Legal Marijuana and Public Health Two Years In

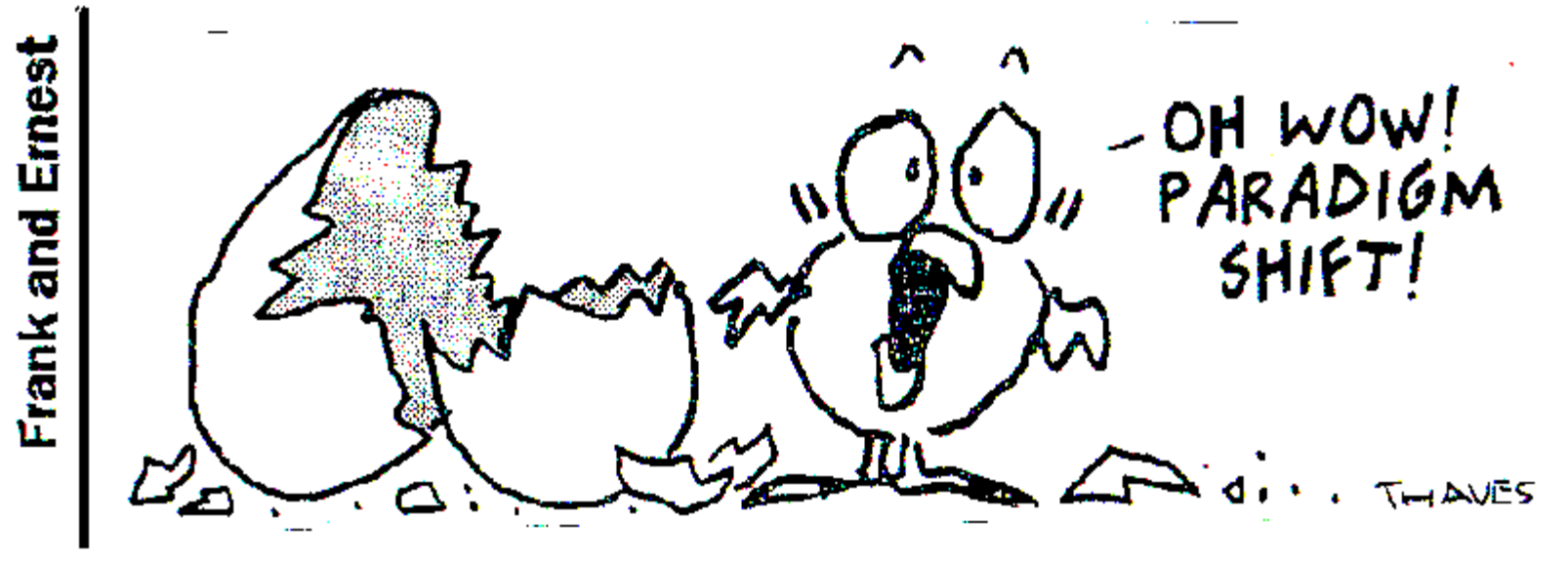
Mike Van Dyke, Ph.D., CIH

Branch Chief

Environmental Epidemiology, Occupational Health, and Toxicology

COLORADO

Department of Public Health & Environment


Frank and Ernest
OH WOW! PARADIGM SHIFT!
THAVES

Public Health Responsibilities

1. Create a scientific advisory panel to review literature and emerging science
2. Monitor patterns of use
3. Monitor health concerns
4. Prevention and education
5. Consultative role: Contamination limits and laboratory certification, edibles safety, safe disposal of product and byproducts

CDPHE and Retail Marijuana (C.R.S. 25-1.5-111 & SB-13-283)

Retail Marijuana Public Health Advisory Committee

An appointed panel of scientists and health care professionals with expertise in cannabinoid physiology to monitor emerging health effects and other information.

- Systematically review the scientific literature
- Review public health surveillance data
- Recommend public health related policies
- Recommend public health surveillance activities
- Identify research gaps important to public health

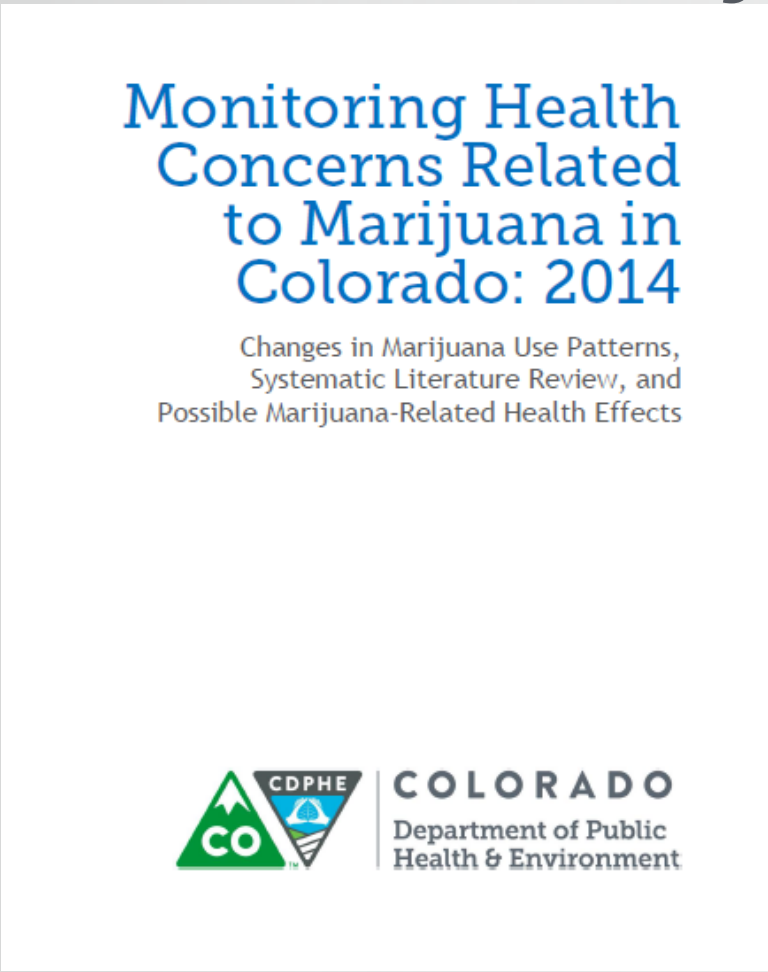
CDPHE Goal
Translate Science into Public Health

- Develop consensus statements that convey the quality and quantity of scientific evidence behind a finding
- Translate consensus statements into plain language statements in a standardized way
- Guide the development of evidence-based prevention campaigns

Topics Covered

Marijuana Use During Pregnancy and Breastfeeding
Potential Neurological and Mental Health Effects
Potential Health Effects on Youth and Unintentional Poisonings
Marijuana Dose and Drug Interactions
Potential Extrapulmonary Effects and Injuries
Potential Respiratory Effects and Lung Cancer

1. Retail Marijuana Public Health Advisory Committee



- Available on CDPHE web page
- Individual chapters
  - Updates in-progress

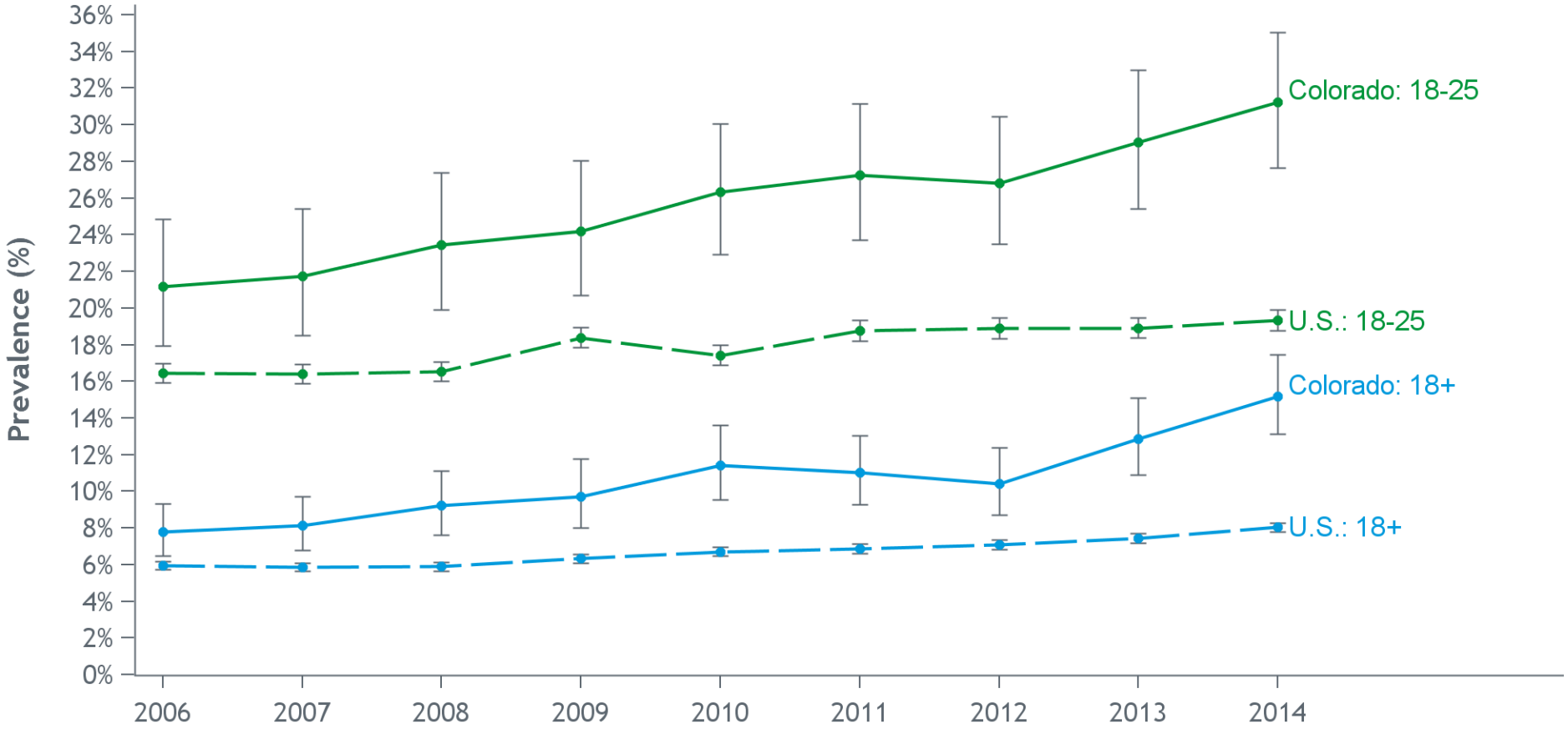
www.colorado.gov/cdphe

2. Monitoring Patterns of Use

- Who is using?
  - age, gender, ethnicity, county, etc.
- How are they are they using?
  - Smoking, vaporizing, ingesting, dabbing, etc.
- How often are they using?
- Are they following safe practices when using?
  - Safe storage away from children, not driving while under the influence, etc.

