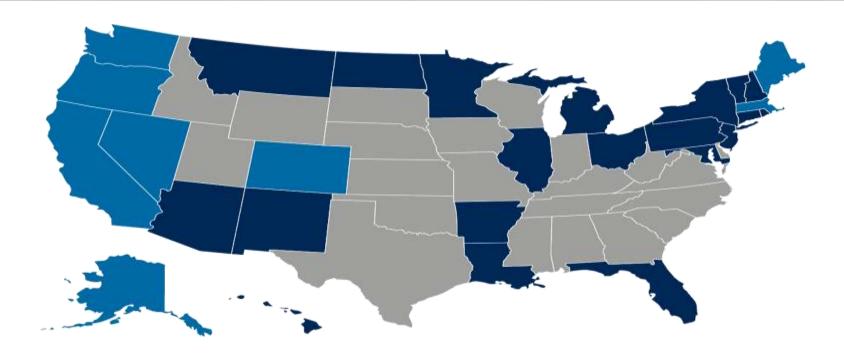
Beyond the Legalization Debate: What We Urgently Need to Know in a Post-Legalization World.



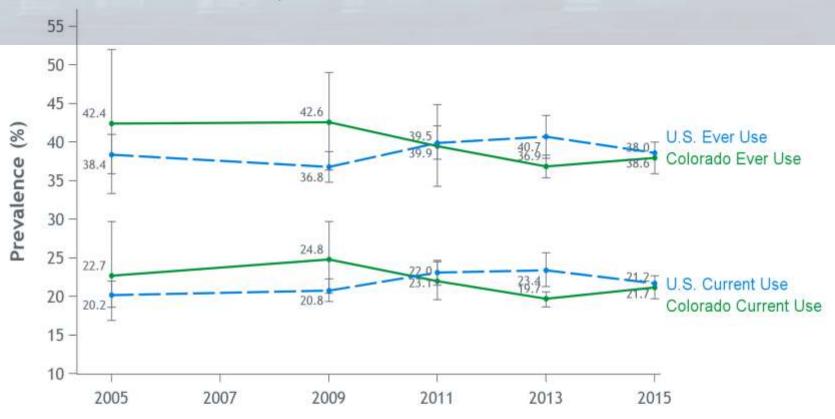
ATHS Presentation

Andrew Freedman: Former Director of Marijuana Coordination, Partner at Freedman & Koski, Inc.

Colorado Cannabis Legalization

- November 2000: Colorado voters passed Amendment 20, legalizing medical marijuana and creating caregiver model
- October 2009: Department of Justice issued Ogden memo, indicating that the federal government would not intervene with medical marijuana in states where it was legal
- November 2012: Colorado voters passed Amendment 64, legalizing adult-use recreational marijuana
- August 2013: Department of Justice issued the Cole Memo, outlining eight enforcement priorities for states with legal recreational marijuana
- January 2014: First retail marijuana stores open in Colorado

Figure 1. Prevalence of Ever and Current Marijuana Use For High School Students in Colorado Compared to the National Prevalence, 2005-2015.



Produced by: EEOHT, CDPHE 2016

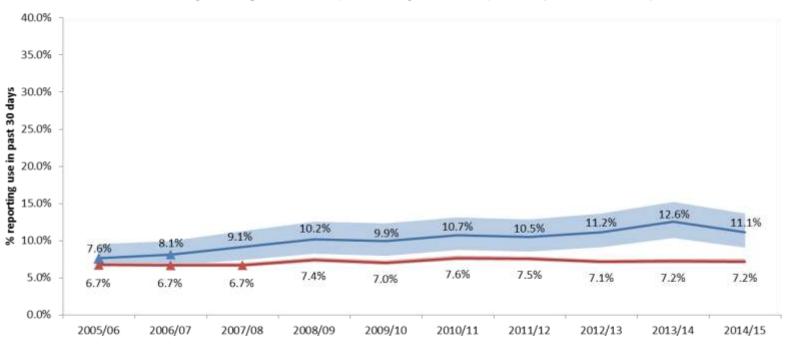
†Ever Use is defined as marijuana use at least one time during a student's lifetime and Current Use is defined as marijuana use at least once in the past 30 days.

