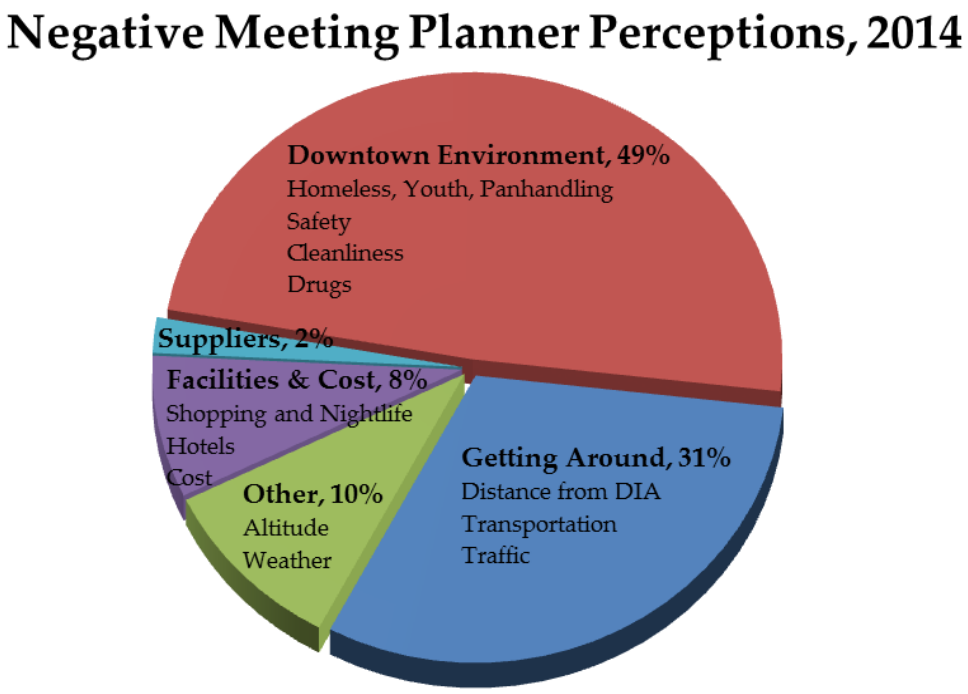
SOURCE: **Governor's Office of State Planning and Budgeting**

Related Material

Colorado State Revenue Gains Are A Myth: "You do not legalize for taxation. It is a myth. You are not going to pave streets. You are not going to be able to pay teachers," Andrew Freedman, director of Marijuana Coordination for Colorado, said on Boston Herald Radio. "The big red herring is the whole thing that the tax revenue will solve a bunch of crises. But it won't."[5]

Is The Tax Revenue Worth It?: The Roaring Fork School District's Rob Stein stated, "It was a pretty smart move of those people who are trying to get the marijuana legislation passed to try to tie it to schools because it's certainly where people have that impression. It's just not accurate that marijuana excise taxes are the difference makers for schools or school facilities." While Stein's school district was awarded some grant money from the marijuana tax revenue to contribute towards building a new addition, and he is "not ungrateful for the marijuana tax money" he is still left wondering if it is truly worth it. "What we don't know yet is the total societal costs of marijuana legalization," Stein said.[6]

Event Planners' Views of Denver



SOURCE: **VISIT DENVER, Impacts of the Downtown Environment on the Tourism Industry and Visitor Perceptions report**

VISIT DENVER is the marketing organization for the city and it measures, records and reports hundreds of data points, to include safety trends and feedback received from convention and leisure visitors. Based on data collected they came away with three key takeaways:

- "The downtown environment is the #1 complaint from meeting planners, far surpassing any other categories. The severity of this issue has increased and as of 2014 nearly 50% of meeting planners negatively commented on homeless, youth, panhandling, safety, cleanliness, and drugs including public marijuana consumption."
- "Denver ranks very high on walkability, affordability, facilities, and other factors. However, Denver as a 'safe city' ranks significantly lower according to interviews with key convention planners conducted by an independent third-party."
- "Denver is losing visitors and valuable convention business as a result of these overall safety (or perception of safety) issues. Unfortunately, word is beginning to spread among meeting planners about the safety challenges Denver is facing.

As the market organization for the city, we fear not being able to brand Denver away from this growing reputation."

Comments made by the Colorado Convention Center clients and visitors to Denver:

- "I'm sorry but I would never consider putting attendees in danger by holding a convention in your city. We are staying at Embassy Suites downtown on 16th, and last night witnessed a group of about 30 teenagers attack a man walking along 16th street. I am told this is not an unusual occurrence. The homeless situation is very sad, and public streets reek of weed. The Denver police should be more alert to large groups of minors congregating on city streets attacking tourists. My feedback from this meeting will be to never locate here again; I have felt much safer in downtown NYC, Philly, Seattle, and Chicago."
- "I am a 5th generation Colorado native. I am downtown for a national convention and within 10 minutes of walking to the Convention Center I was so disheartened: I didn't feel safe and it was 2:00 in the afternoon. I passed drunks, disheveled people, smelled weed being smoked in the open. It was disgusting and I thought so this is where the current government is taking us. I use [sic] to be so proud of Denver and Colorado; today I was heart sick and embarrassed, knowing I'd be apologizing to colleagues coming from other states that didn't have sanctuary cities, legalized pot etc. Mayor Hancock, you need to rethink what you're doing before the Denver that was beautiful and safe is gone."
- "This client chose to contract with the Hyatt Regency San Antonio. I would like to share with you why Denver dropped off his list. This client does a lot of business in Denver and was disappointed to see, in his opinion, how things have changed in the city since marijuana was legalized. He says he sees lots of people walking around looking 'out of it' and does not want to expose his attendees to this. I hope you don't mind the honestly [sic] but I wanted you to know exactly 'why'."
- "Greetings, we wanted to pass along some comments based on a national meeting we hosted for our industry in Denver in July [2015]. It was held with delegates arriving as early as July 11 and continued through July 15. This is a meeting of industry executives and business owners from around the entire country. The meeting was headquartered at the Sheraton downtown. The chairman commented, 'We will most likely not return to Denver based on the current situation with all the street people.' This was followed up by comments from the President who echoed these comments about a reluctance to return to Denver based on the condition of the City and the abundance of homeless people walking the mall and in and about the downtown area. The attendees were also less than complementary with Denver and in particular the downtown area.

Some of the comments received from attendee in survey after the conference were:

- 'Denver seems less safe now that pot is legalized.'
- 'Don't have a meeting in downtown Denver…what a depressing downtown area.'
- 'The neighborhood had way too many vagrants. I don't remember Denver being that bad.'
- 'Poor area, lots of crime as we sat outside on a patio on the 16th Street mall on Sunday evening having a beer, I turned my head to look at a television, when I turned back a street person was drinking my beer. I am sure this is not an image Denver wants portrayed around the country.'"

Homeless

Marijuana Legalization in Colorado: How Recreational Weed is Attracting People, but Spiking the State's Homeless Rate:[7] In this two-part reporting piece, a 25 year old man named Devin Butts is followed around by a reporter during his first two days in Pueblo, Colorado. Devin self-admitted he moved to Colorado due to the legal marijuana industry where he can freely use without harassment. After beginning to use marijuana as a youth, Devin graduated to hydrocodone pills, methamphetamine and crack and did stints in and out of jail related to the drug use. As a final determining factor, Devin decided to move to Colorado from Texas when "…his lawyer had told him the new marijuana charge was finally moving forward in the courts. He was looking at another 120 days behind bars." As the reporter follows Devin around, he applies for jobs at the local mall and takes several hits of marijuana throughout the day. While he is determined to become a success story in Colorado, he also is in line with the belief that tax revenue from marijuana "…should go to help those like himself that have been lured to the region because of cannabis." Likewise, various other individuals involved with the marijuana industry as well as homeless services believe that more money "…should go to understanding and addressing the needs of the people who've arrived in the state with an interest in marijuana and not much else."

Further information from the series: According to the report, "Interviews with people at homeless shelters in Denver and other Colorado cities like Pueblo suggest that since Colorado launched its legalized cannabis system in 2014, the percentage of newcomers to the facilities who are there in part because of the lure of marijuana has swollen to 20 to 30 percent." "All told, several hundred marijuana migrants struggling with poverty appear to be arriving in Colorado each month."