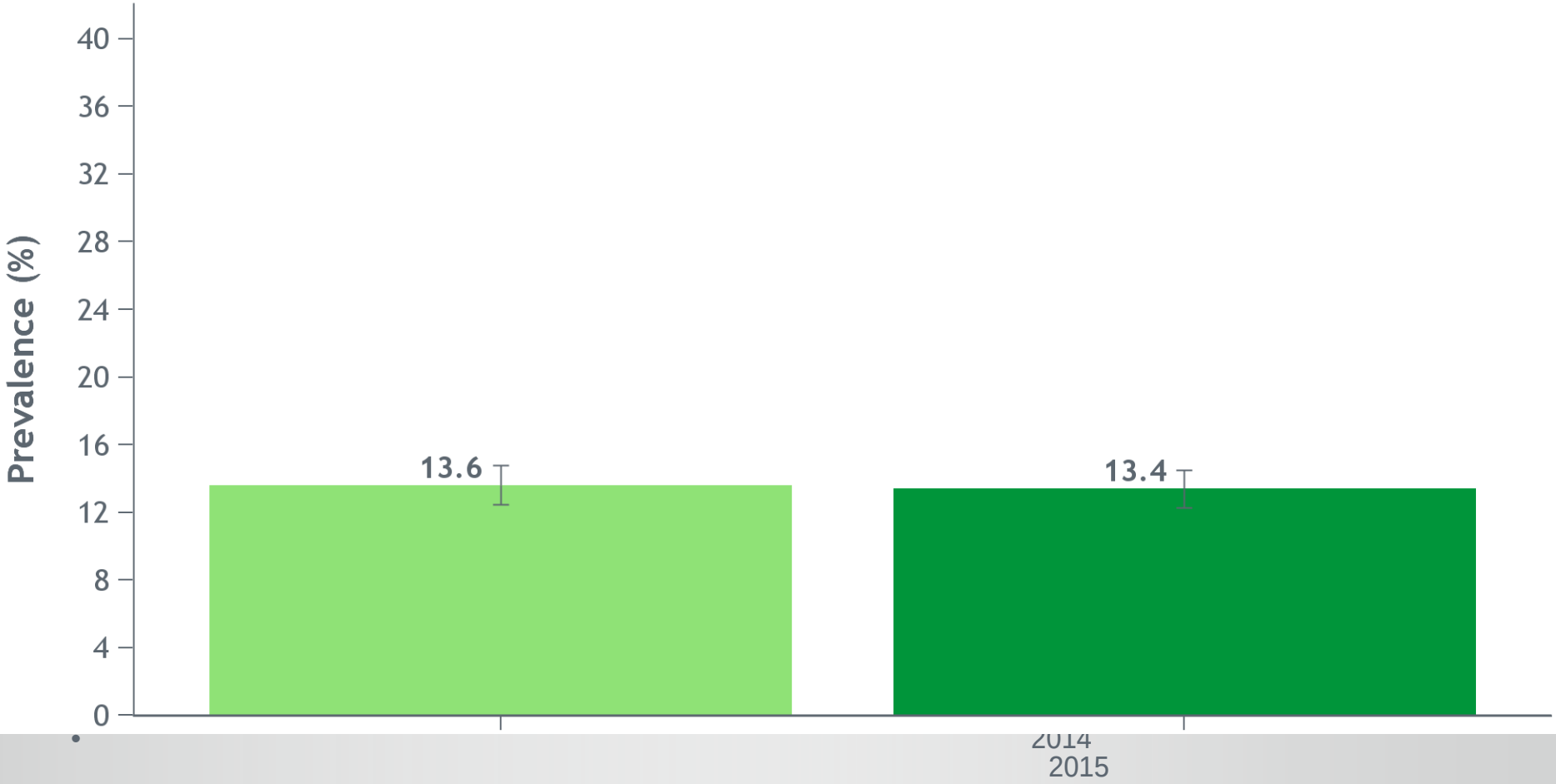
Collecting this type of info and monitoring trends can help focus prevention efforts to the right target populations

Past 30 Day Marijuana Use For Colorado Compared to the Nation in Those 18 to 25 Years Old and Those 18 Years and Older: National Survey on Drug Use and Health 2006-2014.



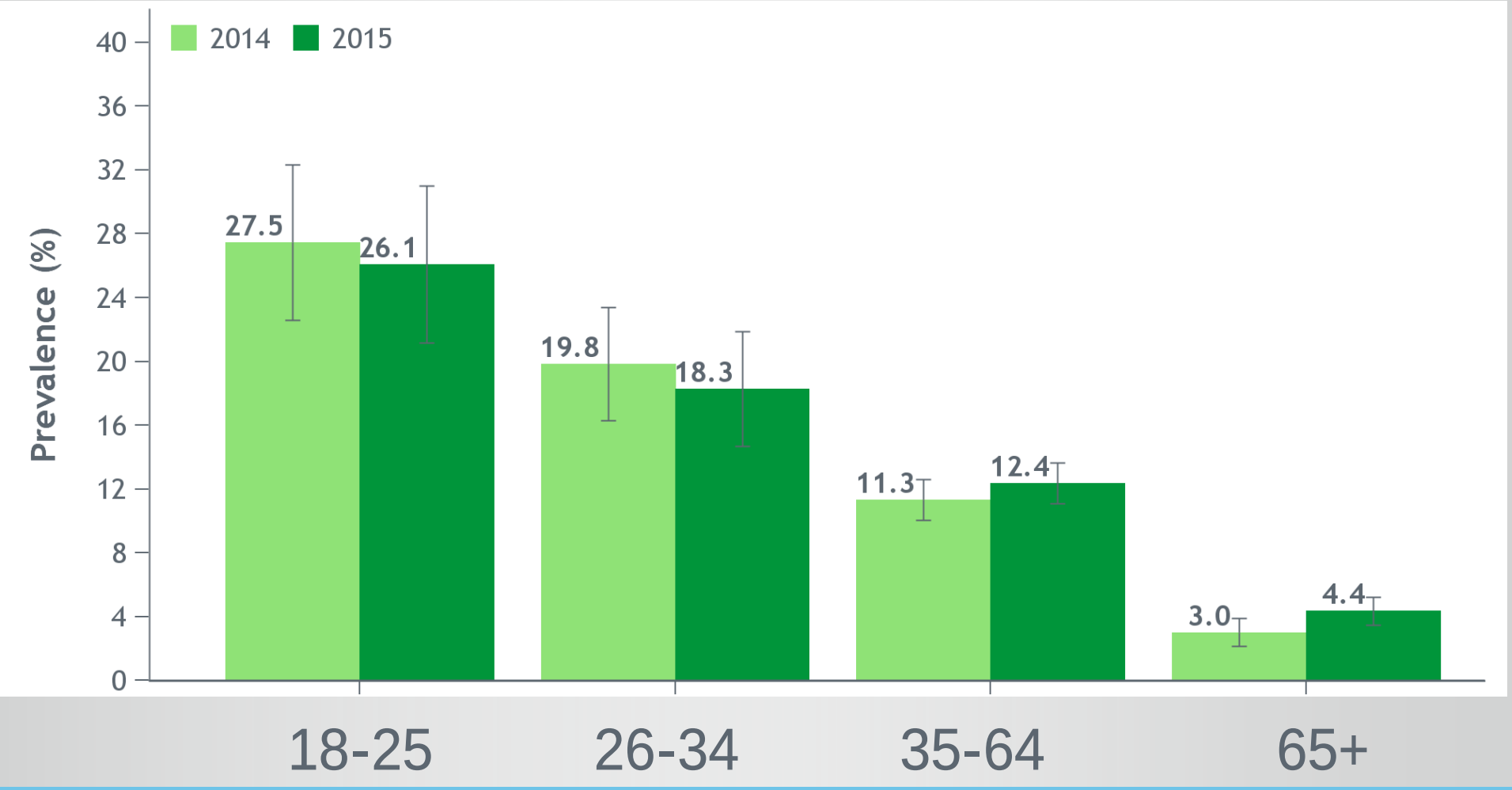
*EEOHT, CDPHE 2016
†Data Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health 2006-2014.

Adult Marijuana Use in Colorado 18 years old and older (BRFSS)