‡Data Source: Healthy Kids Colorado Survey (HKCS) prevalence estimates for 2005-2015 and Youth Risk Behavioral Survey prevalence estimates for 2005-2015. Note: Data for the year 2007 was not included due to low sample size.

^{*}Black bars indicate margins of error (95% Confidence Intervals).

Youth Marijuana Use

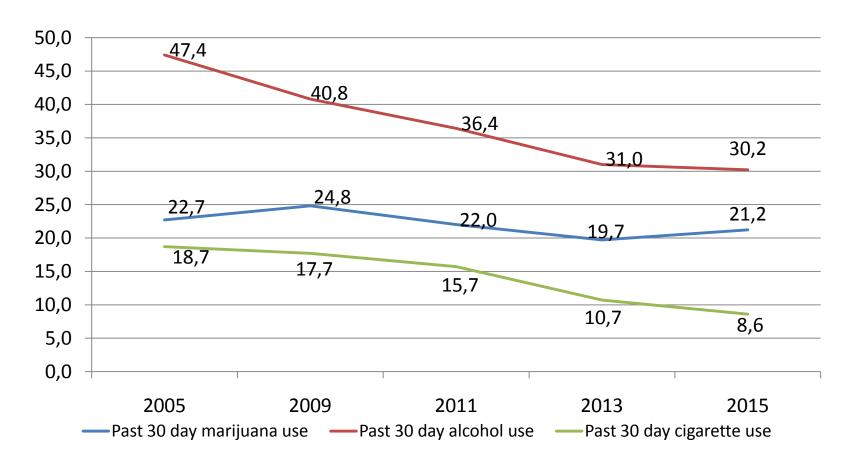
Past 30-day marijuana use, 12-17 years old, 2005/06 to 2014/15



indicates a statistically significant difference from 2015 with at least a p<.05</p>

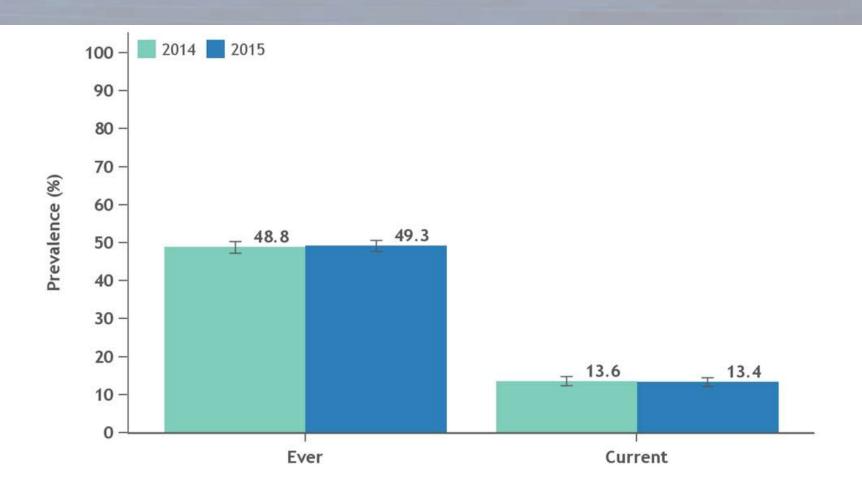
Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health. URL: http://www.samhsa.gov/data/population-data-nsduh

High School Student Past 30 Day Substance Use



Data Source: Healthy Kids Colorado Survey prevalence estimates for 2005, 2009, 2011, 2013 & 2015.

Adult Marijuana Use in Colorado



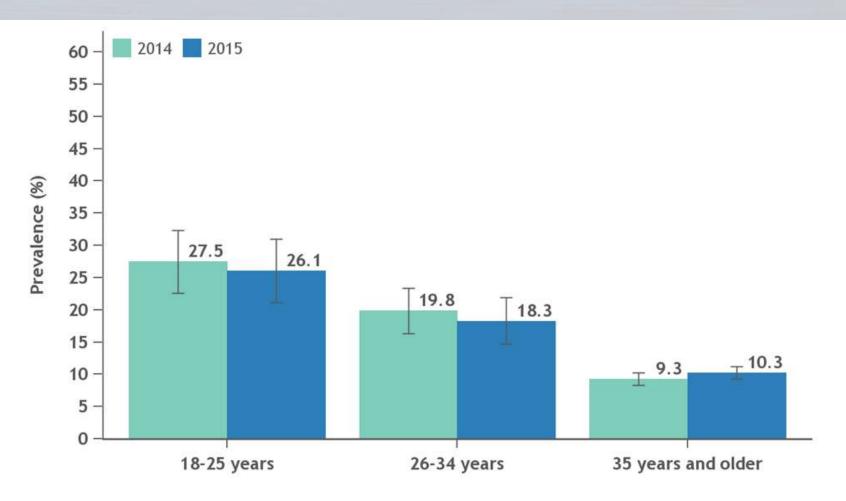
Produced by: EEOHT, CDPHE 2016.

