Marijuana and Opioids: A Research Perspective
John S Searles, Ph.D.
Substance Abuse Research and Policy Analyst

December 11, 2017
Cannabis Use and Risk of Prescription Opioid Use Disorder in the United States

Mark Olfson, M.D., M.P.H., Melanie M. Wall, Ph.D., Shang-Min Liu, M.S., Carlos Blanco, M.D., Ph.D.

Published online September 26, 2017, American Journal of Psychiatry
Sample

• National Epidemiological Survey on Alcohol and Related Conditions (NESARC) – A nationally representative sample of the civilian noninstitutionalized adult (18+) US population.
  • Wave 1 2001 - 2002 Response rate = 81.0%
  • Wave 2 2004 - 2005 Response rate = 86.7%

• DSM-IV Criteria for assessment

Cumulative response rate = 70.2% (n=34,653)
Results

Adjustments for background and clinical characteristics (e.g., age, sex, race/ethnicity, family history variables, antisocial personality disorder, other substance use disorder, mood & anxiety orders at wave 1)

Wave 1 past year cannabis use predicting:

- Wave 2 nonmedical opioid use prevalence adjusted OR = 3.54 (2.74 – 4.57)
- Wave 2 nonmedical opioid use incidence adjusted OR = 2.62 (1.86 – 3.69)
Prevalence of Opioid Use Disorder in Wave 2 Is Dose Dependent on Level of Cannabis Use in Wave 1

Occasional = Less than once/month
Frequent = Once a month or more to 2 times/week
Very Frequent = 3 times/week to every day
The Relatively Small Number of Daily Users Dominates Use & Use-Related Harm

Figure. Prevalence of Psychiatric Disorders in Wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions by Level of Cannabis Use in Wave 1

Source: Blanco et al. (2016). Cannabis Use and Risk of Psychiatric Disorders. JAMA Psychiatry, 73, 388-395
Risk of Any Other Drug Use Disorder with Past Year Cannabis Use Disorder

<table>
<thead>
<tr>
<th>Any CUD Dx</th>
<th>Mild CUD</th>
<th>Moderate CUD</th>
<th>Severe CUD</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>6.6</td>
<td>11.5</td>
<td>13.4</td>
</tr>
</tbody>
</table>

## Change in Prevalence Rankings– Colorado
(National Survey on Drug Use and Health)

### 2012/2013

<table>
<thead>
<tr>
<th></th>
<th>12+</th>
<th>12-17</th>
<th>18-25</th>
<th>26+</th>
<th>18+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past 30 Day Use of Marijuana</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Past Year Nonmedical Use of Pain Relievers</td>
<td>12</td>
<td>4</td>
<td>10</td>
<td>16</td>
<td>13</td>
</tr>
</tbody>
</table>

### 2013/2014

<table>
<thead>
<tr>
<th></th>
<th>12+</th>
<th>12-17</th>
<th>18-25</th>
<th>26+</th>
<th>18+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past 30 Day Use of Marijuana</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Past Year Nonmedical Use of Pain Relievers</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Olfson et al. (2017)

Conclusions

• “Cannabis use appears to increase rather than decrease the risk of developing nonmedical prescription opioid use and opioid use disorder.”

• “If cannabis use tends to increase opioid use, it is possible that the recent increase in cannabis use may have worsened the opioid crisis.”