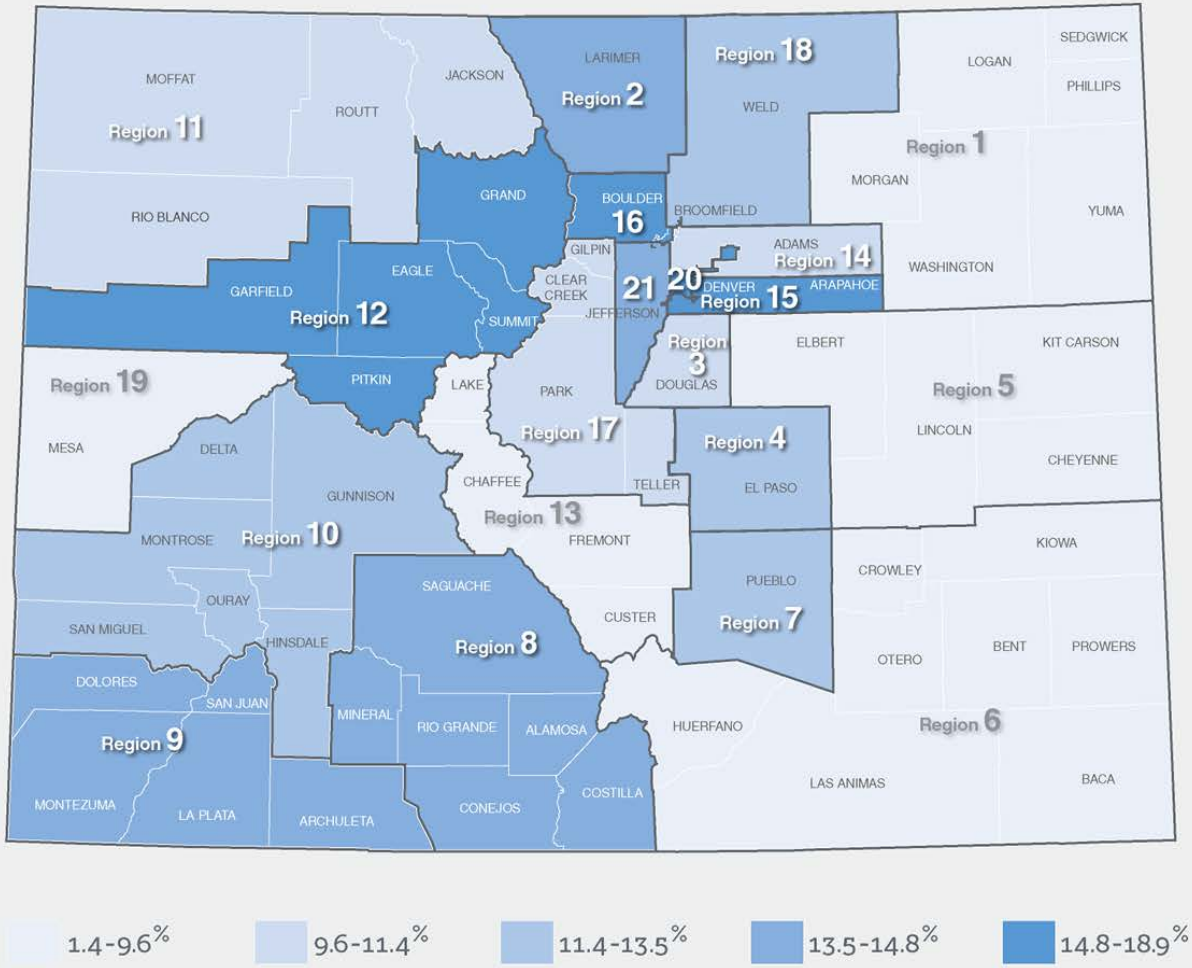


COLORADO
Department of Public Health & Environment

Adult Marijuana Use in Colorado by Age (BRFSS)



By Region

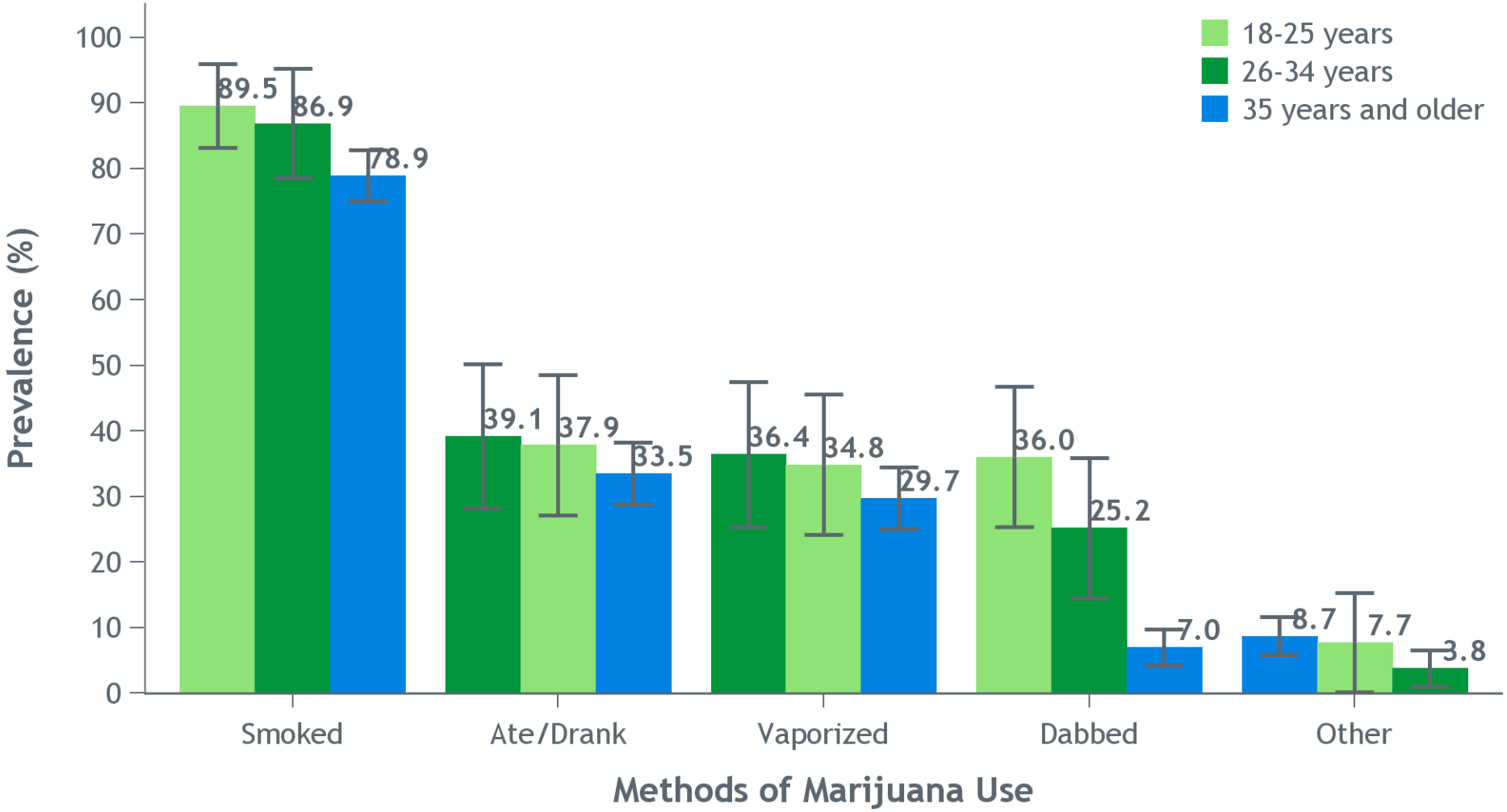


1.4-9.6%
9.6-11.4%
11.4-13.5%
13.5-14.8%
14.8-18.9%

	%
Colorado	13.6
Region 1	7.9
Region 2	13.7
Region 3	10.0
Region 4	12.0
Region 5	1.4
Region 6	5.9
Region 7	12.7
Region 8	14.4
Region 9	14.2
Region 10	13.5
Region 11	11.0
Region 12	15.6
Region 13	9.6
Region 14	11.2
Region 15	14.9
Region 16	18.9
Region 17	11.4
Region 18	12.1
Region 19	5.4
Region 20	18.5
Region 21	14.8

CDPHE CO
COLORADO
Department of Public Health & Environment

Method of Marijuana Use among Colorado Adults (18+ years) that Reported Current Marijuana Use by Age Categories, 2015.



Prevalence of Daily or Near Daily (20-30 Days in Past Month) Marijuana Use Compared to Daily or Near Daily Alcohol and Tobacco Use among Colorado Adults (18+ years), 2014-2015.