^{*}Black bars indicate margins of error (95% Confidence Intervals).

[†]Ever Use was marijuana use at least once in a lifetime. Current Use is defined as marijuana use at least once in the past 30 days.

[‡]Data Source: Colorado Behavioral Risk Factor Surveillance System 2015.

Current Adult Marijuana Use in Colorado by Age



Produced by: EEOHT, CDPHE 2016.

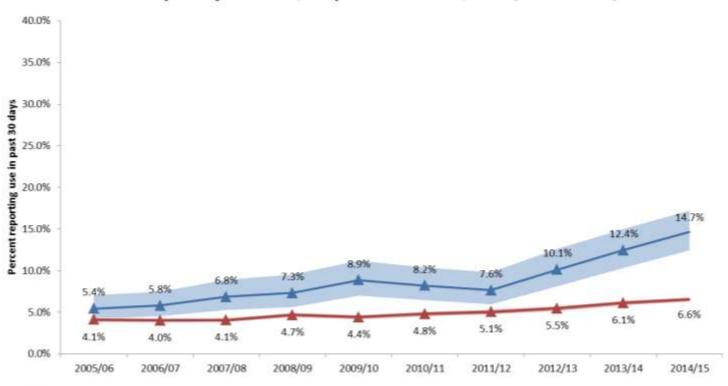
‡Data Source: Colorado Behavioral Risk Factor Surveillance System 2015.

^{*}Black bars indicate margins of error (95% Confidence Intervals).

[†]Current Use was marijuana use at least once in the past 30 days.

Adult Marijuana Usage Rates

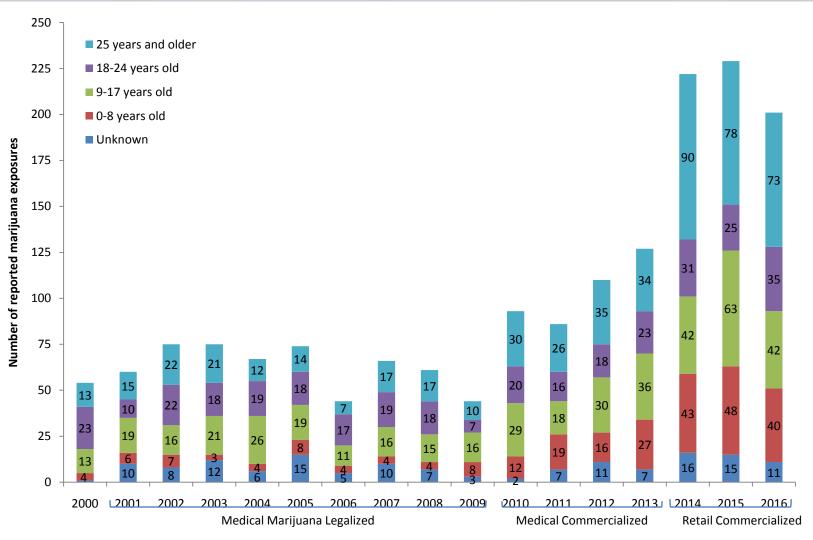
Past 30-day marijuana use, 26 years and older, 2005/06 to 2014/15



▲ indicates a statistically significant difference from 2015 with at least a p<.05

