Monitoring drug use patterns and health impacts

Talk for the
COLORADO SUBSTANCE ABUSE TREND AND RESPONSE TASK FORCE
August 5, 2016
Surveys in Colorado

BRFSS - Behavior Risk Factor Surveillance System
- National adult survey - no marijuana questions
- Colorado added marijuana questions starting in 2014
- We just received 2015 data
- About 11,000 surveys completed in Colorado in 2015

HKCS - Health Kids Colorado Survey
- State high school and middle school survey
- Asks all questions from the national YRBSS survey
- Adds questions on many youth behaviors, risk factors and protective factors, including marijuana questions
- About 15,000 surveys completed in Colorado in 2015
Other Surveys in Colorado

Not used in today’s presentation

NSDUH - National Survey on Drug Use and Health

TABS - Tobacco Attitudes and Behaviors Survey

IFHL - Influential Factors in Healthy Living

CHS - Child Health Survey

PRAMS - Pregnancy Risk Assessment Monitoring System
High School Alcohol, Marijuana and Tobacco Use in CO (HKCS)

Prevalence (%)

- Alcohol
  - 2009: 40.8
  - 2011: 36.4
  - 2013: 31.0
  - 2015: 30.2

- Marijuana
  - 2009: 24.8
  - 2011: 22.0
  - 2013: 19.7
  - 2015: 21.2

- Tobacco
  - 2009: 17.7
  - 2011: 15.7
  - 2013: 10.7
  - 2015: 8.6
High School Marijuana Use in Colorado and Nationally (HKCS)

- **Prevalence (%)**
  - **Colorado**
  - **United States**

- **2005**
  - Colorado: 42.4%
  - United States: 22.7%

- **2007**
  - Colorado: 42.6%
  - United States: 24.8%

- **2009**
  - Colorado: 36.8%
  - United States: 20.2%

- **2011**
  - Colorado: 39.5%
  - United States: 23.1%

- **2013**
  - Colorado: 40.7%
  - United States: 29.4%

- **2015**
  - Colorado: 38.0%
  - United States: 21.2%

**U.S. Ever Use**
- Colorado Ever Use
- 42.4% in 2005
- 36.8% in 2009

**U.S. Current Use**
- Colorado Current Use
- 22.7% in 2005
- 20.2% in 2009

**Colorado**
- Ever Use: 36.8% (2009)
- Current Use: 20.2% (2009)
H.S. and M.S. Marijuana Use in Colorado by Grade Level (HKCS)

Prevalence (%)

<table>
<thead>
<tr>
<th>Grade</th>
<th>2013</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>0.9</td>
<td>2.2</td>
</tr>
<tr>
<td>7th</td>
<td>4.5</td>
<td>8.8</td>
</tr>
<tr>
<td>8th</td>
<td>8.7</td>
<td>8.8</td>
</tr>
<tr>
<td>9th</td>
<td>13.7</td>
<td>12.4</td>
</tr>
<tr>
<td>10th</td>
<td>19.0</td>
<td>18.8</td>
</tr>
<tr>
<td>11th</td>
<td>22.1</td>
<td>26.3</td>
</tr>
<tr>
<td>12th</td>
<td>24.3</td>
<td>27.8</td>
</tr>
</tbody>
</table>
High School Marijuana Use in Colorado by Sex (HKCS)
Middle School Marijuana Use in Colorado by Sex (HKCS)
Marijuana Use by Race/Ethnicity in Colorado High Schools

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Prevalence 2013</th>
<th>Prevalence 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple or Other Race</td>
<td>28.1</td>
<td>28.0</td>
</tr>
<tr>
<td>White Hispanic</td>
<td>23.6</td>
<td>23.6</td>
</tr>
<tr>
<td>White</td>
<td>17.0</td>
<td>19.5</td>
</tr>
<tr>
<td>NH/PI</td>
<td>19.4</td>
<td>27.0</td>
</tr>
<tr>
<td>Black</td>
<td>10.0</td>
<td>22.7</td>
</tr>
<tr>
<td>Asian</td>
<td>10.3</td>
<td>27.0</td>
</tr>
<tr>
<td>AI/AN</td>
<td>20.1</td>
<td>27.0</td>
</tr>
</tbody>
</table>
Marijuana Use in Colorado

Summary

• Alcohol use in high school is still higher than marijuana use. Both alcohol use and tobacco smoking are trending down.