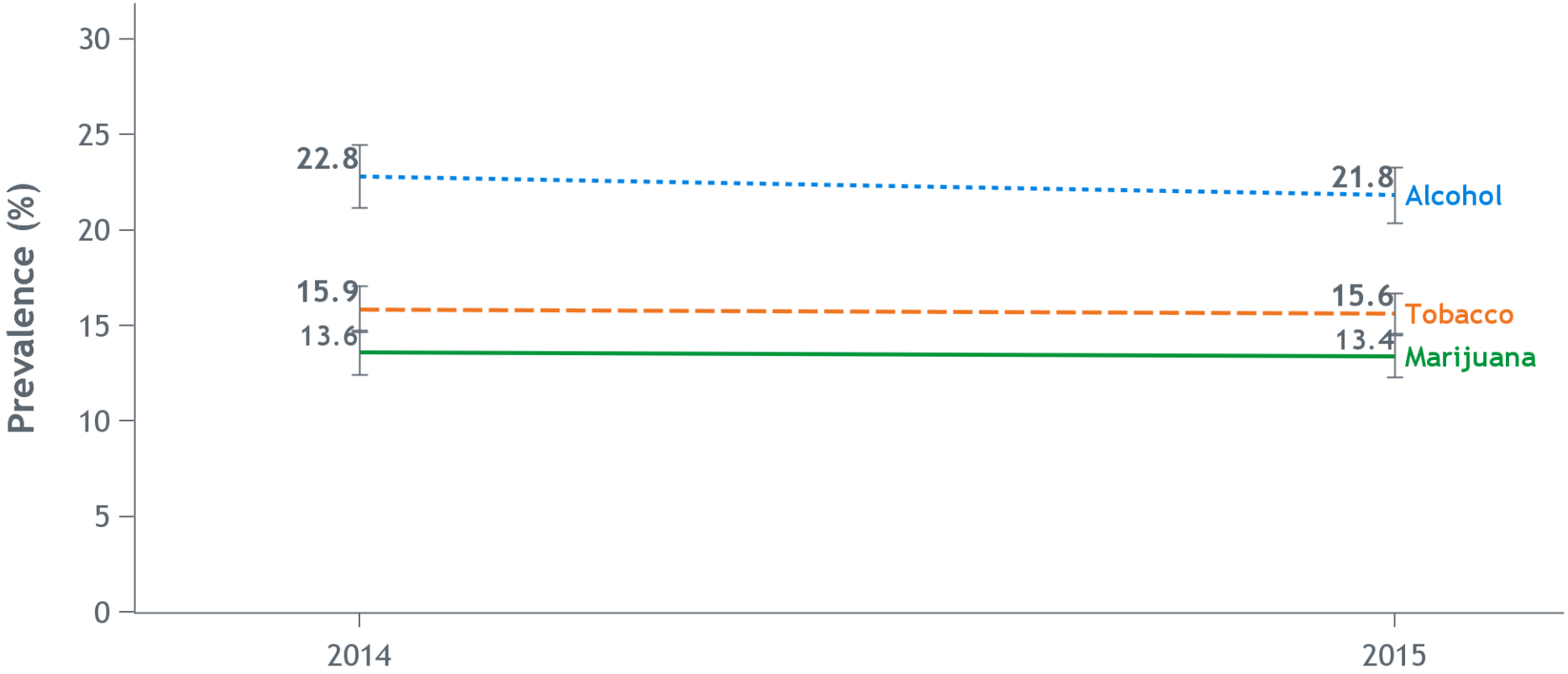
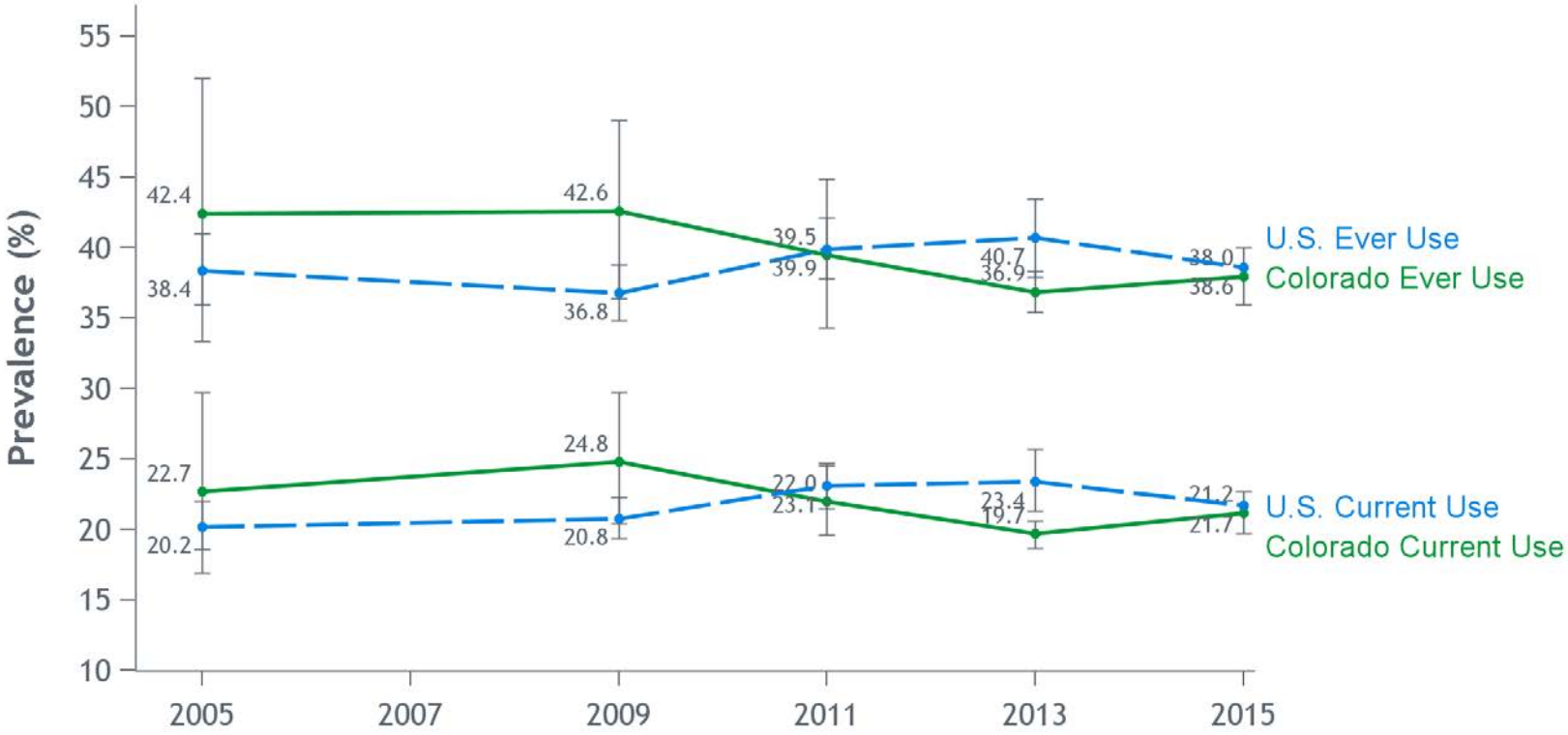


Figure 1. Prevalence of Ever and Current Marijuana Use For High School Students in Colorado Compared to the National Prevalence, 2005-2015.

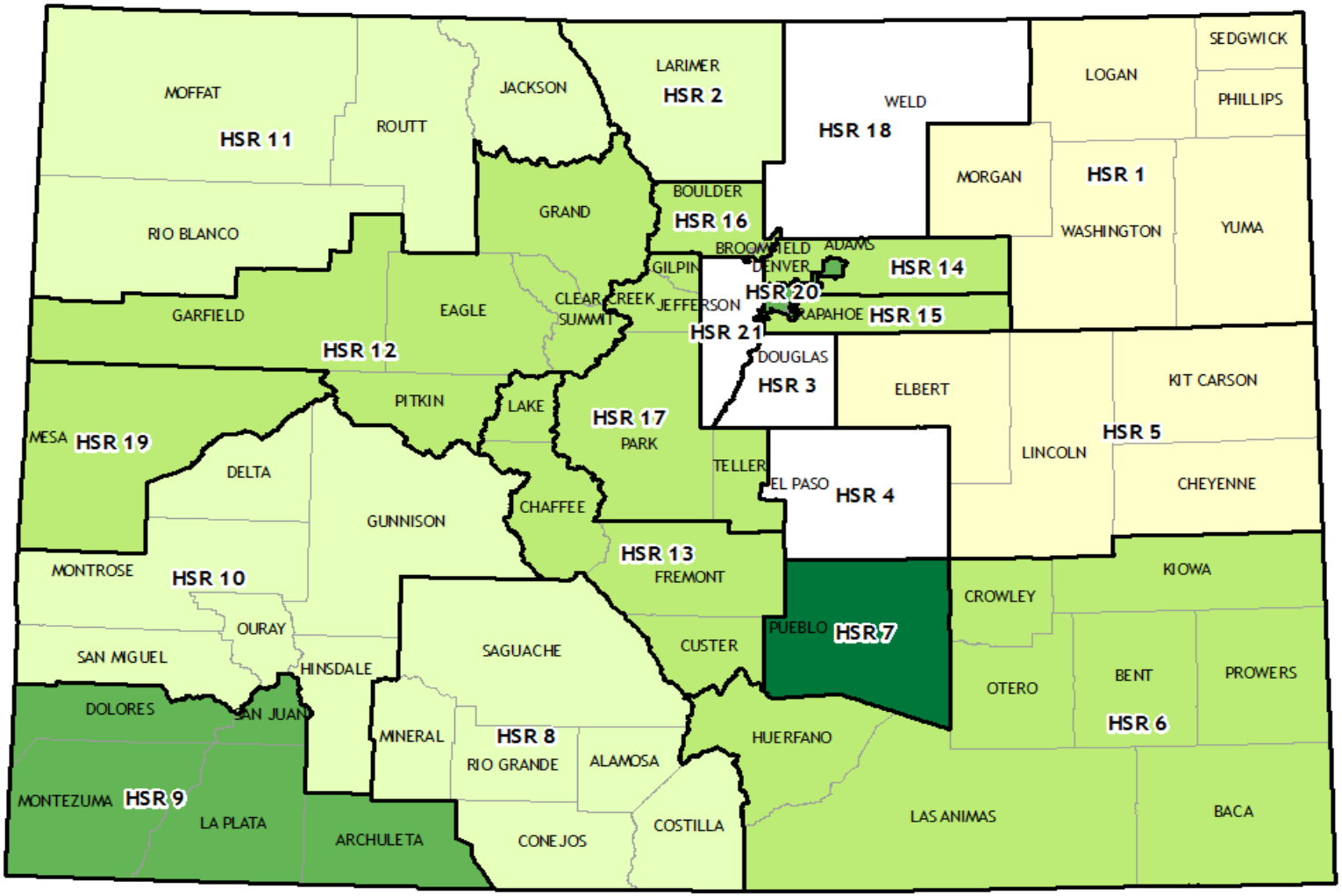


Produced by: EEOHT, CDPHE 2016

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

†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.

