

Marijuana and CDPHE



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CDPHE's role in SB-13-283

1. Monitor drug use patterns
2. Monitor health effects
3. Set up advisory committee of experts to review literature and emerging science



Public Health Monitoring

What are specific concerns?

- CDPHE conducted key informant interviews with local health departments across state to better understand and address
- Spoke with representatives from urban, rural, mountain/resort areas, college town, and plains counties



Monitoring Patterns of Use

- Who is using?
 - age, gender, ethnicity, county, etc
- How are they are they using?
 - Smoking, vaporizing, ingesting, dabbing, etc
- 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



Monitoring Health Effects – Some Specific Concerns

- Marijuana contamination literature reports
 - Chemicals: pesticides, formaldehyde, lead, ammonia
 - Other: aspergillus, salmonella, meningococcus
- High potency marijuana
 - Butane hash oil
- Unintentional poisonings
- Prevention among youth
- Pregnancy/Breastfeeding
- Injuries
- Infused Product (Edible) Safety



Photo by Vjiced available under CCA-SA from [Wikimedia Commons](https://commons.wikimedia.org/wiki/File:Hash_oil.jpg)



CDPHE Monitoring Activities

Target Pop.	Problem	Monitoring
Young Children	Accidental Poisoning	Pilot surveillance project Colorado Hospital Association (CHA) Data Rocky Mountain Poison and Drug Center Calls Child Health Survey(CHS) - risk factors
Youth	Increased Use/Abuse	Healthy Kids Colorado Survey (aka YRBS)
	Poisoning, Overdose, Abuse	Colorado Hospitalization Data Rocky Mountain Poison and Drug Center Calls
	Accidents/Trauma	Colorado Hospitalization Data Colorado Trauma Registry
Adults	Increased Use/Abuse	Behavioral Risk Factor Surveillance System (BRFSS) Tobacco Attitudes and Behaviors Survey (TABS)
	Poisoning, Overdose, Abuse	Colorado Hospitalization Data Rocky Mountain Poison and Drug Center Calls
	Accidents/Trauma	Colorado Hospitalization Data & Colorado Trauma Registry Pilot Surveillance (Ski-Related Injuries)
	Contaminated Products	Foodborne Illness Surveillance related to Edibles Rocky Mountain Poison and Drug Center Calls
Pregnant/ Breastfeeding	Birth Defects, Developmental Disabilities	Pregnancy Risk Assessment Monitoring System (PRAMS) Active Surveillance (Birth Defects Registry)

Monitoring Behaviors – Prevalence of Use



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Prevalence of Use Surveys

- The **Behavioral Risk Factor Surveillance System** (BRFSS), monitors self-reported health status, prevalence of disease, and risk behaviors of Colorado adults.
- The **Pregnancy Risk Assessment Monitoring System** (PRAMS) monitors behaviors before, during, and after pregnancy.



Prevalence of Use Surveys

- **Child Health Survey (CHS)** monitors behaviors and experiences for young Colorado children between the ages of 1 to 14 years.
- **Healthy Kids Colorado Survey (HKCS):** This survey focuses on the middle and high school-age groups.
 - Three state agencies collaborated on a common approach to youth surveys with the 2013 HKCS. Offered again in 2015.
 - Over 220 schools and 40,000 youth participated in 2013 Healthy Kids Colorado Survey.



Prevalence of Use Surveys

- The Attitudes and Behavior Survey on Tobacco and Health call back survey, Influential Factors Healthy Living (TABS/IFL), collects population-level data every 3 years through self-reported health-related attitudes and behaviors.



Survey	Population	Survey type	Timeline
BRFSS	~14,000 non-institutionalized adults	Random digit dial survey--landline and cell phone	Data typically available end of summer/early fall
PRAMS	~2000 postpartum women with babies 2-9 months old	Mixed method--mail, with phone followup	Data typically available late fall/early winter
HKCS	~40,000 middle and high school students	Paper and pencil, administered in the classroom	Conducted in the fall of every odd year. Data will be available in Sept 2014.
Child Health Survey	~1,200 children ages 1-14	Random digit dial call back survey from the BRFSS--landline and cell phone	Data typically available end of summer/early fall
TABS/IFL	~4,000 adults	TABS survey administered via phone, mail, and internet and IFHL is a phone call back from TABS	Data should be available fall 2014

County Level Prevalence Data:

- **BRFSS:** The 2014 sample should be large enough to generate overall prevalence estimates for Colorado's larger counties. Stratified analysis for each County may need to wait until we collect two or three years of data.
- **PRAMS:** The single year sample will not be large enough for County level estimates. Our normal practice is to combine multiple years of weighted data to generate county level estimates. Therefore, we will need to wait until the 2015 data are available before we can explore county level data.



