Navigating Marijuana Data in a World of Alternative Facts

June 14, 2017

Communities Count
Providing data. Inspiring action

Data Training for King County’s Youth Marijuana Prevention & Education Program
Clarifying what we do and do not know

- About trends in youth marijuana use & perceptions.

- About the effects of marijuana on youth:
  - By potency and dose
  - For heavy, moderate, & occasional use
  - For different modes of delivery

- About effective messaging for youth.
  - Importance of honesty / credibility.
  - Specific programs.
Proof cannabis DOES lead teenagers to harder drugs: Study finds users are 26 times more likely to turn to other substances by the age of 21 (Daily Mail (6/7/2017))

- Study is first clear evidence that cannabis is gateway to cocaine and heroin
- Teen marijuana smokers are 37 times more likely to be hooked on nicotine
- Findings from Bristol University provide authoritative support for those warning against the liberalisation of drugs laws

Study finds link between teen cannabis use and other illicit drug taking in early adulthood (University of Bristol press release, 6/8/2017)

Patterns of cannabis use during adolescence and their association with harmful substance use behaviour: findings from a UK birth cohort (Journal of Epidemiology and Community Health, 6/7/2017)

“Adolescent substance use also clusters with other risk behaviours which are strongly associated with outcomes in adulthood. Our study does not support or refute arguments for altering the legal status of cannabis use—especially since two of the outcomes are legal in the UK. This study and others do, however, lend support to public health strategies and interventions that aim to reduce cannabis exposure in young people.”
What is your goal? Change policy, educate parents, inform students, develop curriculum for teachers, disseminate information to media, etc.

Who is your audience?
- Policymakers
- Parents
- Students
- Teachers
- Public

What kinds of messages most effectively reach your audience?
- Teens want “true facts” – basics about marijuana, including delivery methods (and doses), risks and benefits (by age), legal repercussions, etc.
- Grantmakers want demonstration of need (demographics, use patterns, risk).
- Scare tactics (Reefer Madness / D.A.R.E.) are neither credible nor effective.

What kinds of data will most effectively support your message?
HEALTHY YOUTH SURVEY

Data source for youth health behaviors & risks

Draft: June 13, 2017
**Background on survey**

Healthy Youth Survey (HYS)

- Collaborative effort
- Administered even years since 2002 in grades 6, 8, 10, & 12
- Describe youth health behaviors habits, risks, and outcomes
- Gathers district, county, and state-level data in a consistent way
- Public Health uses HYS data to monitor student health and evaluation programs
### Methodological differences: DOH vs. Public Health produced reports

<table>
<thead>
<tr>
<th>WA Dept. of Health Reports</th>
<th>Public Health Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Frequencies by grade</td>
<td>• Combines grades</td>
</tr>
<tr>
<td>• No examination of trends</td>
<td>• Able to examine trends</td>
</tr>
<tr>
<td>• Comparisons by gender only for select indicators</td>
<td>• Comparisons by demographic characteristics</td>
</tr>
<tr>
<td>• Limited to state sampled schools</td>
<td>• Includes all participating schools in King County</td>
</tr>
</tbody>
</table>
Current marijuana use decreasing since 2012 among 10th & 12th grade King County, WA students

Current Marijuana use by Grade — King County, WA, 2004-2016
Observed and Modeled Estimates

Grade 6 (observed)  Grade 6* (modeled)  Grade 8 (observed)  Grade 8 (modeled)  Grade 10 (observed)  Grade 10 (modeled)  Grade 12 (observed)  Grade 12 (modeled)

*Statistically significant decrease
Source: Washington State Healthy Youth Survey
Produced by: Public Health - Seattle & King County, APDE, 4/26/17
Percent of Students Reporting Use of Marijuana in Past Year, by Grade

SOURCE: University of Michigan, 2016 Monitoring the Future Study
Percent of Students Reporting Any Illicit Drug Use Other than Marijuana in Past Year, by Grade

- 8th Grade
- 10th Grade
- 12th Grade

SOURCE: University of Michigan, 2016 Monitoring the Future Study
Percent of 12th Graders Reporting Daily Use of Cigarettes and Marijuana in the Past 30 Days

SOURCE: University of Michigan, 2016 Monitoring the Future Study
The LAST TIME you used an electronic vaporizer such as an e-cigarette, what was in the mist you inhaled?