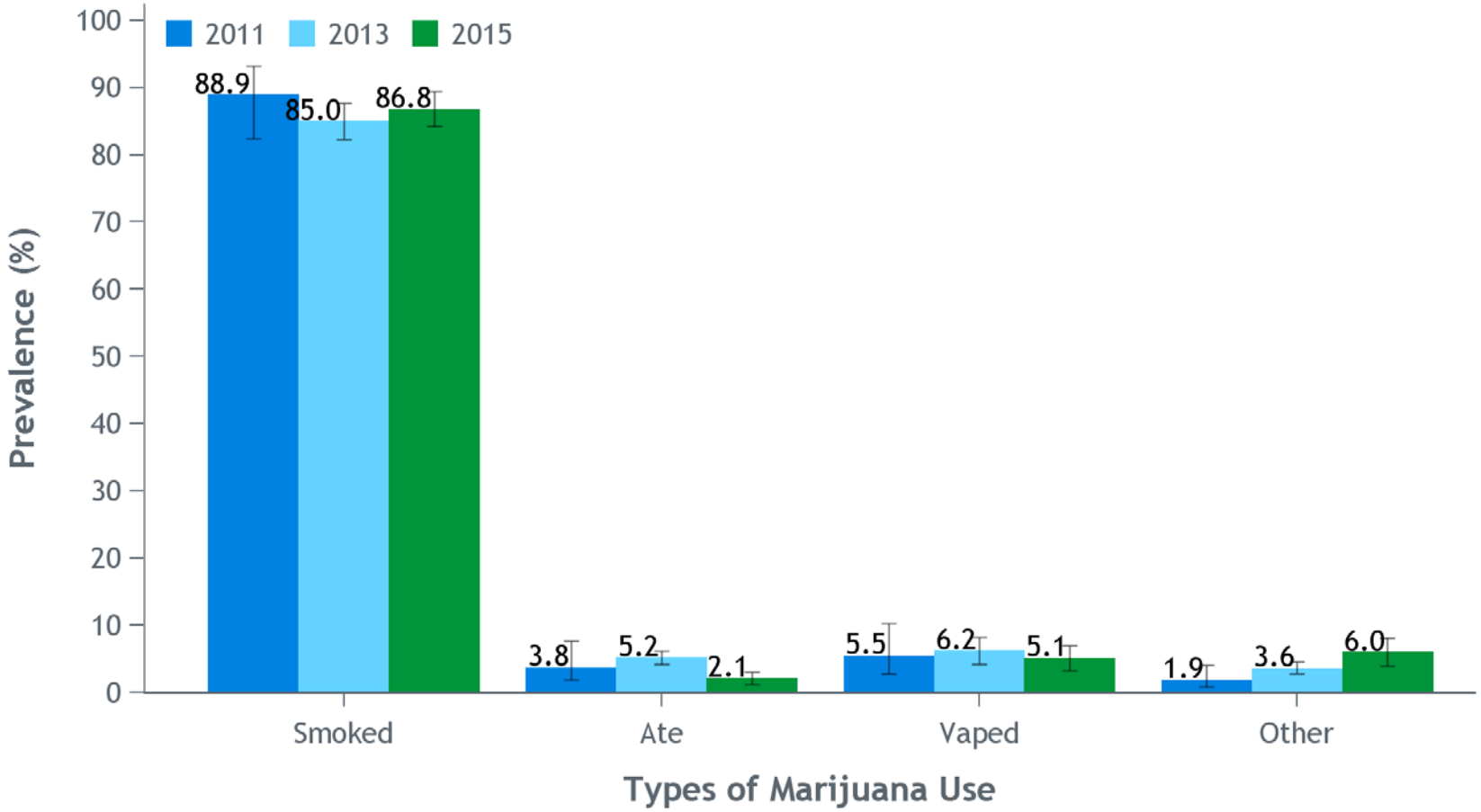


Prevalence of Current Use among High School Students, Colorado 2015

0% - 15% | 15.1% - 20% | 20.1% - 25% | 25.1% - 30% | 30.1% - 35% | No Data

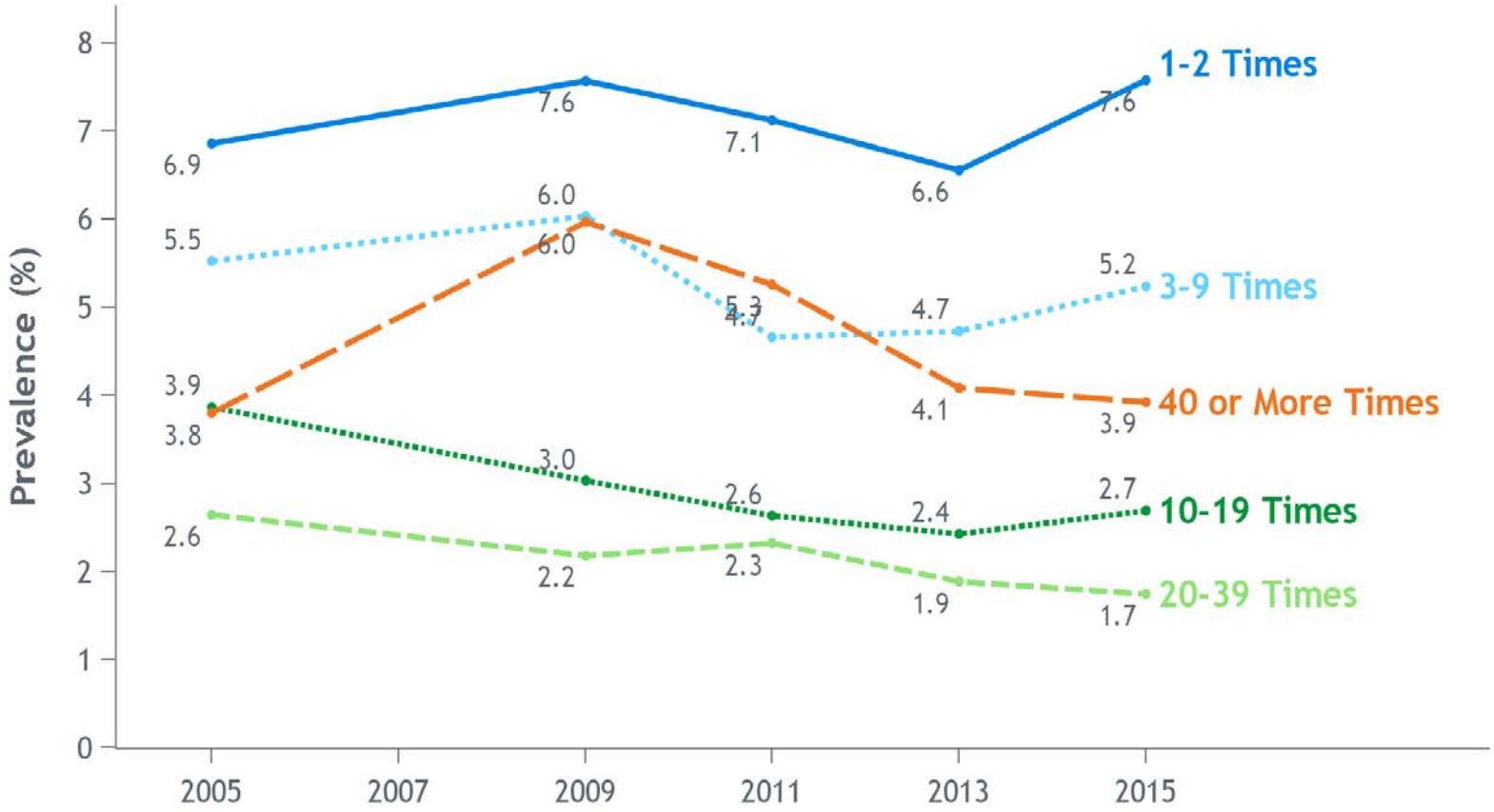
Data Source: Healthy Kids Colorado Survey (HKCS) prevalence estimates for 2015.

Figure 10. Usual Methods of Marijuana Use among High School Students that Reported Current Marijuana Use by Year in Colorado, 2011-2015.



Produced by: EEOHT, CDPHE 2016
*Black bars indicate margins of error (95% Confidence Intervals).
†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 2011-2015.

Figure 12. Prevalence of Marijuana Use for High School in Colorado by Frequency of Use in the Past 30 Days, 2005-2015.

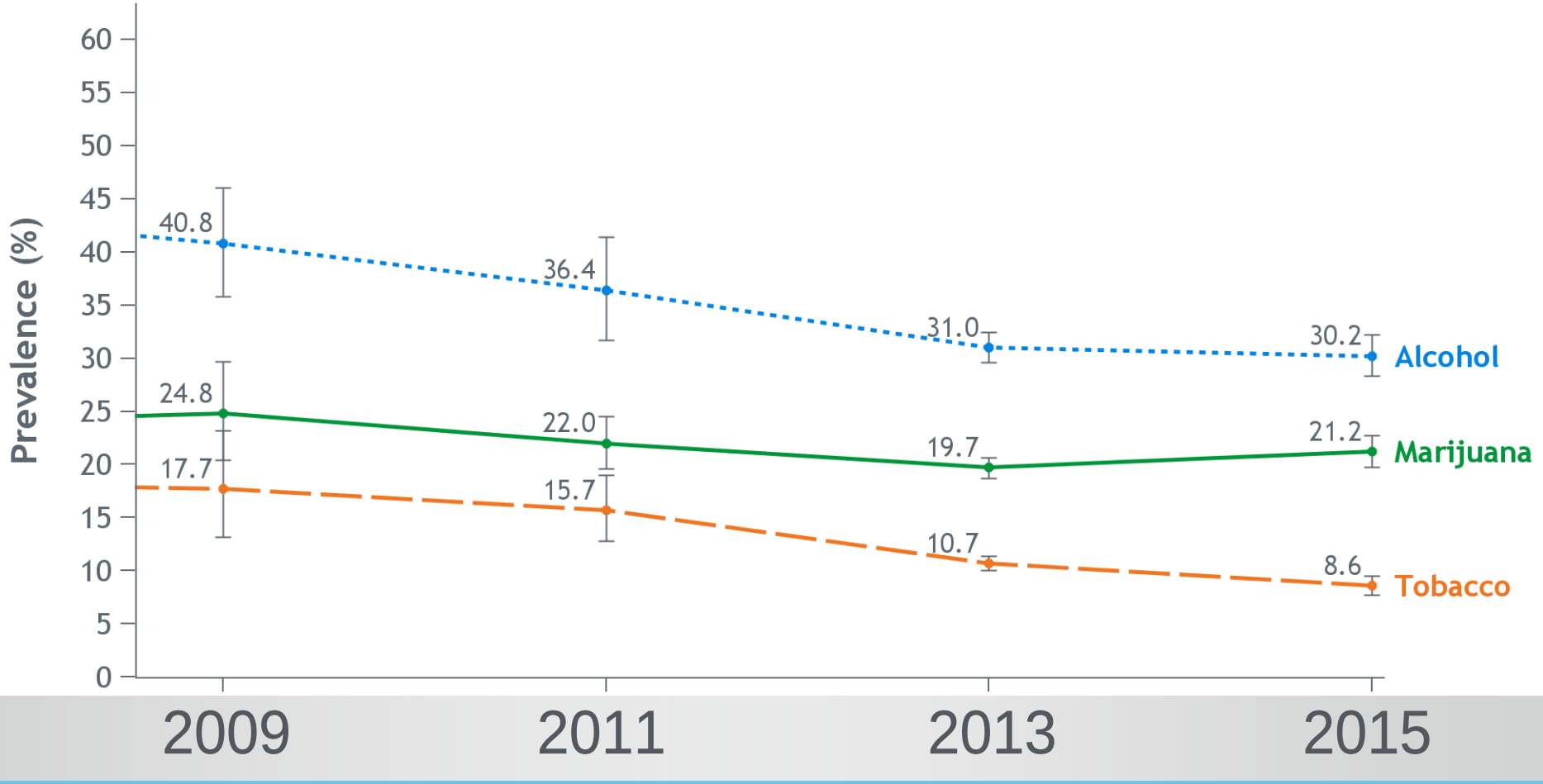


Produced by: EEOHT, CDPHE 2016

†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. Note: 2007 is not included due to low sample size.