Posada, a homeless services center in Pueblo, Colorado:

- According to Anne Stattelman, Posada's director:
    - "Shelters currently have enough beds for just 1 percent of the area's total homeless population."

Denver's St. Francis Center day shelter in Denver, Colorado:

- According to Tom Luehrs, executive director:
    - "A survey conducted by a grad student last year found that between 17 and 20 percent of the 350 or so new people the center was seeing each month said they'd come to the area in part because of medical marijuana."

Salvation Army Crossroads Shelter in Denver, Colorado:

- According to Lt. Col. Daniel L. Starrett, Intermountain divisional commander for the Salvation Army:
    - "An informal survey of 500 newcomers in the summer of 2014 determined that nearly 30 percent were there because of cannabis."
    - "Not only has that number been sustained, but it has continued to grow."

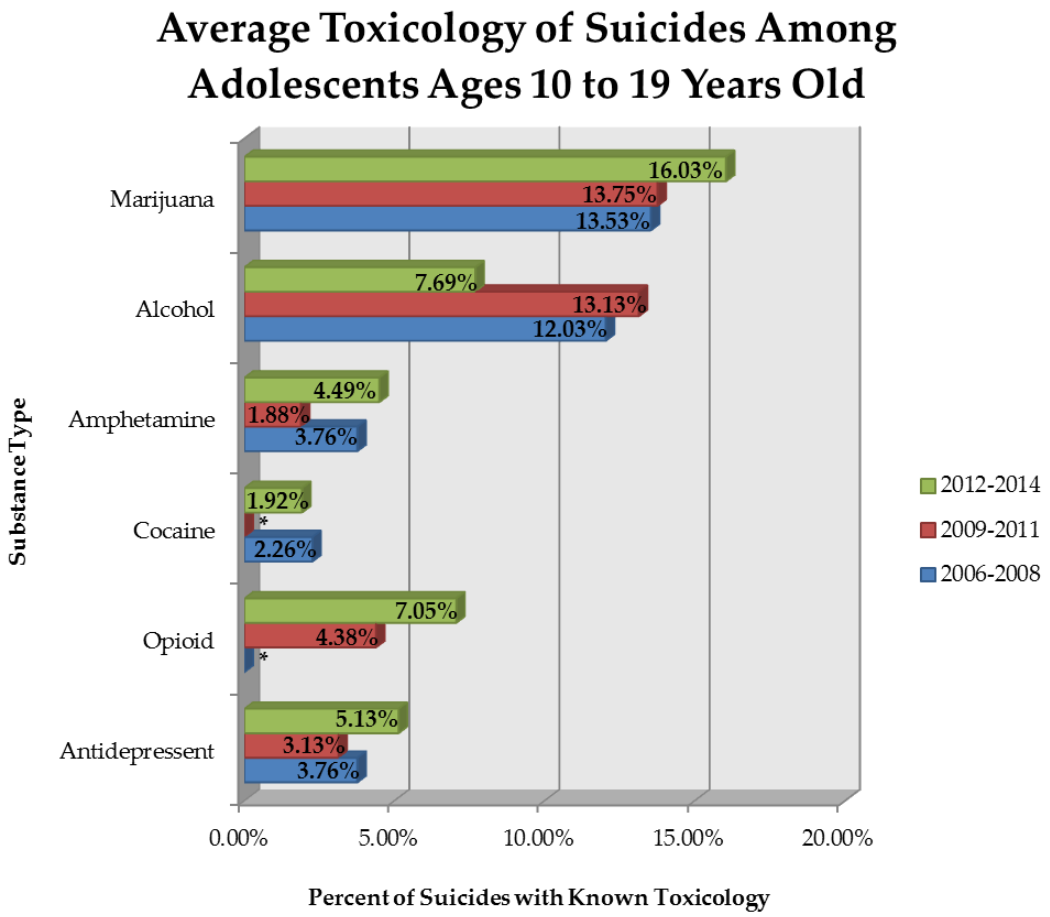
Urban Peak, a shelter for people ages 15 to 24 in Denver, Colorado:

- According to Kim Easton, CEO:
    - "For a while, we informally collected information, and at least one in three of the youth were saying said [sic] they were here in Denver because of the legalization of marijuana."
    - "In the spring following legalization, we had a dramatic increase in the number of youth seeking services, a 150 percent increase just coming in the door. That has become our new normal."

Posada+, Pueblo County (Colorado): Posada has seen a 102 percent increase in the number of homeless served since 2013 when recreational marijuana was legalized. Director Anne Stattelman cites three major reasons poor people are coming to Pueblo; including legalized marijuana, expanded Medicaid, and the reputation as a cheap place to live.[8]

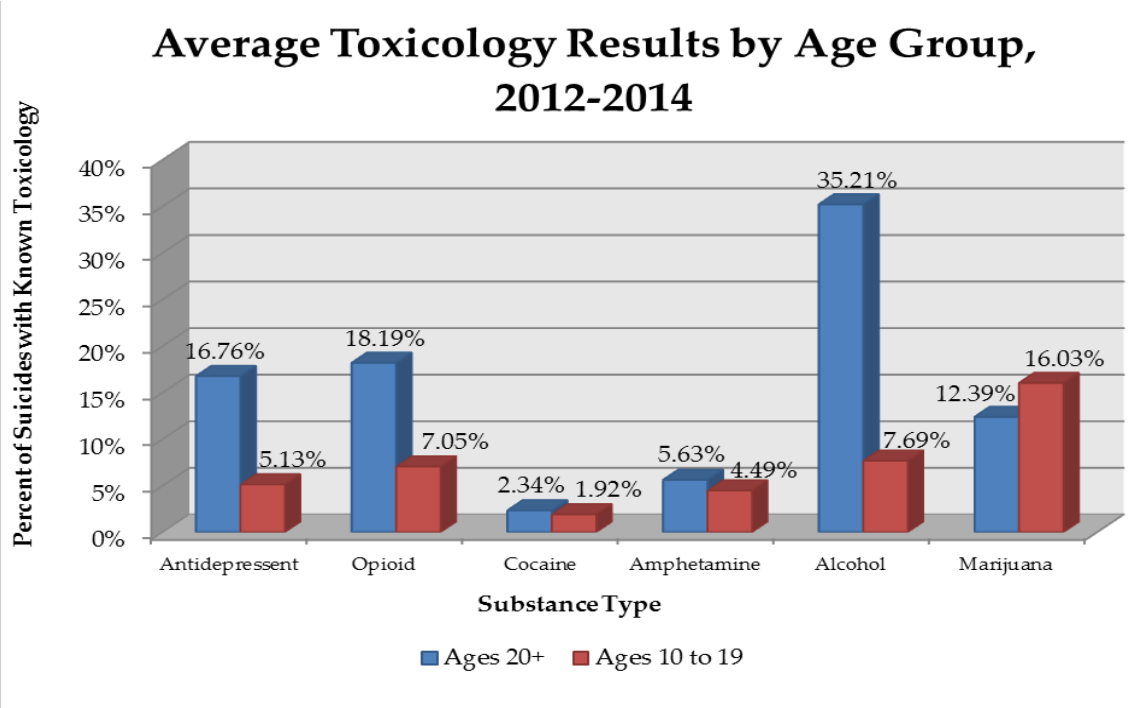
"Urban Travelers": Denver Mayor Michael Hancock has blamed recent trouble on downtown Denver's 16th Street Mall on "urban travelers" and marijuana. Mayor Hancock said, "…he personally talked to some and they were candid about the attraction of marijuana." During a news conference where Mayor Hancock described new security measures to counteract the ongoing trouble on the popular downtown mall, Hancock referred to these individuals as a "scourge of hoodlums" and went on to say that "They're taking beds from our chronically homeless people."[9]

Suicide Data



*Results Unavailable

SOURCE: Colorado Department of Public Health and Environment (CDPHE), Colorado Violent Death Reporting System



SOURCE: **Colorado Department of Public Health and Environment (CDPHE), Colorado Violent Death Reporting System**

Environmental Impact

Growing Marijuana is Doing More Damage than You Think: Environmental pollution is especially troublesome among illegal marijuana grow operations. Many illegal growers prefer indoor locations due to being relatively discreet, the increased control, and the year-long production capability. Roughly one-third of America's marijuana supply is cultivated indoors and the energy needed to power these indoor grow ops is enough to power around 1.7 million homes. As energy is used, greenhouse gases such as carbon dioxide and methane are produced at a rate of 2 pounds of CO_2 per joint.