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

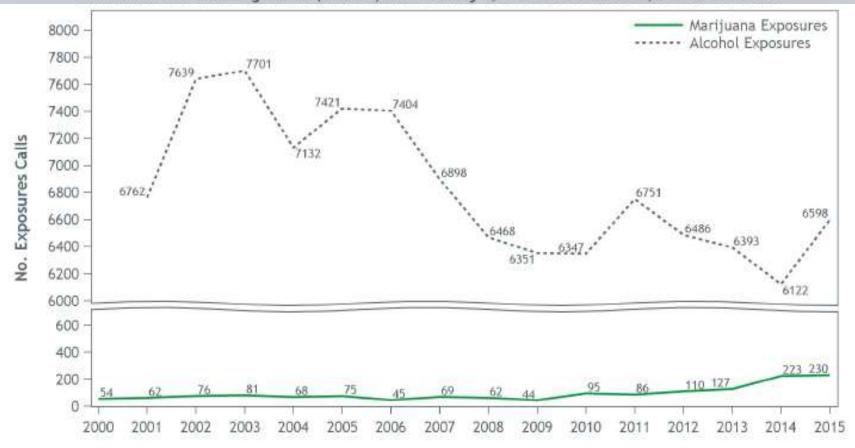
Marijuana Exposure Calls to Poison Center, by Age Group of Case, 2000-2016



Produced by: Colorado Department of Public Health & Environment, Environmental Epidemiology, Occupational Health and Toxicology Branch (2016).

Data Source: National Poison Data System (NPDS) closed, human, marijuana exposure calls in Colorado from 2000 to 2016, n=1,578.

Number of Human Marijuana Exposure Calls† Compared to the Number of Human Alcohol‡ Exposure Calls to Rocky Mountain Poison and Drug Center (RMPDC) from January 1, 2000 to December 31, 2015 in Colorado

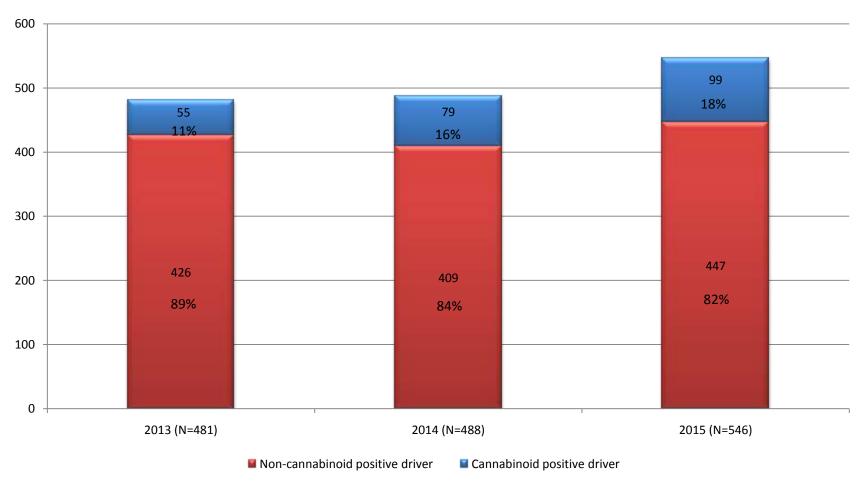


*EEOHT, CDPHE 2016

[†]Human marijuana exposure calls to RMPDC were determined by the presence of the generic code Marijuana - 0083000 from the National Poison Data System and questionable exposures were validated with a records review.

[‡]Human alcohol exposure calls to RMPDC were determined by the presence of the generic code Ethanol (Beverages)-0019140 from the National Poison Data System.

Fatalities on Colorado Roadways

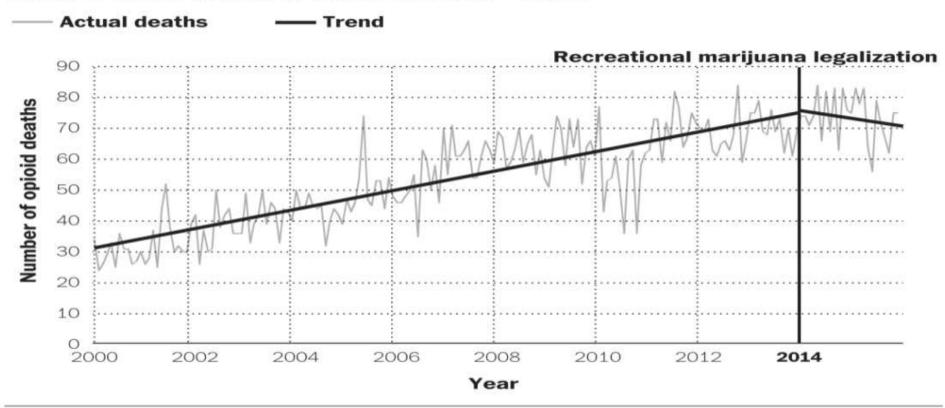


Note: A positive test for cannabinoids may be the result of active THC or one of its inactive metabolites and does not necessarily indicate impairment. Source: Data provided by Colorado Department of Transportation, 8/4/2016.