County Level Prevalence Data:

- **Child Health Survey:** the sample size is smaller than BRFSS and we usually need at least two years of data to generate overall county prevalence estimates.
- **Healthy Kids Colorado Survey:**
 - 2013 data will be available for 20 of the 21 health statistics regions. Final data will be available on CDPHE's website in early September 2014. For some of the more populous counties, the health statistics region and the county are the same.
 - In fall 2015, we will collect representative data for the state and 21 health statistics regions and allow any interested school to participate, even if not selected in sample.



County Level Prevalence Data:

- **TABS/IFL:** Data are available at the state level and for each health statistics region. For some of the more populous counties, the health statistics region and the county are the same



Monitoring for Health Effects



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Emergency Room and Hospital Data

- Retrospective, not real time
- Difficulties with ICD-9 Codes
 - Which ones?
 - How consistently used by providers?
 - Need to look at other data to better capture issues related to injuries, pregnancy/breastfeeding, unintentional poisonings, edible-borne illness/contamination, etc



ICD-9 Codes

Mental Disorders > Neurotic Disorders, Personality Disorders, And Other Nonpsychotic Mental Disorders > Drug dependence 304-

- 304.3 Cannabis dependence
 - 304.30 Cannabis dependence, unspecified
 - 304.31 Cannabis dependence, continuous
 - 304.32 Cannabis dependence, episodic
 - 304.33 Cannabis dependence, in remission
- 305.2 Nondependent cannabis abuse
 - 305.20 Cannabis abuse, unspecified
 - 305.21 Cannabis abuse, continuous
 - 305.22 Cannabis abuse, episodic
 - 305.23 Cannabis abuse, in remission



ICD-9 Codes

Injury And Poisoning

- Poisoning By Drugs, Medicinals And Biological Substances > Poisoning by psychotropic agents
 - **969.6** Poisoning by psychodysleptics (hallucinogens) (
 - Includes: Cannabis derivatives, Lysergide [LSD], Marijuana (derivatives), Mescaline, Psilocin , Psilocybin
- Supplementary Classification Of External Causes Of Injury And Poisoning > Accidental Poisoning By Drugs, Medicinal Substances, And Biologicals > Accidental Poisoning by Other Psychotropic agents
 - **E854.1** Accidental poisoning by psychodysleptics [hallucinogens]



Trauma Registry

- Detailed information on most severe injuries
- Captures
 - Deaths
 - Hospital admissions
 - Patient transfers
 - Unplanned ED returns (30 days)
- Limited information on marijuana use currently. Adding additional on acute marijuana use.



Pilot Surveillance Projects for Health Effects

- Lots of anecdotal reports but are these issues really a problem for the population?
 - Conduct small pilots to assess
 - If these data indicate a specific problem, we can look into larger surveillance efforts specific to the issue



Surveillance Pilot Projects



Pregnancy/Breastfeeding

- Certain hospitals seeing increase in reported use during pregnancy
- Developing standard questions to ask all patients during prenatal care
- Match to Birth Defects Registry



Surveillance Pilot Projects

Unintentional Poisonings in young children

- Poison control data (numbers small)
- Pilot projects with certain hospitals to assess number of children visiting emergency rooms



Surveillance Pilot Projects

Ski/Snowboard Injuries

- Pilot with hospital in ski town
- Adding standard questions on acute marijuana use during ski/snowboard-related visits to Emergency Room
- Will capture the less severe injuries and give more complete picture than trauma registry alone