Additionally, outdoor cultivation operations pose their own environmental threats including:

- Water resource abuse
- Trespass grows on federal land or a stranger's private property
- Unauthorized land conversion
- Toxic rat poisons
- Excessive energy use

These illegal grow operations don't necessarily account for the damage they cause and, therefore, often leave a negative impact on the environment.[10]

Mind-Blowing Facts About Marijuana Production in America:[11]

- Trespass grows accounted for 72 percent of outdoor plants seized in California in 2013. Nearly half of the cannabis eradicated by law enforcement nationwide was on public or tribal land.
- During California's growing season, outdoor grows consume roughly 60 million gallons of water a day – 50 percent more than is used by all the residents of San Francisco.
- An indoor grow module accommodating 4 plants sucks as much electricity as 29 refrigerators.
- In California, indoor marijuana grows account for about 9 percent of household electricity use.
- For every pound of pot grown indoors, 4,600 pounds of CO_2 goes into the atmosphere.
- The production and distribution of pot in America emits as much carbon as 3 million cars.

Water Consumption More than Doubles with Illegal Marijuana Home Grows in Colorado: Public utility records revealed that water usage in one illegal marijuana home grow ranged from 13,200 to 18,000 gallons per month. Water consumption by previous tenants within the same exact residence averaged 6,000 to 7,000 gallons per month.[12]

Illegal Marijuana Home Grows are the New Meth Houses: Illegal home grows present significant potential risks to public health and public safety. Colorado homes used for cultivating marijuana often sustain extensive damage. In many cases these operations have caused house fires, blown electrical transformers, mold throughout the residences, and environmental damages. Growing conditions consume high levels of power and water and results in the drainage of chemical-laden waste water often disposed of improperly.

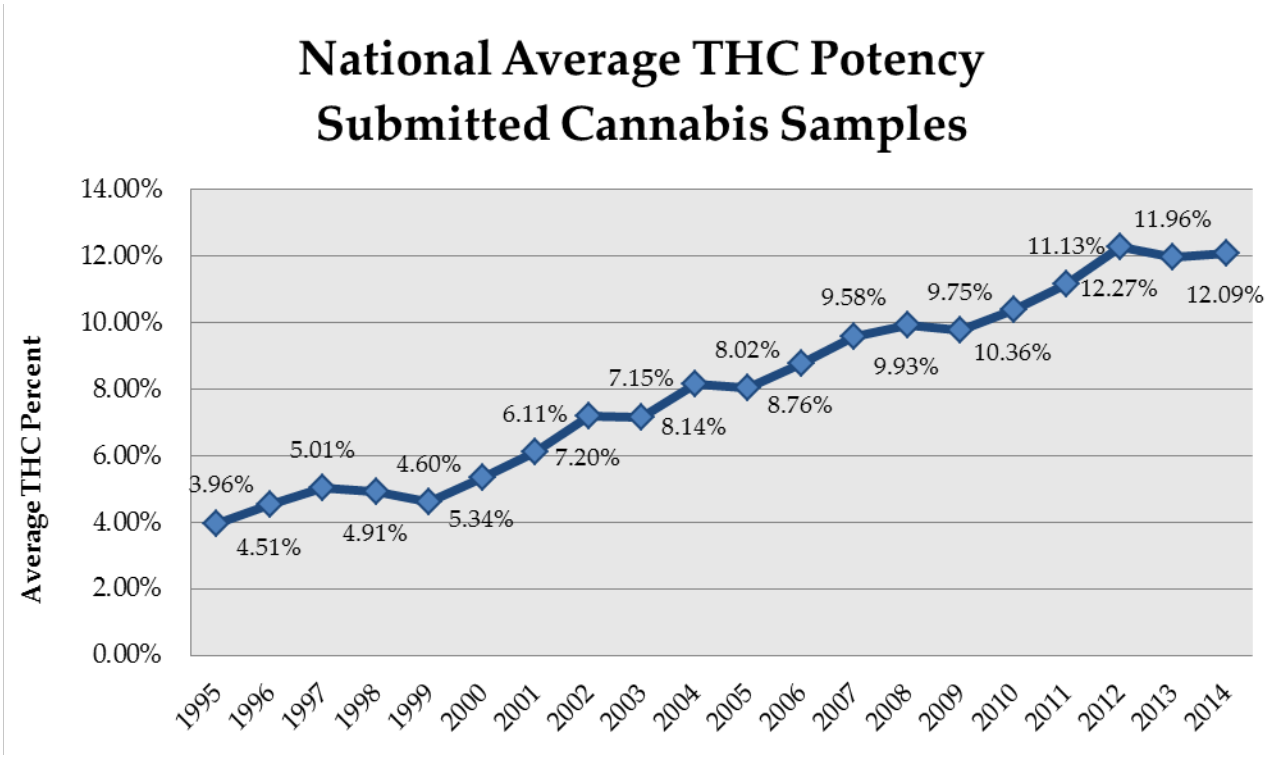
Growers often alter the interior structure of these homes to enhance their ability to grow year round. Most of these alterations are not to code which presents serious risks to first responders. Holes are cut into the floors, tampering with high voltage electrical systems, loose and extension cords present entrapment hazards, explosive chemicals such as propane and butane all present clear hazards for fire fighters and police officers responding to the residence in an emergency situation.

"Much like the 'meth houses' of the 1990's, many of these homes may ultimately be rendered uninhabitable."[13]

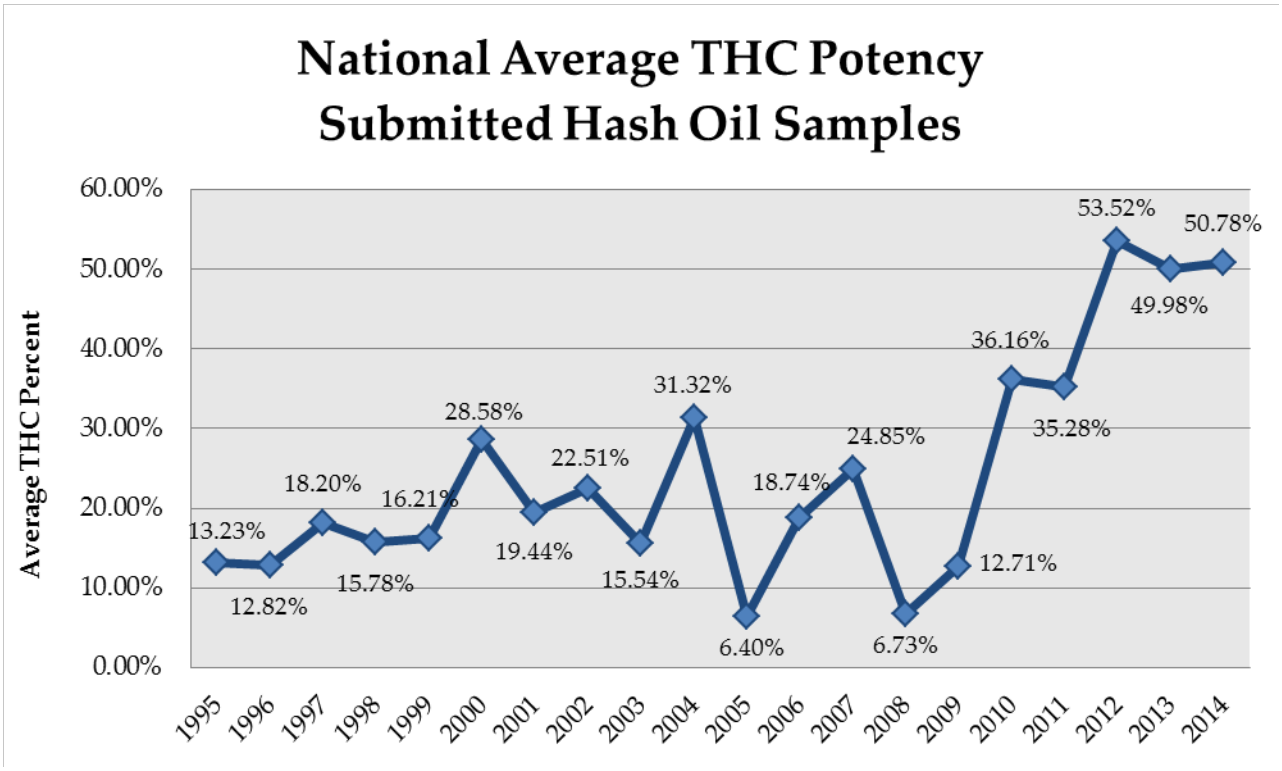
Stealing Electricity for Home Grows: "In some cases, growers tap directly into utility lines outside the residence in order to 'steal' electricity before its consumption is

registered on the property's meter. This practice is encountered increasingly in Colorado residential grows. Aside from the power theft involved, hot tapping also poses an increased fire and safety risk to occupants, landlords, neighbors and first responders."[14]