<table>
<thead>
<tr>
<th>Substance</th>
<th>8th Grade</th>
<th>10th Grade</th>
<th>12th Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine</td>
<td>24.9%</td>
<td>6.8%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Marijuana or hash oil</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Just flavoring</td>
<td>62.8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Don't know</td>
<td>5.6%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

SOURCE: University of Michigan, 2016 Monitoring the Future Study
Perceptions of harm from regular marijuana use decreasing over time among all survey grades

Perceived Harm (%)

Grade 6* (modeled)  Grade 8*  Grade 10*  Grade 12*

2004: 73  72  62  54
2006: 72  62  54  46
2008: 57  56  48  38
2010: 57  56  48  38
2012: 57  56  48  38
2014: 57  56  48  38
2016: 57  56  48  38

*Statistically significantly decreasing
Source: Washington State Healthy Youth Survey
Produced by: Public Health - Seattle & King County, APDE, 5/1/17
Figure 1. Perception of risk and actual cannabis use in U.S. students, 1975–2013

Past-year use of marijuana

Perceived risk of marijuana

Source: Volkow, Baler, Compton, & Weiss, 2014; reproduced with permission, Massachusetts Medical Society
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What kinds of data will most effectively support your message?
Extra slides
Some changes to HYS

• “Small school districts” pilot (starting in 2014)
  □ Schools with small enrollments have option of administering survey to students in grades 7, 9 and 11 (in addition to students in grades 6, 8, 10 and 12)

• Sexual orientation, behavior and abuse questions (starting in 2014)
  ▪ Schools have option to register for forms with or without these questions
  ▪ Form A Enhanced: One sexual orientation question
  ▪ Form B Enhanced: three sexual behavior questions, one sexual orientation question (asked as sex of partners), and two sexual abuse questions

• Asian ethnicity question (starting in 2016)
  ▪ Disaggregation within Asian group
Are things improving/worsening overtime?

Is this a bigger problem among older or younger students?

Is this issue more prevalent among certain groups?

Has our program been effective in improving indicators?

Current HYS report format provided by DOH to school districts

<table>
<thead>
<tr>
<th>Highlights of the Local Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your students</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>Smoking cigarettes in the past 30 days (see item 24).</td>
</tr>
<tr>
<td>Drinking alcohol in the past 30 days (see item 28).</td>
</tr>
<tr>
<td>Using marijuana or hashish in the past 30 days (see item 29).</td>
</tr>
<tr>
<td>Drinking five or more drinks in a row in the past 2 weeks (see item 52).</td>
</tr>
<tr>
<td>Carrying a weapon at school in the past 30 days (see item 102).</td>
</tr>
<tr>
<td>Being bullied in the past 30 days (see item 122).</td>
</tr>
<tr>
<td>Enjoyed being in school over the past year (see item 191).</td>
</tr>
<tr>
<td>Feeling safe at school (see item 202).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance Use</th>
<th>Local</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoked cigarettes in past 30 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drank alcohol in past 30 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used marijuana or hashish in past 30 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Binge drinking in past 2 weeks</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
KING COUNTY HEALTH AND WELL-BEING MEASURES

To identify geographic areas of need, King County census tracts were rank-ordered from highest to lowest percent of adults by the areas noted above. The tracts were then divided into 10 groups. Dark reds show tracts with the highest rates; dark blues show tracts with lowest rates (note: the Life Expectancy map ranks shortest in dark red to longest in dark blue).