High School Alcohol, Marijuana and Tobacco Use in CO (HKCS)



COLORADO
Department of Public Health & Environment

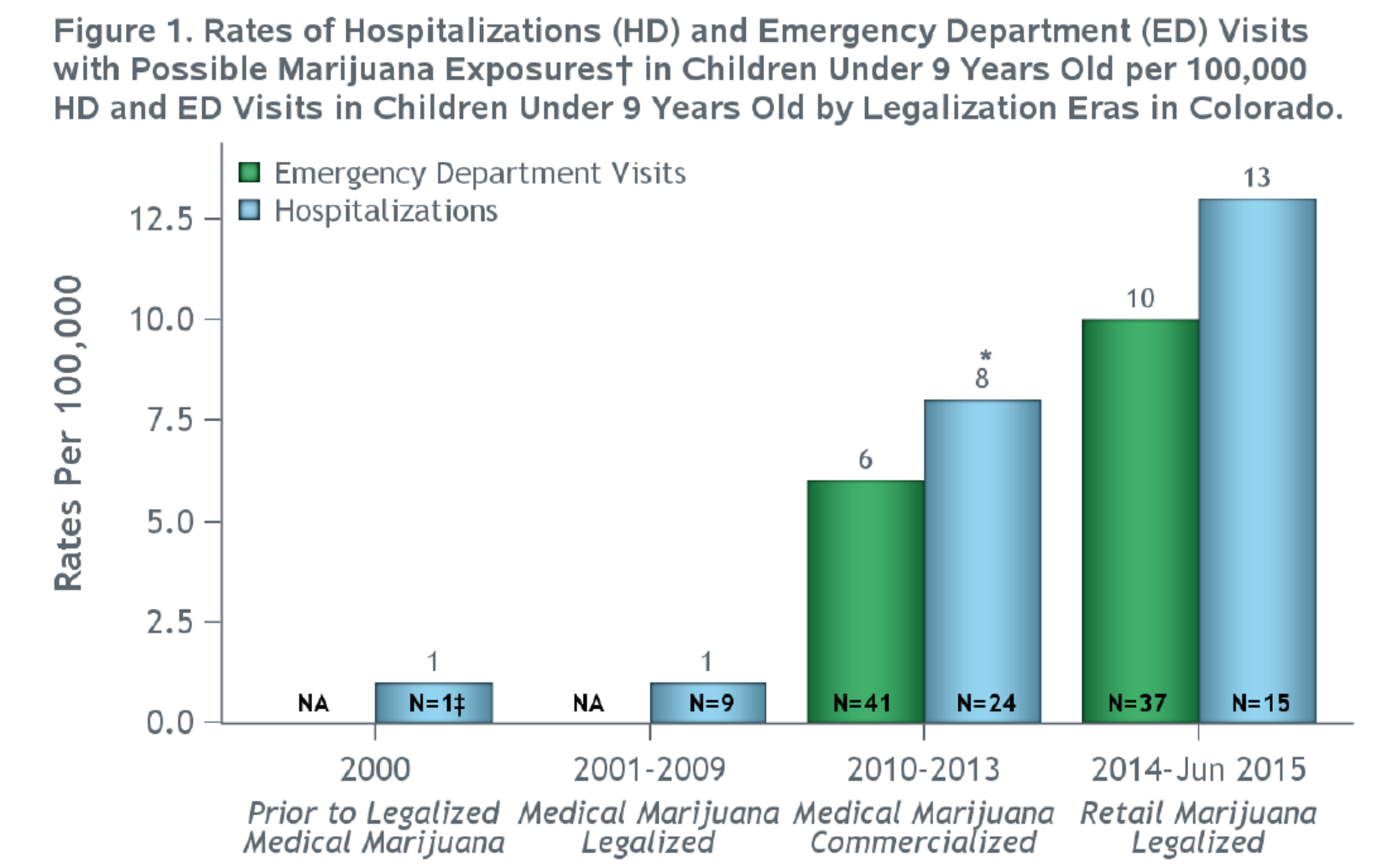
2. Patterns of Use- Summary

- Data available do not suggest a substantial increase in current marijuana use among Colorado adults and youth
- Higher current use among Colorado adults compared to most other states
- Higher current use among certain demographics (men, low income, GLBT, lower education levels)
- Methods of use show mostly smoking with co-use of edible products
- Substantial possibility for child exposure through secondhand smoke and edibles

3. Monitoring Health Cncerns

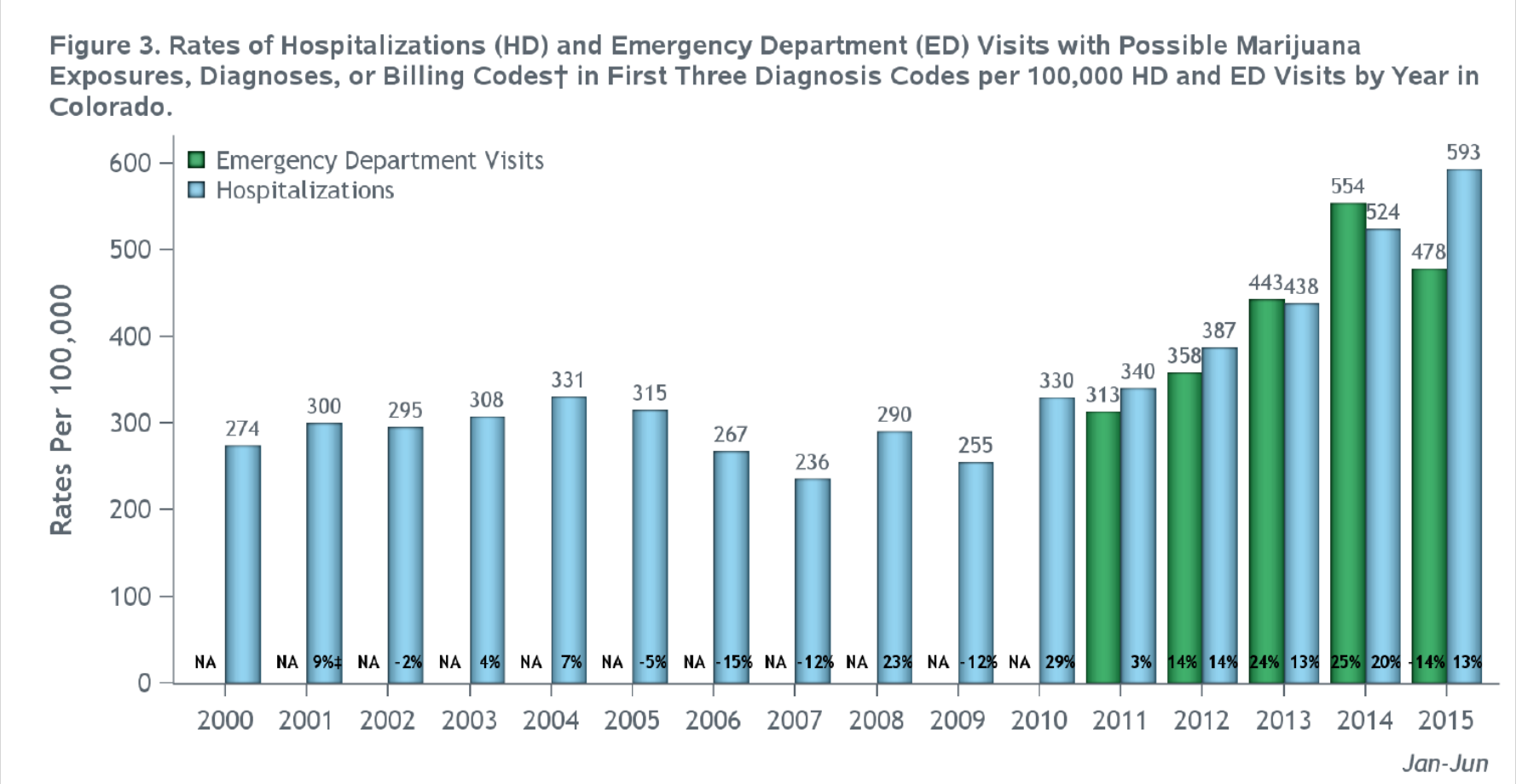
- Adverse events
  - Emergency Department Visits
  - Hospitalizations
  - Calls to poison center

Child Marijuana Exposures

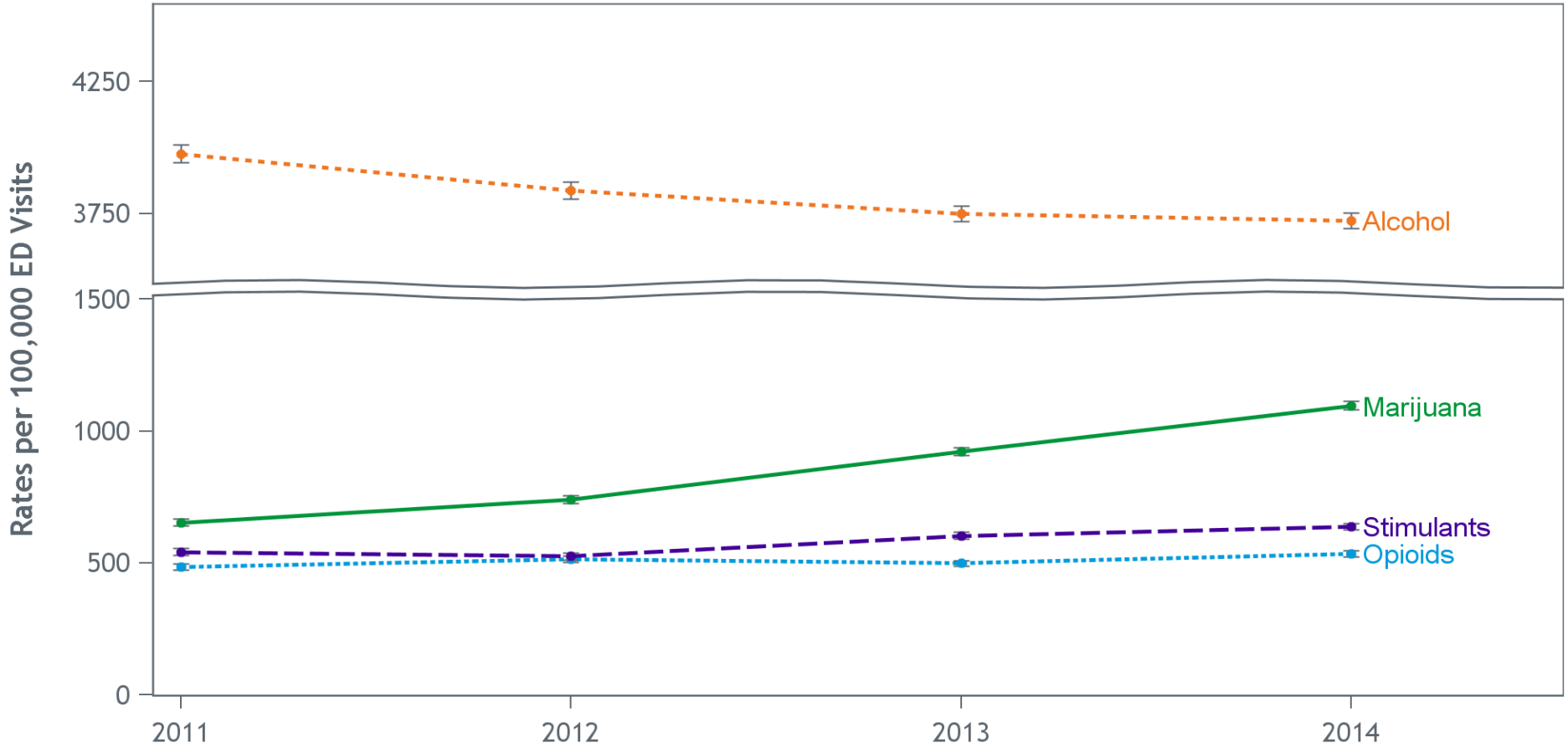


COLORADO
Department of Public Health & Environment

Marijuana Associated Hospitalizations and Emergency Department Visits
(All Ages)



Substance Related ED Visits in Colorado, 2011-2014: Exposures, Diagnoses, Billing Codes, or Poisonings.