• Highest rates of marijuana use (1 or more times within the past 30 days) are among the 18-25 age group and high school juniors and seniors, at about 26%.

• About 13% of all adults use (18 years and older).
Marijuana Use in Colorado Summary

• Adult use is higher among males than females, but in high school they’re nearly the same.

• There is a big difference between high school use rates and adult use rates for Hispanics.

• Gay, lesbian, bisexual use is over 30% in both adults and high school.

• Kids first trying marijuana rises around age 13.
2 Overarching Indicators

tracked for
the Colorado Consortium for
Prescription Drug Abuse Prevention

Use:
1. Non-medical use of prescription pain relievers

Impact:
2. Drug overdose deaths involving prescription opioids
Percent of Coloradans who misused prescription pain relievers in the past year

- Age 12+ (all ages): 4.1%
- Age 18-25*: 9.3%
- National Average: 4.9%

*Difference between the 2012-2013 and 2013-2014 population percentages is statistically significant at the 0.05 level. From the National Survey on Drug Use and Health for 2013-2014: [http://www.samhsa.gov/data/sites/default/files/NSDUHsaeShortTermCHG2014/NSDUHsaeShortTermCHG2014.htm](http://www.samhsa.gov/data/sites/default/files/NSDUHsaeShortTermCHG2014/NSDUHsaeShortTermCHG2014.htm)
Health Impact:
Prescription opioid overdoses

329 of the 880 drug poisoning deaths in Colorado involved rx opioid pain relievers in 2015.

Source: Colorado death certificate data 2015, Vital Statistics Unit
Health Impact: Opioid overdose deaths
Age-adjusted rates, Colorado residents, 2006-2015

Note:
Heroin is a subset of the category of specified drug(s) other than opioid pain relievers. Some unspecified drugs may be opioid drugs.

Source: Colorado death certificate data 2015, Vital Statistics Unit
Opioids are only part of the drug picture ... in terms of health impact.
Substance Related ED Visits in Colorado, 2011-June 2015: Exposures, Diagnoses, Billing Codes, or Poisonings.

*R E O H T, C D P H E 2016
†I C D - 9 - C M 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[0, 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, 969.72, E854.2, E855.5).
Substance Related Hospitalizations in Colorado, 2000-June 2015: 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 hospitalizations with possible marijuana exposures, diagnoses, billing codes or poisonings.
‡Hospitalizations 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, 969.72, E854.2, E855.5).
Health Impact: Drug overdose deaths
Age-adjusted rates, Colorado residents, 2006-2015

Source: Colorado death certificate data 2015, Vital Statistics Unit
Summary

**Opioids**

- Lower % of 18-25 misusing prescription opioids
- Prescription opioid overdose leveling?
- Heroin overdose rate in 2015 same as 2014 but higher than 2012

**Alcohol and other drugs**

- Shift in care from ED to inpatient for rates of alcohol dependence and alcohol poisoning?
- Alcohol rates 4 to 30 times greater than other drugs, depending upon the indicator (not all shown)
- Psychostimulant overdose rate same as 2014 but higher than 2012.
Response using new funding

Bureau of Justice Assistance

• Hired an epidemiologist to analyze the PDMP

• Support to Consortium

• Goal: Increase data-driven decision making at the state and local level

Centers for Disease Control

• Hire 2 staff

• Test PDMP integration with the 2 Colorado Health Information Exchanges

• $ for heroin rapid response project
Upcoming efforts

Data
• Health Watch report detailing drug overdose trends this fall
• Updated Consortium dashboard on the web
• More local and regional results

Future Opportunities?
• Applied for CDC funding for an alcohol epidemiologist
• With more staff at CDPHE, increased collaboration with CDHS/State Epi Outcome Work Group, Consortium, across CDPHE

Delayed data! Drug-related hospitalizations and ED visits due to a major change in coding claims data as of 10/1/2015
Questions later?

Contact:
Daniel Vigil, MD, MPH
daniel.vigil@state.co.us
Barbara Gabella, MSPH
barbara.gabella@state.co.us