THC Potency



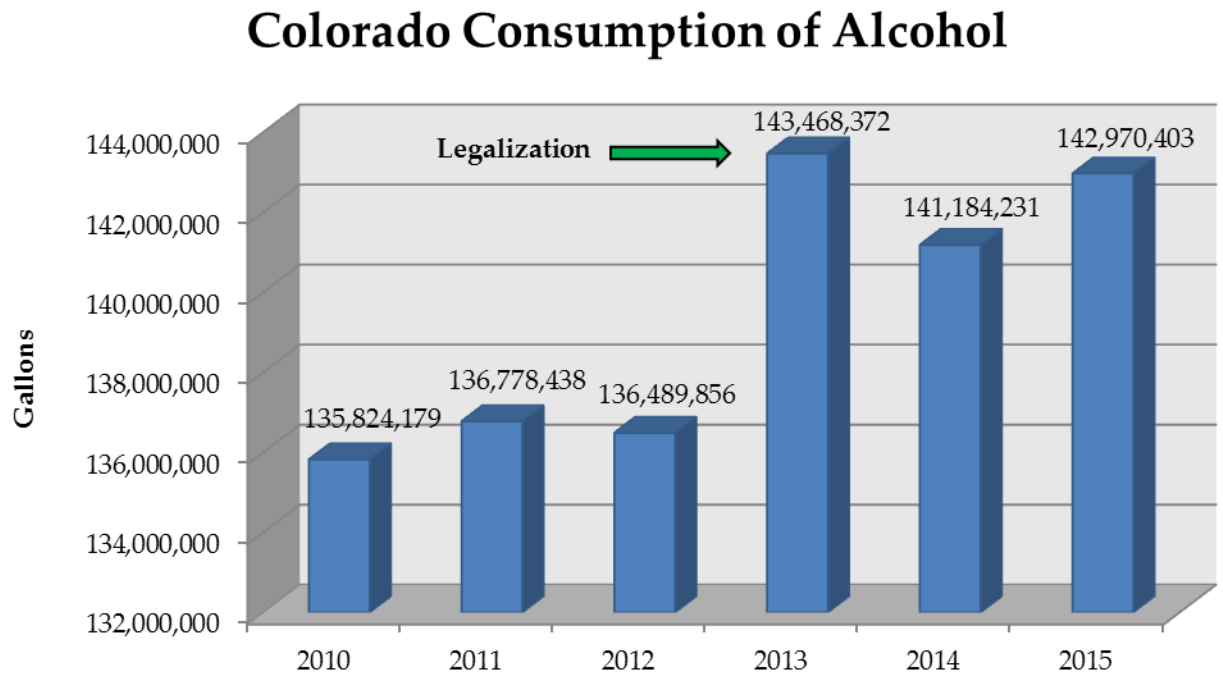
SOURCE: **Potency Monitoring Program, Quarterly Report Number 132, National Center for Natural Products Research (NCNPR) at the University of Mississippi, under contract with the National Institute on Drug Abuse.**



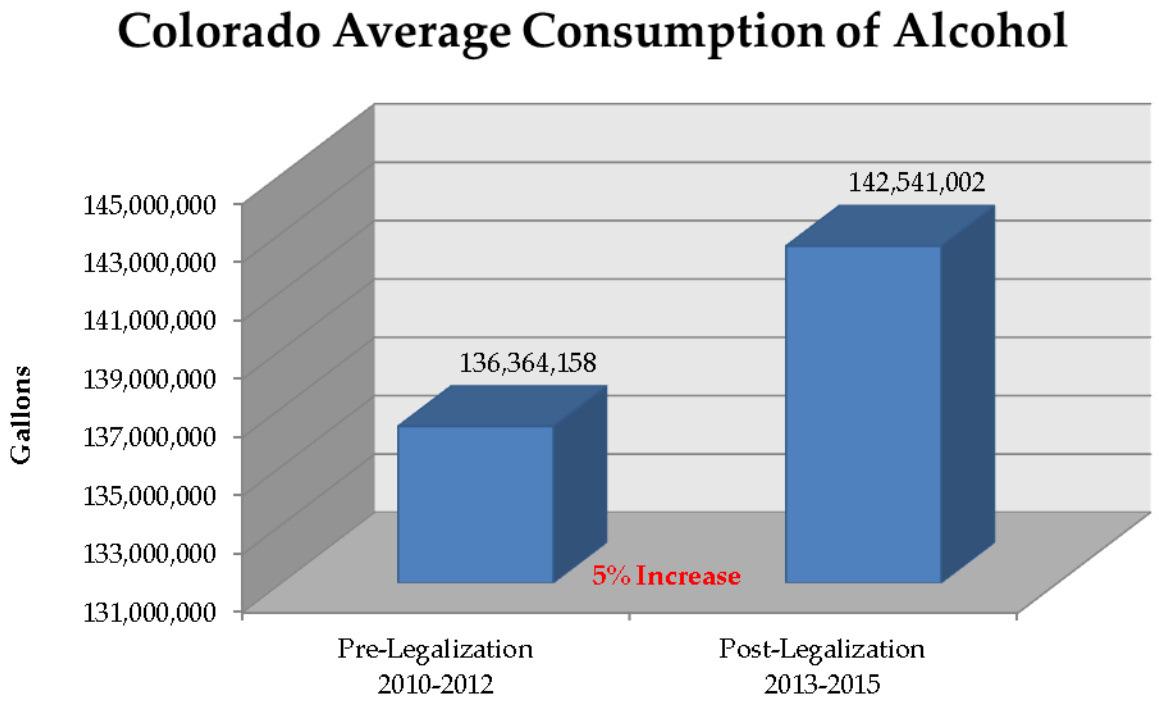
SOURCE: **Potency Monitoring Program, Quarterly Report Number 132, National Center for Natural Products Research (NCNPR) at the University of Mississippi, under contract with the National Institute on Drug Abuse.**

Marijuana Use and Alcohol Consumption

- **There are some who have theorized that legalizing marijuana would reduce alcohol consumption. Thus far that theory is not supported by the data.**



SOURCE: Colorado Department of Revenue, Colorado Liquor Excise Tax



SOURCE: Colorado Department of Revenue, Colorado Liquor Excise Tax

Related Material

Colorado Stands out for Consuming Drugs and Alcohol: "The Substance Abuse and Mental Health Services Administration annually surveys Americans age 12 and older about whether they use opioid painkillers for non-medical reasons or consume any marijuana, alcohol or cocaine. States are ranked into quintiles based on what proportion of their population uses each substance, thereby creating a 'top 10 list' for all four. Colorado stands out as the only state which is a top consumer of all four substances."[15]