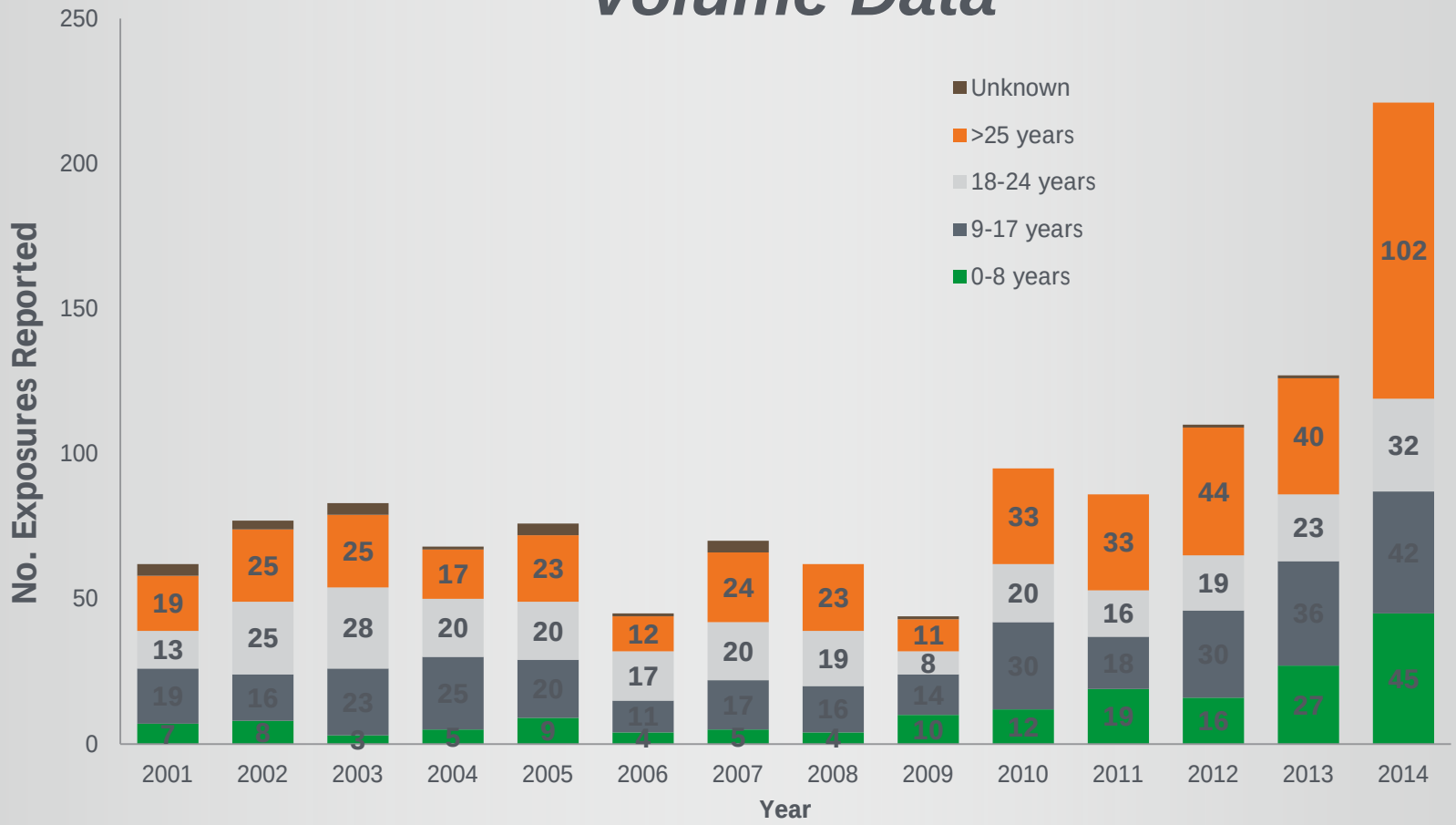


*EEOHT, CDPHE 2016

†ICD-9-CM codes 305.2, 304.3, 969.6 and E854.1 were used to determine ED visits with possible marijuana exposures, diagnoses, billing codes or poisonings.

‡ED visits involving other substances were identified using ICD-9-CM codes: Alcohol (291[.0-.5, .8, .9], 303[.0, .9], 305.0, 425.5, 571[.0-.6, .8, .9], 790.3, 980[.0-.3, .8, .9], E860[.0-.4, .8]); Prescription Opioid Dependence and Poisoning (304[.0, .7], 305.5, 965[.00, .02, .09], E850[.1, .2]); Heroin Poisoning (E850.0, 965.01); Cocaine Dependence and Poisoning (304.2, 305.6, 970.81, E855.2); Stimulant Dependence and Poisoning (304.4, 305.7, 970.89, E854.2).

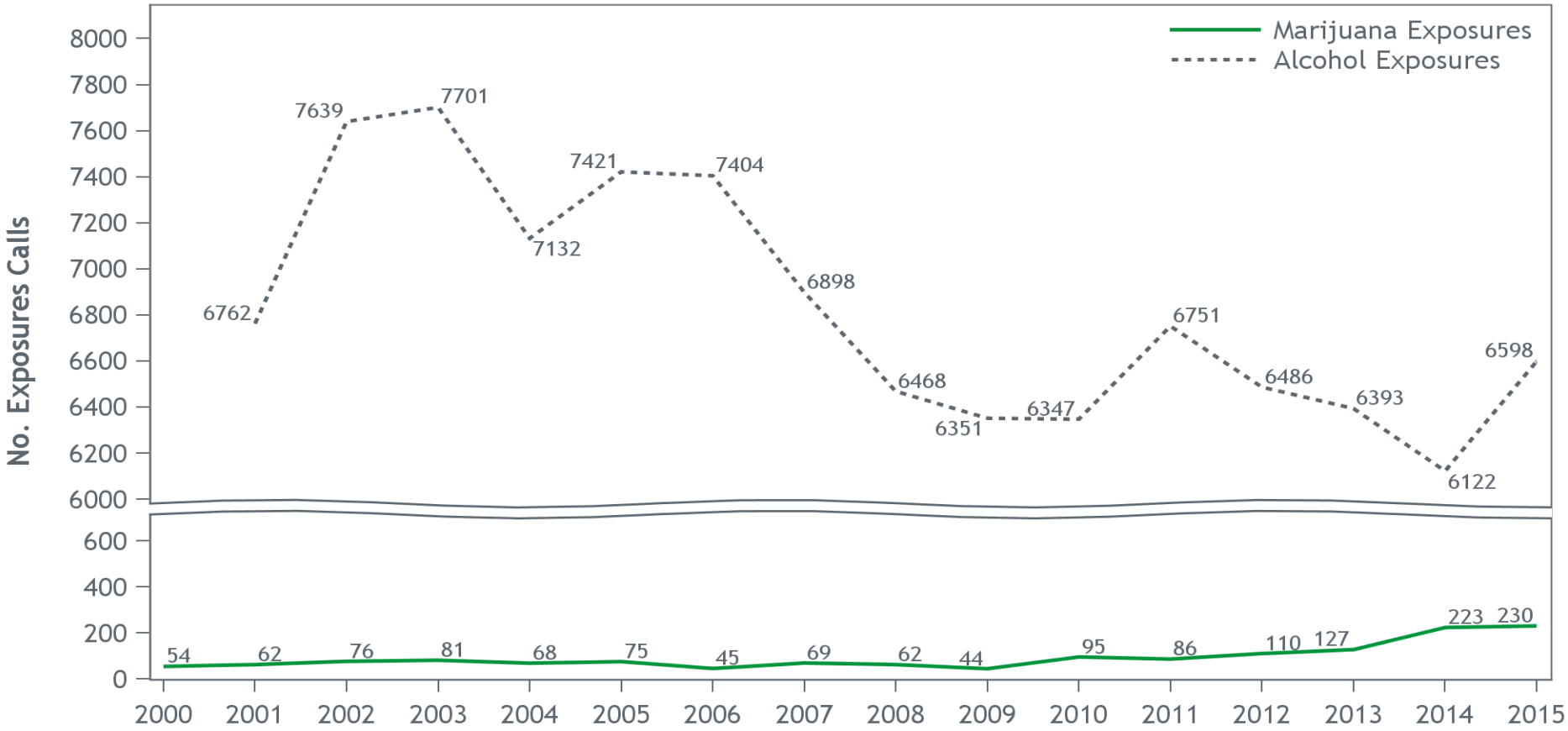
Rocky Mountain Poison and Drug Center Call Volume Data



Marijuana Legalization Era	Medical Marijuana Legalized	Medical Marijuana Commercialized	Retail Marijuana Legalized