2015 DATA ARE PRELIMINARY AND SUBJECT TO CHANGE

Opiod Deaths

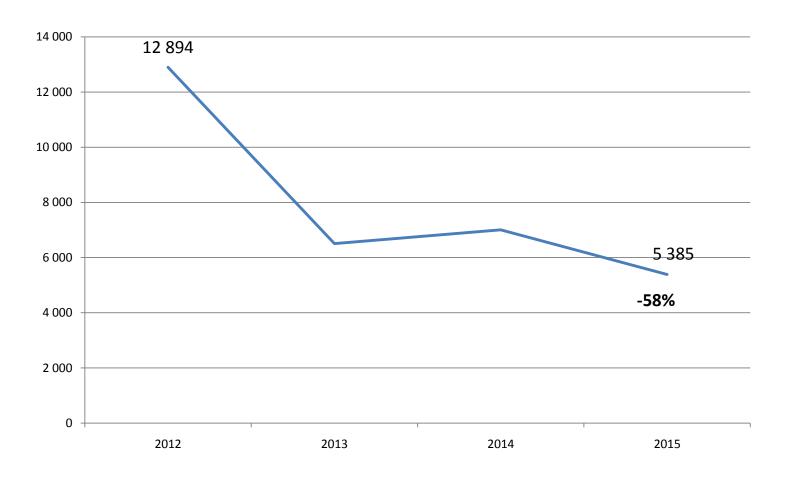
Monthly opioid deaths in Colorado, 2000 - 2015



WAPO.ST/WONKBLOG

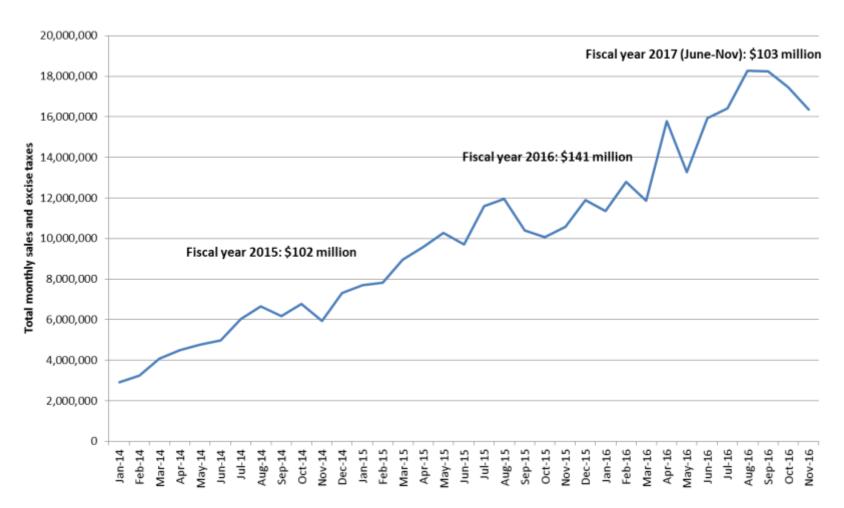
Source: Livingston et. al.

Marijuana-related Arrests



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

Sales and Excise Taxes



Source: Colorado Department of Revenue, Marijuana Enforcement Division.

Note: Includes regular sales tax for medical (2.9%), regular sales tax for retail (2.9%), special sales tax for retail (10%), and excise tax for retail (15%). The Colorado fiscal year runs from July 1st to June 30th.

Further Data and Research Needed:

- Effects of higher potency
- Longitudinal data on problematic use
- Effects of commercialization and normalization
- Effects of price point on problematic use
- Substitution vs. Complement Effect
- Intoxication Tests

Questions and Concerns?

Contact us:

Andrew Freedman:

Website: www.FreedmanKoski.com Email: Andrew@FreedmanKoski.com

Twitter: @FreedmanKoski Phone: 01.720.588.2164