Preventing a Bad Trip: Marijuana Related Injury in the Era of Retail Pot

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Marijuana Related Injury

1. Unintentional Consumption of marijuana (0-8 years)

2. Overconsumption of marijuana (9+ years)

3. Recreational Injury

4. Driving under the Influence

5. Flash fires, explosions from hash oil extraction
CDPHE’s Public Health Response

1. Data Collection
   Measure impact of marijuana, our work

2. Public Health Statements
   Retail Marijuana Public Health Advisory Committee: 13 member committee charged to review scientific literature on the health effects of marijuana

3. Education Campaigns
   Good to Know campaign

4. Partnerships & Collaboration
   Regulatory changes, joint efforts
MARIJUANA RELATED INJURY

Unintentional Consumption of Marijuana

Colorado youth age 8 and under
Possible Marijuana Exposure

Rocky Mountain Poison and Drug Center Calls

- Emergency Department Visits
- Hospitalization

Pre-legalization

Medical Marijuana Legalized

Medical Marijuana Commercialized

Retail MJ Legalized
Possible Marijuana Exposure

- Rocky Mountain Poison and Drug Center Calls
  - 9.5 (n=13)
  - 26.4 (n=10)

- Emergency Department Visits
- Hospitalization
  - 45

No. Exposures Reported

Rates per 100,000

- Pre-legalization
- Medical Marijuana Legalized
- Medical Marijuana Commercialized
- Retail MJ Legalized

- Graph showing the increase in exposures reported and rates per 100,000 from 2000 to 2014.
Public Health Statement

1. Legal marijuana access is associated with increased numbers of unintentional exposures in children which can lead to hospitalizations.

   Legal $\rightarrow$ more access $\rightarrow$ more accidents $\rightarrow$ sick kids

2. While little data are available for marijuana, evidence indicates that child resistant packaging prevents exposure to children from potentially harmful substances.

   Child resistant packaging may help keep kids safe
Education Campaign

Store it right: **LOCKED UP, OUT OF REACH & OUT OF SIGHT.**
Store marijuana securely away from those underage.

**GOOD TO KNOW**

**LOCK IT UP RIGHT.**
OUT OF REACH & OUT OF SIGHT.

**GOOD TO KNOW**
Partnerships & Collaboration

Retail Marijuana Industry Partners: Child-resistant packaging and labels
MARIJUANA RELATED INJURY

Overconsumption of Marijuana

Coloradans age 9 and up

intentional + unintentional consumption
**Possible Marijuana Exposure**

- **RMPDC all >8 years**
- **Emergency Department Visits**
- **Hospitalization**

<table>
<thead>
<tr>
<th>Year</th>
<th>No. Exposures Reported</th>
<th>Rates per 100,000</th>
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<tbody>
<tr>
<td>2000</td>
<td>51</td>
<td>n/a</td>
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<td>2001</td>
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<td>17.4 (n=63)</td>
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<tr>
<td>2002</td>
<td>76</td>
<td>n/a</td>
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<tr>
<td>2003</td>
<td>62</td>
<td>15 (n=528)</td>
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<tr>
<td>2004</td>
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<tr>
<td>2005</td>
<td>40</td>
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<td>2006</td>
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<td>2007</td>
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<tr>
<td>2008</td>
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<tr>
<td>2009</td>
<td>22.3 (n=820)</td>
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<td>2010</td>
<td>83</td>
<td>27.9 (n=441)</td>
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<td>2011</td>
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<tr>
<td>2012</td>
<td>93</td>
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<tr>
<td>2013</td>
<td>99</td>
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<tr>
<td>2014</td>
<td>176</td>
<td>37.6 (n=290)</td>
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- **Pre-legalization**
- **Medical Marijuana Legalized**
- **Medical Marijuana Commercialized**
- **Retail MJ Legalized**
Quick Data Aside...

*The sky is not falling.*

1) Reporting bias for data

health care providers are looking for MJ exposure

2) Consider population at risk

~120,000 Medical MJ vs. 3,500,000 Retail MJ
Public Health Statement

1. For occasional users, smoking, eating, or drinking marijuana containing 10mg or more of THC is likely to cause impairments that affects your ability to drive, bike, or perform other safety-sensitive activities.

   1 serving = 10mg TCH \(\rightarrow\) enough to feel “high”

2. Wait at least 6 hours after smoking, ...at least 8 hours after eating or drinking marijuana... before driving, biking, or performing other safety sensitive activities.

To be safe, you have to wait (probably longer than you thought)
Public Health Statement

3. It is important to delay consuming another THC-containing product until the effects from the first edible serving are known. For new or occasional users, it takes up to 4 hours to reach maximum blood levels of THC and potentially longer to feel the full effects of consuming a marijuana edible product.

Start low, go slow.
Public Health Statement

4. Using alcohol and marijuana at the same time is likely to result in greater impairment than either one alone.

Do not mix alcohol and marijuana

5. Use caution when taking drugs or medications and marijuana at the same time. Some drugs or medications may have interactions with marijuana that have not yet been identified.

Do not mix medication and marijuana
Education Campaign

Marijuana in Colorado

With edibles, BE SMART. GO SLOW WHEN YOU START.

Edibles can take up to four hours to reach their full effect.

GOOD TO KNOW

THE EFFECTS OF EDIBLES PEAK UP TO 4 HOURS AFTER EATING OR DRINKING

MARIJUANA IN COLORADO
Partnerships & Collaboration

Partners from food safety, sanitation, health effects and dosing committee, regulation, and industry partners worked together to regulate concentration/dosage of marijuana-infused products.

As of February 2015, all edible retail marijuana products must have clear single servings of 10 mg THC, with no more than 100 mg per product. Servings can be individually wrapped pieces, bottled drinks or sections that are easy to break off.

→ No more 100mg THC cookies.
MARIJUANA RELATED INJURY

Skiing, Driving, Flash Fires

Other injuries related to marijuana in Colorado
Marijuana and Recreational Activity: Ski Area Pilot

November 2014 - present: small scale surveillance project in winter recreational area in Colorado

*Does marijuana contribute to injury during recreation activity NOT captured in trauma registry?*

Verbal screening during admission to Emergency Department to ask about recent marijuana use. Includes minor breaks, sprains.
Driving Under the Influence

Public Health Statements:
1. Driving soon after using marijuana doubles the risk of a motor vehicle crash.
2. Using alcohol and marijuana together increase the risk of a motor vehicle crash more than using either substance alone.

Data Challenge:
*Timing of THC blood testing, quality of exposure measure, prevalence of testing, duration of impairment, interactions, tolerance...*

Public Education: impairment, minimum wait time, interactions → message alignment between sister-agencies
Hash Oil Extractions & Flash Fires

Unanticipated source of injury

2014: 32 explosions, 27 injuries linked to hash oil extractions

**Improve data collection** by fire departments

**Proposed legislation**- HB 15-1305: Unlawful Manufacture Marijuana Concentrate: Restrict hash oil extractions in homes or by lay persons due to the flammability of some substances used in the production of the oil.
CDPHE’s Public Health Response

1. Data Collection - *start now!*


3. Education Campaigns - *message alignment, never to early to communicate what “safe and responsible” looks like*

4. Partnerships & Collaboration - *benefits of marijuana industry being a good partner*