DEC 82



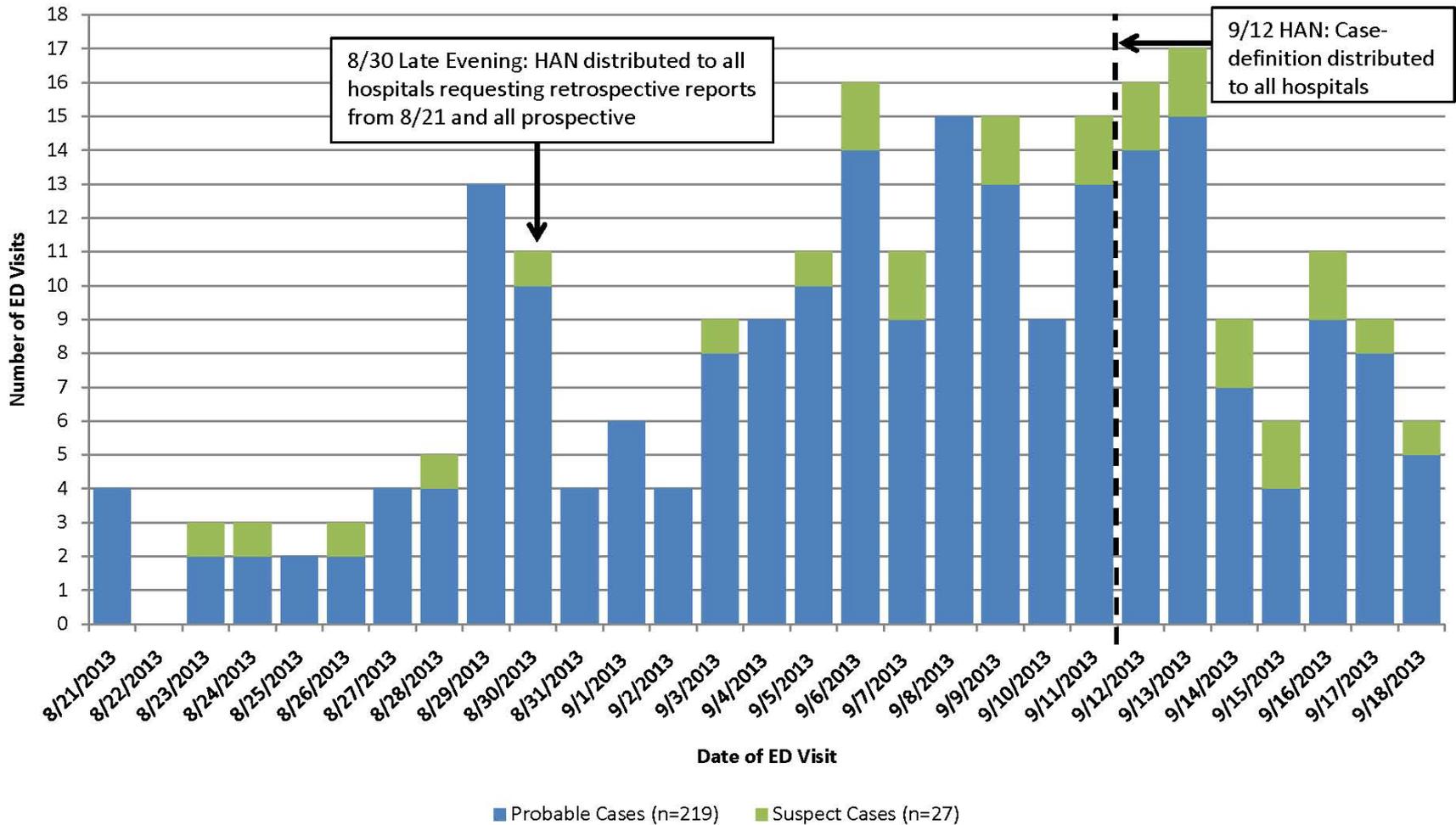
Monitoring for Acute Contamination

- Questions on edibles added to all foodborne illness questionnaires
- Poison Control Data
- Other???. (? Real-time ER data, reportable conditions ???)