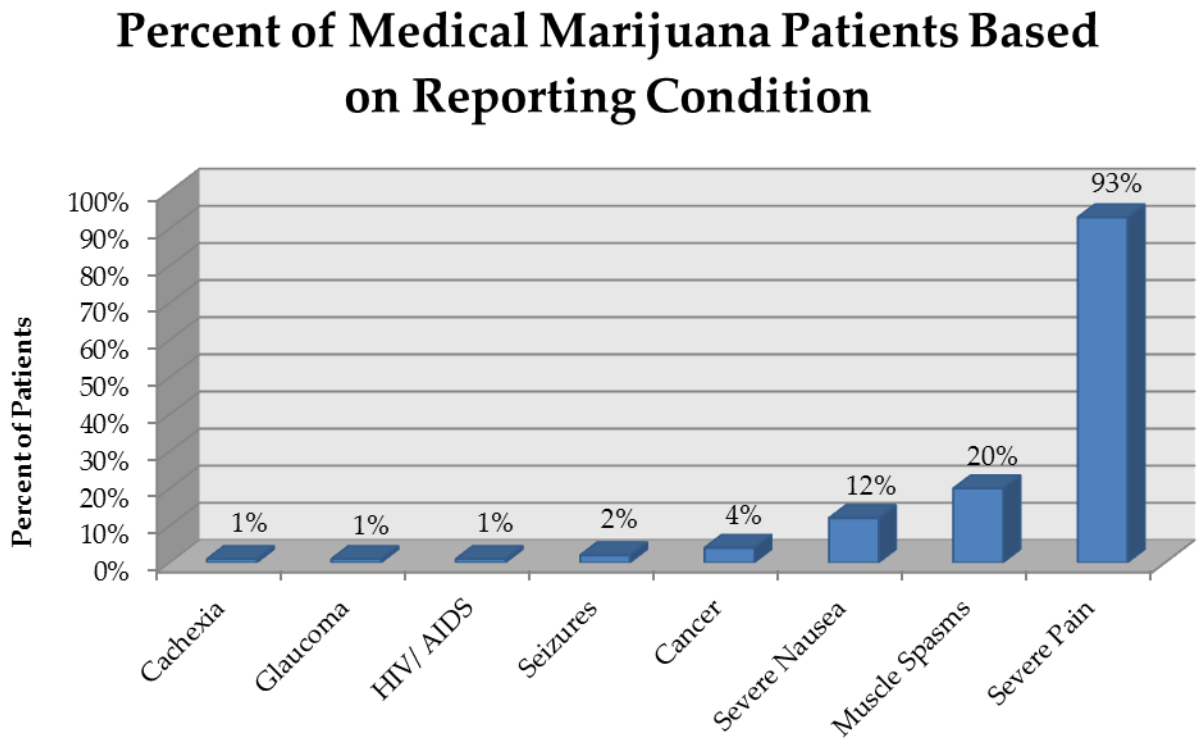
Medical Marijuana Registry

Medical Marijuana Registry Identification Cards[16]

- December 31, 2009 – 41,039
- December 31, 2010 – 116,198
- December 31, 2011 – 82,089
- December 31, 2012 – 108,526
- December 31, 2013 – 110,979
- December 31, 2014 – 115,467
- December 31, 2015 – 107,534

Profile of Colorado Medical Marijuana Cardholders:[17]

- Age of cardholder
  - 65 percent male, with an average age of 42 years
  - 0.3 percent between the ages of 0 and 17
  - 49 percent between the ages of 18 and 40
    - 23 percent between the ages of 21 and 30
- Reporting medical condition of cardholder
  - 93 percent report severe pain as the medical condition
  - 6 percent collectively report cancer, glaucoma and HIV/AIDS
  - 2 percent report seizures



SOURCE: **Colorado Department of Public Health and Environment, Medical Marijuana Statistics**

NOTE: **TOTAL DOES NOT EQUAL 100 PERCENT AS SOME PATIENTS REPORT USING MEDICAL MARIJUANA FOR MORE THAN ONE DEBILITATING MEDICAL CONDITION.**

Related Material

Docs Gone Wild on Pot Referrals: For the first time the medical board has taken action against some doctors for over-recommending plant count grows for medical marijuana cardholders. "State records current through the end of May show that 478 patients have recommendations for more than 75 plants. Another 1,324 patients have permission to grow between 50 to 75 plants. More than 2,200 have been recommended to grow between 26 and 50 plants." With that much product available, even considering a patient's tolerance level or complicated cooking processes to create edible products, it is foolish to assume "…no one with that amount of marijuana would ever be tempted to engage in black-market or underground sales."[18]

Colorado Licensed Marijuana Businesses as of January 2016

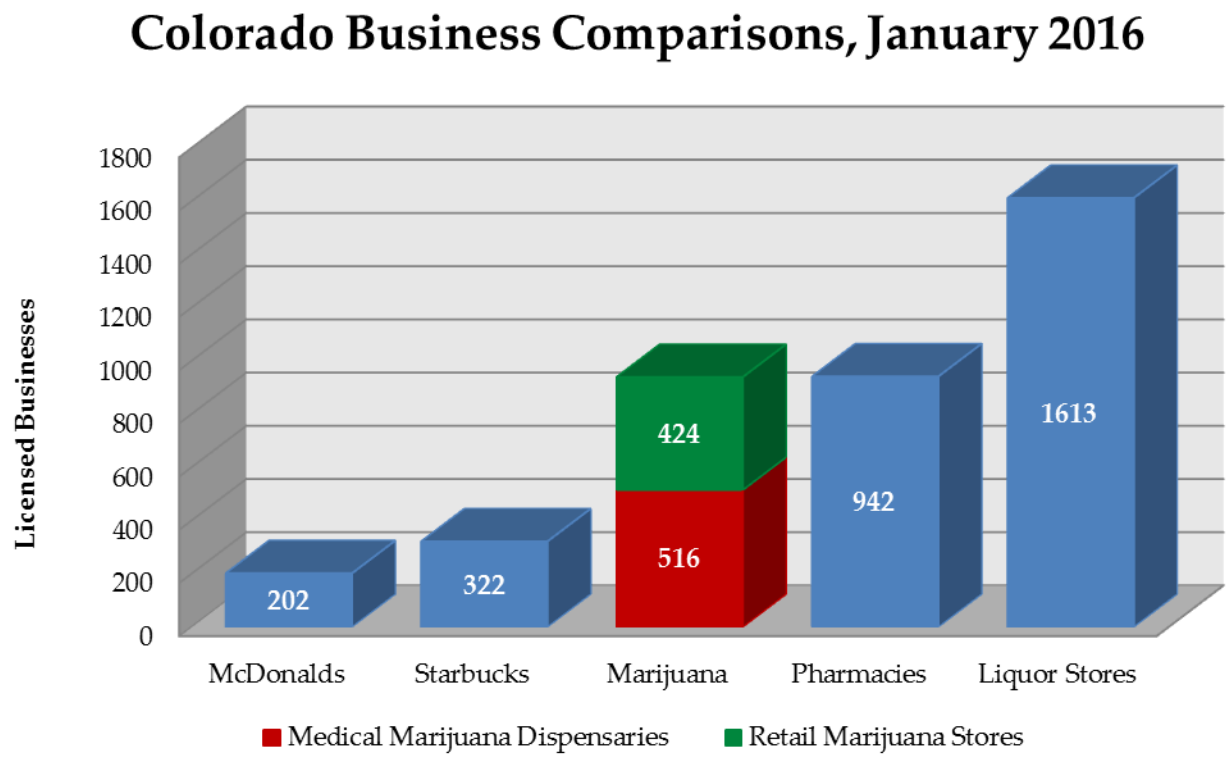
Medical Marijuana:[19]

- 516 medical marijuana centers (dispensaries)
- 751 marijuana cultivation facilities
- 202 infused products (edibles) businesses

Recreational Marijuana:[20]

- 424 marijuana retail stores
- 514 marijuana cultivation facilities
- 168 infused product (edibles) businesses
- 17 testing facilities

Business Comparisons, January 2016



SOURCE: **Colorado Department of Revenue; Starbucks Coffee Company, Corporate Office Headquarters; McDonalds Corporation, Corporate Office Headquarters**

Demand and Market Size

The Colorado Department of Revenue published a report in July 2014 called, "Market Size and Demand for Marijuana in Colorado." Some of the information included:[21]

Demand

- In 2014, the established demand for marijuana by Colorado residents 21 years and older is **121.4 metric tons** (**267,638.44 pounds**) of marijuana.
- In 2014, the estimated demand for marijuana by out-of-state visitors 21 years and older is **8.9 metric tons** (**19,620.94 pounds**).
- The potential range of demand for the above two groups is between **104.2–157.9 metric tons** (between **229,719.32** and **348,106.34** pounds).