COLORADO
Department of Public Health & Environment

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

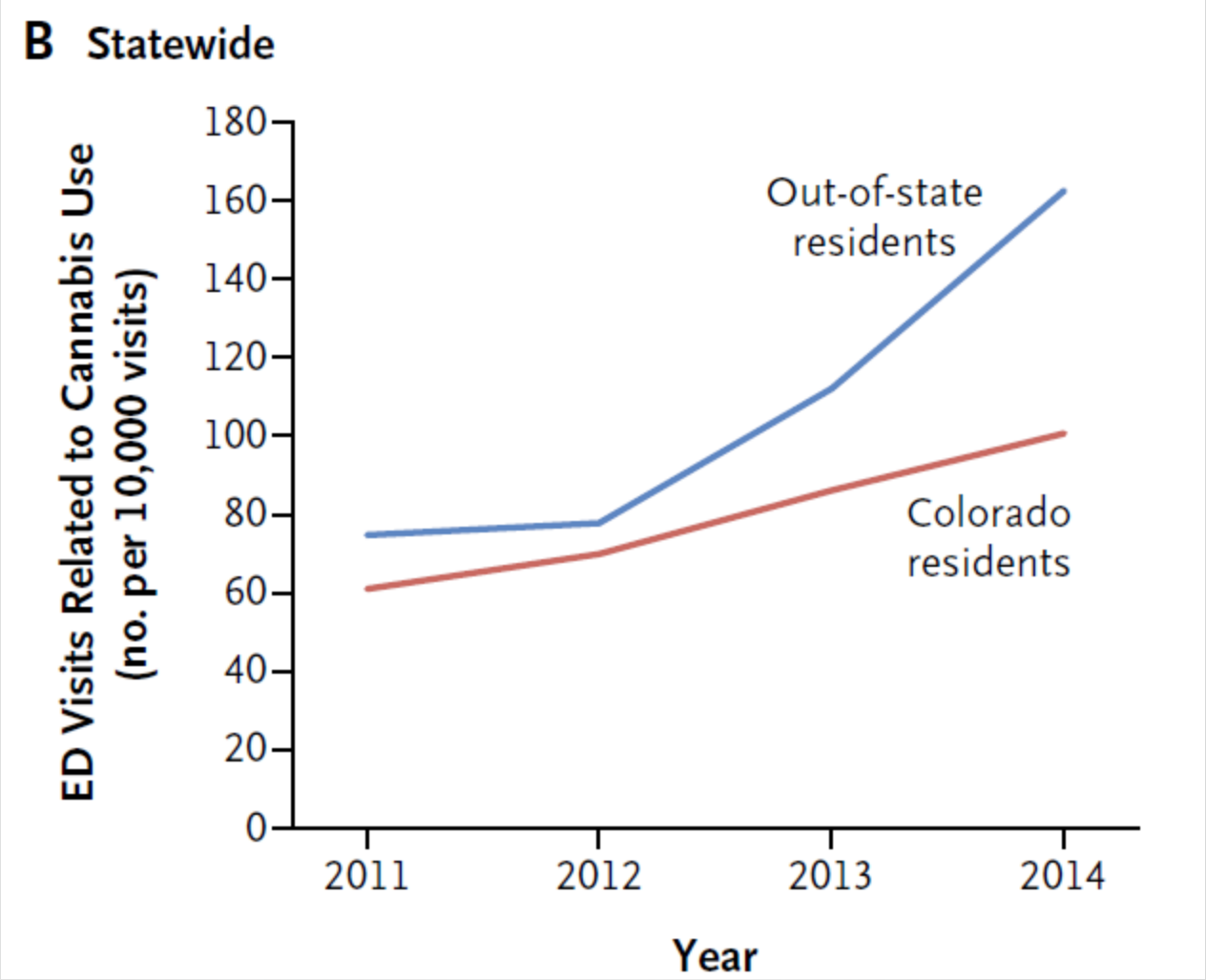


*EEOHT, CDPHE 2016

†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.

Out-of-State Residents



3. Health Concerns- Summary

- Increases in unintentional poisonings among children since legalization
- Increases in marijuana exposure calls to the poison center since legalization
  - Relative number small compared to other substances
- Increases in emergency department visits and hospitalizations related to marijuana since legalization
  - Causes for these increases unclear – casual vs. social change in reporting
  - Larger increases for out-of-state residents
  - ED and hospitalizations related to marijuana remain a small proportion of all visits (< 2%%)

4. Prevention & Education

Social media messages: THC in any form can harm your baby

Future Campaign Plans

Public Health Campaigns

COLORADO
Marijuana

Home | Legal use | Health effects | Responsible use | Talk about marijuana | Resources | Medical

GOOD to KNOW

MARIJUANA — IN COLORADO —

Be educated. Be responsible.

Official state information on the laws & health effects of retail marijuana

Links

Good to Know Colorado campaign site
Spanish website/En español

What's New

Monitoring Health Concerns Related to Marijuana in Colorado: 2014

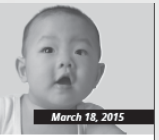
www.colorado.gov/marijuana

COLORADO
Department of Public Health & Environment

Clinical Guidelines

MARIJUANA PREGNANCY AND BREASTFEEDING GUIDANCE

FOR COLORADO HEALTH CARE PROVIDERS



March 18, 2015

SCREENING QUESTIONS

In addition to asking about alcohol, tobacco, and other drug use (including prescription drugs), now that marijuana is legal in Colorado, we recommend asking all teens and women who could become pregnant about marijuana use.

1. ***Have you used marijuana in the last year?***

   If no: Go to question 2

   If yes: When was the last time you used marijuana? How do you use marijuana? What form of marijuana do you use? How often do you use and how much?

   If pregnant: How has your use of marijuana changed since finding out you are pregnant?

   If concerned about substance abuse: Use the Cannabis Use Disorder Identification Test (CUDIT) and referral recommendations found in the resources section.

2. ***Does anyone use marijuana in your home?***

   If yes or no: It is important to ensure that your home is safe for your child. Make sure that any potentially harmful substances are out of reach of your child, including marijuana, alcohol, prescription drugs or household substances.

   If yes: Provide additional education on avoidance of secondhand smoke and safe storage, more information below.

TIPS FOR USING THIS GUIDANCE:

All information in italics is scripted talking points to share with your patients, written at about a middle school reading level.

COLORADO Department of Public Health & Environment

PRENATAL VISITS

It is important to reassess substance use at each visit, because many women continue using substances throughout the pregnancy or may begin or resume using substances during pregnancy.

Discuss importance of cessation of marijuana and other potentially harmful substances during pregnancy and breastfeeding and offer support if needed, found in the resource section.

Discuss patient's plan for marijuana use after pregnancy. *Tell me about whether you intend to use marijuana after delivering your baby.*

Discuss breastfeeding and marijuana: *Are you planning to breastfeed your child?* If yes, see breastfeeding section for more information.

Please inform your patient: *Marijuana is now legal for adults over 21. But this doesn't mean it is safe for pregnant moms or babies. Some hospitals test babies after birth for drugs. If your baby tests positive for THC at birth, Colorado law says child protective services must be notified.*

As a prenatal care provider, if you are concerned about a patient's substance use, you can recommend testing of mother during prenatal care and/or at delivery or testing of the newborn at birth.

Newborn testing information:

- Meconium testing generally identifies maternal marijuana use after 24 weeks gestation.
- Urine testing generally identifies maternal marijuana use after 32 weeks gestation.
- Umbilical cord testing generally identifies maternal marijuana use after 24 weeks gestation.

WELL WOMAN VISITS:

Discuss contraception options if patient wants to continue recreational or medical marijuana, alcohol or other substance use and/or does not desire pregnancy.

If patient desires a pregnancy, discuss importance of cessation of marijuana and other potentially harmful substances. Consider use of contraception while the patient is working towards cessation of substances.

1

PEDIATRIC EXPOSURE PREVENTION CLINICAL GUIDANCE

FOR COLORADO HEALTH CARE PROVIDERS

August 31, 2015

FOR DISCUSSIONS WITH PARENTS OR GUARDIANS OF CHILDREN AND ADOLESCENTS AGES 0-20

In Colorado, it is illegal for youth under the age of 21 to purchase, possess or use retail marijuana. Despite serious consequences for youth if they break the law, a recent survey found that about 5% of middle school students and 20% of high school students in Colorado report using marijuana in the last 30 days.

This same survey found that more than one-third of high school seniors that have ever used marijuana first tried it before age 15. Because some youth try marijuana at an early age, it is important for parents and health care providers to talk to youth early and often about the risks of using marijuana and other substances.

SCREENING QUESTIONS:

Now that marijuana is legal in Colorado, we recommend asking all adolescents and young adults about marijuana use. This should be done in addition to asking about alcohol, tobacco and other drug use (including prescription drugs), as well as other safety measures such as seat belt or bike helmet use.

Language for parents: ***Now that marijuana is legal in Colorado, we would like to talk with you about it to help you keep kids safe.***

How do you store substances that may harm a child in your home? Such substances include alcohol, marijuana, tobacco, prescription drugs, over the counter medicines, cleaning products or other potentially harmful chemicals.

Does anyone smoke in your home (marijuana or tobacco)?

Does anyone in your home use any other form of marijuana, such as vaping, edibles or tinctures?

Does anyone else who cares for your child use marijuana or have it in their home?

If there is marijuana in the child's environment, provide additional education on avoidance of secondhand smoke and safe storage. If parents choose to use marijuana, they need to be educated on responsible marijuana use to protect their children's health and safety. Conversations with parents will depend on the age of the child.

TIPS FOR USING THIS GUIDANCE:

All information in italics is scripted talking points to share with your parents, written at a middle school reading level.

ANSWERS TO COMMON QUESTIONS ABOUT MARIJUANA

Even though marijuana is natural, natural products can be dangerous or poisonous. Marijuana, like other plants such as tobacco or poisonous berries, can harm people. The chemical in marijuana that makes you feel "high," tetrahydrocannabinol or THC, can have harmful effects on brain development in youth, including problems with learning, memory and school performance.

Legal does not mean safe. Think about alcohol or cigarettes. Both are legal to use for adults, but can have serious health risks. Marijuana use also has risks, even though it is now legal for adults 21 years and older. Being legal does not make marijuana safe, especially for youth.

Many medicines, including medicinal marijuana, may have harmful side effects. Doctors can recommend medical marijuana for certain medical conditions when they decide the benefit of treatment is greater than the risk for side effects. Discuss treatment choices that have the lowest risks and side effects.

COLORADO Department of Public Health & Environment

1

COLORADO Department of Public Health & Environment

Questions?

COLORADO
Department of Public Health & Environment