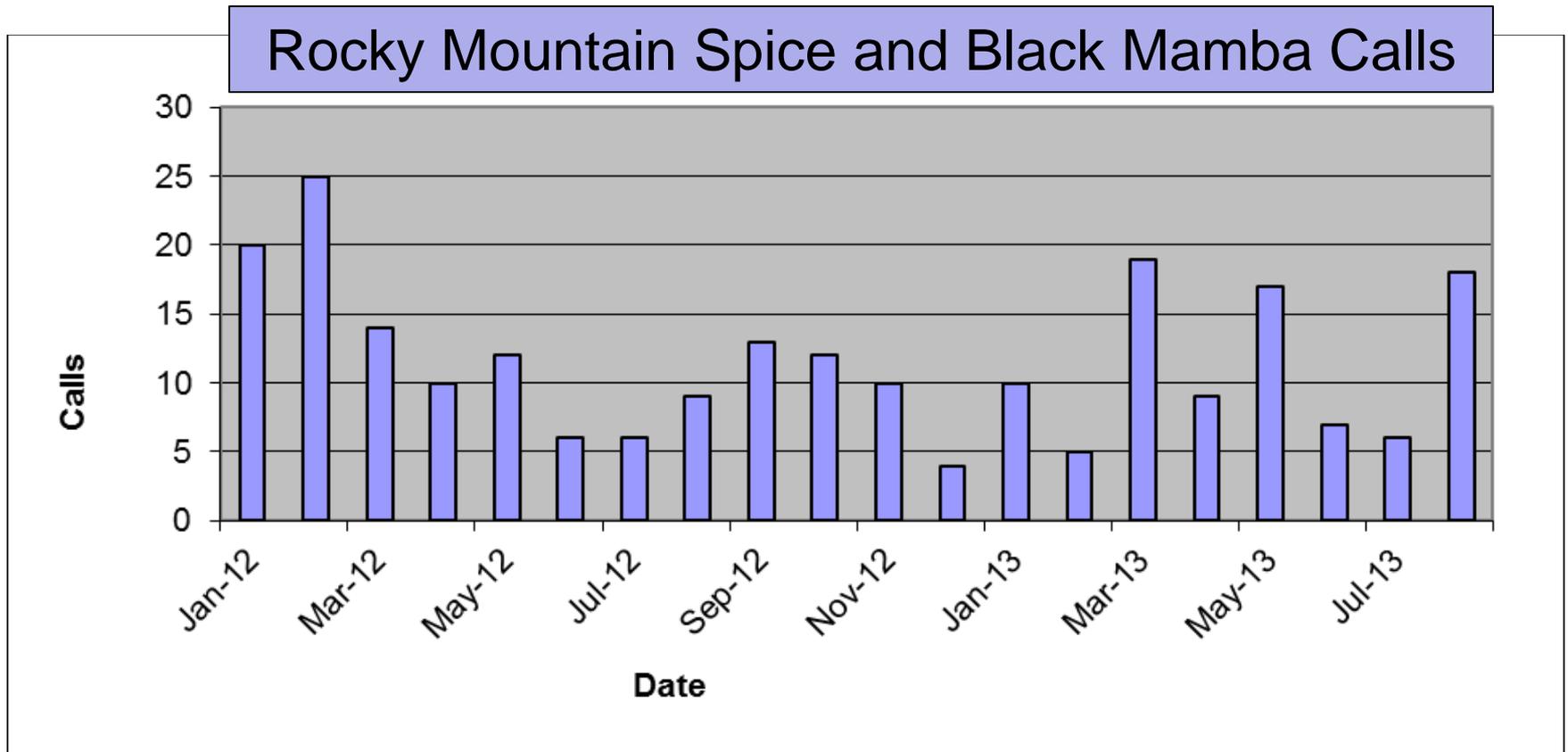


ED Visits Following Known or Suspected Use of Synthetic Marijuana and ED Visits Following Suspected Use of Unknown Recreational Drug Colorado, 8/21/13—9/18-2013, by Date of ED Visit

(n=246* for information reported to CDPHE through September 18th, 11:59 pm)



Preliminary RMPDC Calls



Popular Media Surveillance System

Dozens fall ill after using synthetic marijuana, hospitals say

7:26 PM, Aug 29, 2013 | 13 comments



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written by:
Anastasiya Bolton

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KUSA - Emergency rooms in the Denver area Thursday have experienced a surge of patients in the last 24 hours sickened possibly by a "bad batch" of synthetic marijuana.

"I've been in emergency medicine for the last 11 years, and I've never seen a problem like this before," Amanda Puhall, a nurse at University Colorado Hospital, said Thursday.

Doctors at University of Colorado Hospital say some patients have ended up in a coma or on life support.

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Things to consider

- Enhance public health network
 - Emergency rooms, toxicologists, law enforcement, crime labs, substance abuse community
- Enhance relationship with poison center
- Explore real-time Emergency Room surveillance
- Consider reportable condition for marijuana poisoning
- Other ideas????



?????Questions???????



Population Surveys

BRFSS 2014

- Have you ever used marijuana or hashish?
- How old were you the first time you used marijuana or hashish?
- During the past 30 days, on how many days did you use marijuana or hashish?
- During the past 30 days, how many times did you drive a car or other vehicle when you had been using marijuana or hashish?



Population Surveys

IFHL/TABS 2013

- BRFSS questions
- When was the last time you used marijuana or hashish?
- During the past 30 days, how many times did you use marijuana or hashish in a public place?
- During the past 30 days, what forms of marijuana did you use? (i.e., smoke or consume edibles)
- How much does using marijuana or hashish risk harming a person's health?
- In the past 6 months, have you had to experience someone smoking marijuana near you at any other place besides your home or workplace?
- Now that Colorado law lets adults grow and use marijuana, has your personal use of marijuana changed?



Population Surveys

CHS 2014

- Have you begun to talk to your child about the risks of using marijuana?
- Is there any marijuana or marijuana product in or around your home right now?
- Where is the marijuana that is currently in or around your home being stored? (child-proof container, locked, out of reach)
- During the past 30 days, has anyone – including yourself, used marijuana or hashish inside your home?
- How was the marijuana that was used inside your home consumed? (vaporized, smoked, eaten, beverages)



Population Surveys

PRAMS 2014

- During any of the following time periods, did you use marijuana or hashish?
 - 3 months before becoming pregnant
 - First 3 months of pregnancy
 - Last 3 months of pregnancy
 - At any time during pregnancy
 - Since baby was born