Market Size

- There are an estimated 485,000 Colorado adult regular marijuana users (at least once per month), which is **9 percent** of the total Colorado population of all ages (5.363 million).
- Heavy users who consume marijuana nearly daily make up the top **21.8 percent** of the user population but account for **66.9 percent** of the demand for marijuana.
- Out-of-state visitors represent about **44 percent** of the metro area marijuana retail sale of marijuana and approximately **90 percent** of sales in heavily-visited mountain communities.
- Colorado has **23 percent** of its users consume nearly daily compared to **17 percent** nationally; that is **35.29 percent** higher.

Third Quarter 2015 Reported Sales of Marijuana in Colorado (January – September)[22]

- 111,046 pounds of medical marijuana flower
- 77,964 pounds of recreational marijuana flower

- 1,719,551 units of medical edible products
- 3,932,215 units of recreational edible products

❖ **A single ounce of marijuana, depending on the solvent type and production method, can produce between 347 and 413 edibles of 10 mg THC strength.**

2014 Price of Marijuana[23]

	1 Gram	Ounce
Buds/Flowers	$14.03	$264.14
Edibles	$24.99 (100 mg)	N/A
Concentrates	$55.00	N/A

Local Response to the Medical and Recreational Marijuana Industry in Colorado[24]

Recreational Marijuana Business and Local Jurisdiction Response:

- 272 municipalities*
- 234 municipalities have taken action on the issue
  - 75 percent have prohibited (168) or have a moratorium (8)
  - 25 percent have allowed (58)

- 62 counties* (unincorporated areas)
  - 63 percent have prohibited or have a moratorium (39)
  - 37 percent have allowed (23)

- 296 local jurisdictions have addressed the issue
  - 73 percent have prohibited or have a moratorium (215)
  - 27 percent have allowed (81)

- 334 total of all local jurisdictions
  - 64 percent have prohibited or have a moratorium (215)
  - 24 percent have allowed (81)
  - 11 percent have not addressed the issue (38)

* Broomfield and Denver are both a city and county but included only once in municipalities data.

Medical and Recreational Business and Local Jurisdiction Response:[25]

- 68 percent have banned (218)
- 32 percent have allowed (104)

Sources:

[1] CBS Denver/Channel 4, June 30, 2016, "Man With PVC Pipe Goes After People On 16th Street Mall," <http://denver.cbslocal.com/2016/06/30/man-wielding-pvc-pipe-goes-after-people-on-16th-street-mall/>, accessed June 30, 2016

[2] Associated Press, *The Washington Times*, July 5, 2016, "Colorado homicides up 15 percent; rapes up by 11 percent", <http://www.washingtontimes.com/news/2016/jul/5/colorado-homicides-up-15-percent-rapes-up-by-11-pe/>, accessed July 5, 2016

[3] Andy Koen, KOAA TV Channel 5, June 28, 2016, "Family tried to get Halloween mass shooter committed," <http://www.koaa.com/story/32330489/family-tried-to-get-halloween-mass-shooter-committed>, accessed August 9, 2016

[4] Adams County (Colorado) Sheriff's Office

[5] Megan Arellano, Colorado Public Radio, June 12, 2015, "Colo. Pot Director Tells Mass. That State Revenue Gains Are a Myth'", <https://www.cpr.org/news/newsbeat/colo-pot-director-tells-mass-state-revenue-gains-are-myth>, accessed August 9, 2016

[6] Nelson Garcia, KUSA/9News.com, August 16, 2016, "Marijuana Tax Revenue Impacts Small Districts," < http://www.9news.com/news/marijuana-tax-money-impacts-small-school-districts/299656466>, accessed August 16, 2016

[7] Joel Warner, *International Business Times*, June 20, 2016, "Marijuana Legalization In Colorado: How Recreational Weed Is Attracting People, But Spiking The State's Homeless Rate [PART ONE]", <http://www.ibtimes.com/>, accessed June 20, 2016

[8] Anne Stattelman, "Links and PowerPoint", e-mail message, August 19, 2016

[9] Noelle Phillips, *The Denver Post*, June 30, 2016, "Denver mayor says violence won't be tolerated on 16th Street Mall," <http://www.denverpost.com/2016/06/30/16th-street-mall-video-attack/>, accessed June 30, 2016

[10] Abby Hutmacher, PotGuide.com Colorado, February 1, 2016, "Growing Marijuana is Doing More Damage Than You Think," <https://www.coloradopotguide.com/colorado-marijuana-blog/2016/february/01/growing-marijuana-is-doing-more-damage-than-you-think/>, accessed June 17, 2016

[11] Josh Harkinson, Brett Brownell and Julia Lurie, *Mother Jones*, "24 Mind-Blowing Facts About Marijuana Production in America," March/April 2014 Issue, <http://www.motherjones.com/print/244516>, accessed June 17, 2016

[12] Drug Enforcement Administration, Denver Field Division, July 2016

[13] "Residential Marijuana Grows in Colorado: The New Meth Houses?" DEA Intelligence Report: UNCLASSIFIED, DEA-DEN-DIR-041-16, June 2016

[14] Drug Enforcement Administration, Denver Field Division, May 2016

[15] *The Washington Post* as published in *The Denver Post*, May 23, 2016, "Survey: Colorado stands out for consuming drugs, alcohol," <http://www.denverpost.com/2016/05/23/colorado-first-in-drugs-survey/>, accessed June 9, 2016

[16] Colorado Department of Public Health and Environment, "Medical Marijuana Registry Program Update (as of March 31, 2015)", <https://www.colorado.gov/pacific/sites/default/files/03_2015_%20MMR_report_draft.pdf>, accessed May 15, 2015

[17] Colorado Department of Public Health and Environment, "Medical Marijuana Registry Program Update (as of March 31, 2015)", <https://www.colorado.gov/pacific/sites/default/files/03_2015_%20MMR_report_draft.pdf>, accessed May 15, 2015

[18] "*The Pos*t Editorials: Docs gone wild on pot referrals, "*The Denver Post*, Wednesday, July 27, 2016, Opinion Section, p. 17A, col. 1

[19] Colorado Department of Revenue, Marijuana Enforcement Division

[20] John Ingold, *The Denver Post*, February 20, 2014, "Lot of green will roll in"

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SECTION 10: Reference Materials

Reports and Articles

Government

- ***Washington State Marijuana Impact Report* by Northwest High Intensity Drug Trafficking Area (NWHIDTA), March 2016**

  The Northwest HIDTA wrote this in-depth report in order to discuss the regulatory functions set by marijuana policy, present data on the impacts of the industry, and to depict where Washington State stands after one year of commercialization. Topics addressed include a regulatory overview, impact on youth, impact on adults, impaired driving, diversion of marijuana, THC extraction, marijuana-related crime, current markets and the upcoming market.[1]

- ***Review of Literature and Subcommittee Reports* by the Wyoming Governor's Marijuana Impact Assessment Council, February 2016**

  The recent legalization of marijuana in Colorado and other states creates an environment where it is important to have access to unbiased scientific information and reports from reliable sources on the subject. With that in mind, the Wyoming Governors Marijuana Impact Assessment Council (GMIAC) was created in July of 2015. This group consists of legislators, division directors, physicians, law enforcement personnel, executive directors, statisticians, professors, research scientists and others who all come together for the purpose of assisting legislators and the public in making informed decisions concerning varying levels of marijuana legalization. Within this report, areas of possible impact that are addressed include education, health, agriculture, revenue, criminal justice and more.[2]

- ***Report of the Special Senate Committee on Marijuana* by the Special Senate Committee on Marijuana, March 8th, 2016**

  The Massachusetts Senate created the Special Senate Committee on Marijuana in February, 2015. The purpose of the committee was to research and analyze the policy ramifications if Massachusetts were to legalize the adult recreational use and

sale of marijuana. The committee was given the responsibility of conducting an objective review of marijuana policy in Massachusetts as well as lessons to be learned from other states, particularly Colorado and Washington. In this report, the committee recommends actions for the state to address numerous policy issues if marijuana were to be legalized in Massachusetts.[3]

- ❒ ***Marijuana Legalization in Colorado: Early Findings* by the Colorado Department of Public Safety, March 2016**

