Drugged Driving in a National Survey of Cannabis Users

Lauren M. Dutra,1* Kian Kamyab,2 Matthew C. Farrelly2 • 1RTI International, Berkeley, CA; 2RTI International, Research Triangle Park, NC

Background

- Driving simulator data suggest that cannabis use may Harper, B. D., Ofshe, R. J., & Galvin, J. A. (2017). When cannabis use is inconsistent and inaccurate.
- Understanding the prevalence of drugged driving and the factors associated with drug use during driving conditions is essential for the development of current and future cannabis legalization frameworks.
- Despite the advent of new cannabis policies in many states, the relationship between cannabis use and driving while under the influence of cannabis remains unexplored.

Methods

- Table 1: Categorization of cannabis legalization for analysis (2016)
  - Public health
    - Public health
    - Public health
    - Public health
    - Public health
  - Legal and medical
    - Legal and medical
    - Legal and medical
    - Legal and medical
    - Legal and medical
  - Forbiddance
    - Forbiddance
    - Forbiddance
    - Forbiddance
    - Forbiddance
  - Market
    - Market
    - Market
    - Market
    - Market

- Variables that were significant at the 0.10 level AND cannabis legalization (because of our interest in this variable) were included in multivariable logistic regression models.
- Chi-square tests were conducted to identify differences in participant characteristics by whether they reported drugged driving in the past 30 days.

Results

- Significant predictors of drugged driving at p < 0.10
  - Age (0, 1 to 7, 8 to 13, 14 to 21, 22 to 29, 30+)
  - Employment status
    - Homemaker
    - Out of work
    - Retired
    - Social media
    - Mail
  - Number of days mental health NOT good
  - Gender
    - Female
    - Male
  - Legalization (recreational, liberal medical, restrictive medical, and neither)

Table 1: Odds of driving within 4 hours of getting high in the past 30 days among current (30-day) cannabis users (n = 839)

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Odds ratio (95% confidence interval)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homemaker</td>
<td>1.14 (0.51-2.55)</td>
</tr>
<tr>
<td>Out of work</td>
<td>0.72 (0.29-1.77)</td>
</tr>
<tr>
<td>Retired</td>
<td>0.52 (0.26-1.03)</td>
</tr>
<tr>
<td>Social media</td>
<td>1.72 (0.99-3.00)</td>
</tr>
<tr>
<td>Mail</td>
<td>REF</td>
</tr>
</tbody>
</table>

Drugged driving differed by cannabis legalization.

- As expected, drugged driving differed by cannabis legalization.
- Legalization became non-significant when perceived risk of drunk driving.

Discussion

- Examine the relationship between self-reported drugged driving and actual traffic incidents.
- Examine differences in drugged driving by specific components of cannabis policy (beyond the categorization of recreational, liberal medical, restrictive medical, and neither).
- Examine the relationship between cannabis legalization and actual traffic incidents.
- Use NCCS data to compare perceived risk of drugged driving to perceived risk of drunk driving.

Next Steps

- Conducted a selection sampling of individuals who live in states with medicinal cannabis, liberal medical/cannabis laws, restrictive medical/cannabis laws, and states that have not legalized cannabis.
- Recruited participants using address-based sampling frames.
- Additional participants were recruited through social media and through snowball sampling.
- Thirty days within the past 30 days.
- Self-reported cannabis use within 4 hours of getting high in the past 30 days.

- Participants had complete data and were included in the analysis.
- Chi-square tests were conducted to identify differences in participant characteristics by whether they reported drugged driving in the past 30 days.

Table 2: Odds of driving within 4 hours of getting high in the past 30 days among current (30-day) cannabis users (n = 839)

- Variables that were significant at the 0.10 level AND cannabis legalization (because of our interest in this variable) were included in multivariable logistic regression models.
- Chi-square tests were conducted to identify differences in participant characteristics by whether they reported drugged driving in the past 30 days.