  Since the passage of Amendment 64, which allows for the retail sale and possession of marijuana in Colorado, the Division of Criminal Justice within the Department of Public Safety has studied the impacts of Amendment 64 (particularly as these relate to law enforcement activities). This report describes early findings of marijuana legalization within the state. More specifically, the impact on public safety, public health, and youth are studied and discussed.[4]

- ❒ ***Impacts of the Downtown Environment on the Tourism Industry and Visitor Perceptions* by VISIT DENVER, November 12th, 2015**

  VISIT DENVER is the marketing organization for the City of Denver. This presentation highlights the safety trends and feedback that VISIT DENVER has received from convention and leisure visitors over the span of several years. Some issues discussed include the homeless, youth, panhandling, safety, cleanliness, and drugs including public marijuana consumption on the streets of Denver.[5]

- ❒ ***Report to the Joint Budget Committee* by the Colorado Department of Revenue, Enforcement Division – Marijuana, April 1st, 2016**

  This report details the progress being made by the State Licensing Authority in processing licenses, in addition to providing an overview of the retail marijuana markets, revenue generated by medical and recreational marijuana businesses, expenses incurred by the State Licensing Authority, the number of medical establishments applying to convert to retail establishments, and enforcement measures taken against licensed persons.[6]

- ❒ ***Third Quarter Update* by the Colorado Department of Revenue, Enforcement Division – Marijuana, January 28th, 2016**

  This report includes information on marijuana business licensing status, number of plants cultivated for medical and recreational purposes, volume of marijuana sold within both recreational and medical markets, units of infused edibles and non-edibles sold, mandatory retail testing for edibles, enforcement activity and administrative actions taken by the State Licensing Authority from January through September 2015.[7]

- ❒ ***Marijuana Equivalency in Portion and Dosage* by the Colorado Department of Revenue, August 10th, 2015**

  This study provides unbiased, scientific information that can be used to suggest appropriate equivalencies between flower and alternative marijuana products. It is a summary of how different marijuana products are produced and consumed. The information in this study can be used to convert concentrate and infused products into their flower weight equivalents from both a production and consumption viewpoint.[8]

- ❒ ***Residential Marijuana Grows in Colorado: The New Meth Houses* by the Drug Enforcement Administration (DEA) Denver Division, June 2016**

  In this report, the proliferation of large-scale marijuana grow operations is examined. The effects of these large-scale marijuana grow operations are discussed, along with an outlook from the perspective of the DEA.[9]

- ❒ ***Marijuana Enforcement in Nebraska* by the Nebraska Center for Justice Research, 2016**

  This report details trends in law enforcement and corrections related to the possession and sale of marijuana in Nebraska in the first full year of recreational legalization in Colorado.[10]

Youth

- ❒ ***The Impact of Marijuana Policies on Youth – Technical Report*, by the American Academy of Pediatrics, March 2015**

  This technical report updates the 2004 American Academy of Pediatrics (AAP) report on the legalization of marijuana. Epidemiology of marijuana use is presented, as are definitions and biology of marijuana compounds, side effects of marijuana use, and effects of use on adolescent brain development. In addition, four different approaches to the legalization of marijuana in the United States are discussed and compared. Lastly, three separate policy approaches on adolescent marijuana use are discussed.[11]

- ❒ ***The Impact of Marijuana Policies on Youth – Policy Statement*, by the American Academy of Pediatrics (AAP), March 2015**

  This policy statement is an update of the American Academy of Pediatrics (AAP) policy statement "Legalization of Marijuana: Potential Impact on Youth," 2004. In this position statement, the AAP examines the issue of marijuana legalization; more

specifically, the effects of marijuana, decriminalization efforts and effects, conclusions. Recommendations in regard to the legalization of marijuana are provided by the AAP.[12]

- ❒ ***Marijuana Use: Detrimental to Youth* by the American College of Pediatricians, April 2016**

  According to the American College of Pediatricians (ACP), marijuana is addicting, has adverse effects upon the adolescent brain, is a risk for both cardio-respiratory disease and testicular cancer, and is associated with both psychiatric illness and negative social outcomes. Evidence indicates limited legalization of marijuana has already raised rates of unintended marijuana exposure among young children, and may increase adolescent use. Therefore, the American College of Pediatricians opposes the legalization of marijuana for recreational use and urges extreme caution in legalizing marijuana for medicinal use.[3]

- ❒ ***Cannabis Does Alter Your Brain* by Lisa Ryan, February 11th, 2016**

  This article describes research by lead study author Dr. Francesca Filbey, of the University of Texas at Dallas. The research described was focused on looking deeper into the effects of using marijuana early in life. Specifically, the study found that subjects who began use of marijuana prior to age 16 had underdeveloped prefrontal cortexes. Furthermore, subjects who began their use after the age of 16 experienced accelerated brain aging[14]

- ❒ ***Cannabis Use is Quantitatively Associated with Nucleus Accumbens and Amygdala Abnormalities in Young Adult Recreational Users* by Jodi M. Gilman et al., 16 April 2014**

  This article describes a study performed by Harvard and Northwestern University researchers which aims to look closely at the effects of tetrahydrocannabinol (THC) on brain development. More specifically, researchers examined the brain morphometry on young adult recreational marijuana users.[15]

Driving Under the Influence of Drugs (DUID)

- ❒ ***Prevalence of Marijuana Involvement in Fatal Crashes: Washington, 2010-2014* by the AAA Foundation for Traffic Safety, May 2016**

  This report quantifies the prevalence of marijuana involvement in fatal crashes in the state of Washington from 2010-2014. The study investigated whether the prevalence changed after Washington legalized recreational use of marijuana, in

addition to creating a new *per se* limit for driving under the influence of marijuana which took effect on December 6th, 2012.[16]

- ***An Evaluation of Data from Drivers Arrested for Driving Under the Influence in Relation to Per se Limits for Cannabis* by the AAA Foundation for Traffic Safety, May 2016**

  One of the major concerns shared by both opponents and proponents of greater access to cannabis is its impact on driver performance and relationship to adverse effects on traffic safety. Several states have implemented *per se* delta-9-tetrahydrocannabinol THC blood limits that define the offense of driving while impaired by cannabis, and others are actively considering such limits. This report describes the findings of a study that was undertaken to determine whether data from the Drug Recognition Expert (DRE) program consisting of physiological indicators of drug use, and performance in roadside cognitive and psychomotor tests, supported any particular quantitative threshold for a *per se* law for THC within the blood.[17]

- ***Advancing Drugged Driving Data at the State Level* by the AAA Foundation For Traffic Safety, March 2016**

  The objective of this project is to identify and recommend strategies for improving state-level data on the nature and extent of drugged driving in the United States by addressing the most significant barriers that impede state efforts to collect and compile such data. This report discusses barriers to effective data and describes expert panel recommendations for addressing those barriers.[18]

- ***Drug-Impaired Driving* by The Governors Highway Safety Association (GHSA), September 30th, 2015**

  This report summarizes the current state of knowledge on drug-impaired driving, including what little is known about the costs and effectiveness of these actions, and identifies actions states can take to reduce drug-impaired driving. Specifically, this report highlights the increase of marijuana use and its role in impaired driving.[19]

- ***Overview of Major Issues Regarding the Impacts of Alcohol and Marijuana on Driving* by the AAA Foundation for Traffic Safety, March 2016**

  This report provides an overview of issues related to marijuana consumption, driving impairment and blood testing as well as the potential impacts of social and legal factors. Comparisons to alcohol are provided to serve as a single point of reference.[20]

- ***Drug Recognition Expert (DRE) Examination Characteristics of Cannabis Impairment* by Hartman et al., April 22nd, 2016**

  The Drug Evaluation and Classification Program (DECP) is commonly utilized in driving under the influence (DUI) cases to help determine categories of impairing drugs present in drivers. Cannabis, one of the categories, is associated with approximately doubled crash risk. This article describes a study which set-out to determine the most reliable DECP metrics for identifying cannabis-driving impairment.[21]

- ***Delays in DUI Blood Testing: Impact On Cannabis DUI Assessments* by Ed Wood, Ashley Brooks-Russell and Phillip Drum, June 11th 2015**

  This study examined the time from law enforcement dispatch to the first blood draw in cases of driving under the influence (DUI) vehicular homicide and a subset of DUI vehicular assault cases in Colorado in 2012. Laboratory toxicology results were also examined to understand the implications of delays in blood draws in cases of driving while under the influence of marijuana's delta-9-tetrahydrocannabinol (THC).[22]

- ***Cannabis Effects on Driving Lateral Control With and Without Alcohol* by Hartman et al., June 23rd, 2015**

  Effects of cannabis, the most commonly encountered non-alcohol drug in driving under the influence cases, are heavily debated. This article describes a study performed by researchers aimed at determining how blood THC concentrations relate to driving impairment, both with and without alcohol.[23]

- ***Medical Marijuana Involved in CA Fatal Crashes* by Al Crancer, M.A. and Phillip Drum, Pharm.D.**

  The relationship between driver fatalities, marijuana use and alcohol use are examined in this report. The contributing data for this report was obtained from the National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS), 2010-2014.[24]

Health

- ***The Health and Social Effects of Nonmedical Cannabis Use* by the Management of Substance Abuse (MSB) Unit in the Department of Mental and Substance Abuse (MSD) of the World Health Organization, 2016**

  This report is an update on the health and social consequences of non-medical cannabis use, with a special focus on the effects on young people and on long-term

frequent use. Furthermore, this report builds on contributions from a broad range of experts and researchers from around the world. It aims to present current knowledge on the impact of non-medical cannabis use on health, from its impact on brain development to its role in respiratory diseases.[25]

- ❒ ***Update of Cannabis and it's Medical Use* by Bertha K. Madras, 2015**

  This report was commissioned by the Secretariat of the Expert Committee on Drug Dependence, Department of Essential Medicines and Health Products, World Health Organization (WHO). This document serves as a summary of the current status of the medical marijuana field and a framework to incorporate new information as it arises.[26]

- ❒ ***Association Between Lifetime Marijuana Use and Cognitive Function in Middle Age* by Reto Auer, M.D., et al., March 2016**

  This article describes the findings of a study aimed at understanding the association between cumulative lifetime exposure to marijuana use and cognitive performance in middle age.[27]

- ❒ ***NAMI Mass Comes Out Against Legalizing Recreational Marijuana* by the National Alliance on Mental Illness of Massachusetts (NAMI Mass), May 23rd, 2016**

  The National Alliance on Mental Illness Massachusetts seeks to improve the quality of life both for people with mental illness and for their families. This article describes the organization's strong opposition to the legalization of marijuana, citing, "detrimental effects for those with mental illness and for people predisposed to mental illness."[28]

- ❒ ***Prevalence of Marijuana Use Disorders in the United States Between 2001-2002 and 2012-2013*, by Deborah S. Hasin, PhD, et al., December 2015**

  Laws and attitudes toward marijuana in the United States are becoming more permissive, but little is known about whether the prevalence rates of marijuana use and marijuana use disorders have changed in the 21st century. This study set out to present nationally-representative information on the past year prevalence rates of marijuana use and marijuana use disorder among marijuana users in the US adult general population, and whether this has changed between 2001-2002 and 2012-2013.[29]

- ❒ ***Public Health Researchers Look At Rise In Marijuana–Related Hospitalizations* by Mollie Durkin, January 2016**

Dr. Zhu, a postdoctoral associate at Duke University Medical Center in Durham, N.C., describes the issues surrounding an increasing prevalence of marijuana use in the U.S., and a seemingly related increase in hospital utilization related to the drug.[30]

- ❒ ***Colorado Visitors Using Marijuana More Likely to End Up In Emergency Room* by Marla Paul (Northwestern University Journalist), February 25th, 2016**

  This article summarizes the findings of a joint study out of Northwestern University Feinberg School of Medicine and the University of Colorado School of Medicine, by lead investigator Dr. Howard Kim. The study, published in the *New England Journal of Medicine*, set out to investigate and compare the number of Colorado residents, and out of state visitors, who ended up in the emergency room with marijuana-related symptoms.[31]

- ❒ ***Legalizing Marijuana Will Increase Our Opiate Epidemic* by Heidi Heilman of the *New Boston Post*, March 2016**[32]
  - A study of rodents, conducted at the Hurd Laboratory at the Mount Sinai School of Medicine, showed that rodents exposed to THC in the adolescent years had offspring that were primed for addiction. The research has yet to be reproduced in humans, but other studies on trans-generational effects of other drugs in humans appear consistent with the discoveries in rodents.
  - Science suggests that legalizing marijuana will not only expose more people to a serious decline in cognitive and mental health functioning, but possibly also prime certain segments of the population – including unborn children – for more opiate addiction and brain changes.

Use Surveys

- ❒ ***Behavioral Health Trends in the United States: Results from the 2014 National Survey on Drug Use and Health (NSDUH)* by the Substance Abuse and Mental Health Services Administration (SAMHSA), September 2015**

  This national report summarizes findings from the 2014 National Survey on Drug Use and Health (NSDUH) on trends in the behavioral health of people aged 12 years old or older in the civilian, non-institutionalized population of the United States. Topics addressed include illicit drug, tobacco and alcohol use, substance use disorders, and mental health issues.[33]

- ❒ ***Healthy Kids Colorado Survey 2015* by the University of Colorado Anschutz Community Epidemiology & Program Evaluation Group, 2016**

This report examines the results of a biennial survey which collects anonymous, self-reported health-related information from Colorado middle and high school students every other year. In 2015, approximately 17,000 randomly-selected students from more than 157 middle schools and high schools participated. The data includes survey results in many topic areas to include tobacco, alcohol and marijuana use. In addition, the data also reflect student attitudes and perceptions that address health behaviors and the influences that can support a student's healthy choices.[34]

- ❒ ***Youth Risk Behavior Surveillance* by the U.S. Department of Health and Human Services Centers for Disease Control and Prevention, June 10th, 2016**

  The national Youth Risk Behavior Survey (YRBS) monitors priority health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. The national YRBS is conducted every two years during the spring semester and provides data representative of 9th through 12th grade students in public and private schools throughout the United States.[35]

Miscellaneous

- ❒ ***What Will Legal Marijuana Cost Employers* by National Families in Action, 2015**

  This report educates employers about how marijuana laws are changing, how those laws will affect employers' ability to conduct business, and what employers can do to protect that ability.[36]

- ❒ ***Workplace Drug Testing in the Era of Legal Marijuana,* by the Institute for Behavior and Health, Inc., March 2015**

  The shift in drug policy has created significant concern and confusion for many employers, employees, and job applicants about drug testing in general and testing for marijuana specifically. This report provides guidance for employers about drug testing employees and job applicants for marijuana use in the workplace.[37]

- ❒ ***The Hidden Costs of Marijuana Use in Colorado: One Emergency Department's Experience* by Kenneth Finn, M.D. and Rochelle Salmore, M.S.N., R.N., 2016**

  To date, there are few studies on the financial impact of marijuana use on the health care system. This study aims to assess potential health care costs and adverse health effects related to cannabis use in an acute care community hospital in Colorado. During the study period, the study hospital incurred a true loss of twenty million dollars in uncollected charges.[38]

- ***Issues in the Implementation and Evolution of the Commercial Recreational Marijuana Market in Colorado* by Subritzky et al., December 15th, 2015**

  This report brings together material sourced from peer reviewed academic papers, grey literature publications, reports in mass media and niche media outlets, and government publications to outline the regulatory model and process in Colorado. Additionally, this report includes descriptions of some of the issues that have emerged in the early stages of marijuana legalization within Colorado.[39]

- ***The Impacts of Marijuana Dispensary Density and Neighborhood Ecology on Marijuana Abuse and Dependence* by Christina Mair et al., June 23rd 2015**

  This article describes the findings of researchers who investigated associations between marijuana abuse and dependence hospitalizations, as well as community demographic and environmental conditions from 2001 to 2012 in California.[40]

- ***Marijuana Survey Finds Medical Users More Likely to Consume Edibles and Vaporize* by the RAND Corporation, January 28th, 2016**

  This article describes the findings of a study which provides some of the first evidence about patterns of marijuana use in states that have legalized medical marijuana.[41]

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Rocky Mountain High Intensity Drug Trafficking Area
Investigative Support Center
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