Marijuana Use, Alcohol Use, and Driving in Washington State: Emerging Issues with Poly-Drug Use on Washington Roadways

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The Washington Traffic Safety Commission (WTSC) shares a vision with numerous others to eliminate traffic fatalities and serious injuries by 2030. Our Commission is made up of 26 employees and ten Commissioners chaired by Washington’s Governor Jay Inslee.

Washington’s Traffic Safety Commission leads statewide efforts and builds partnerships to save lives and prevent injuries on our roadways for the health, safety, and benefit of our communities.
A Note About Data...

<table>
<thead>
<tr>
<th>Drug</th>
<th>Level</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>THC</td>
<td>5.7</td>
<td>ng/ml</td>
</tr>
<tr>
<td>C-THC</td>
<td>55</td>
<td>ng/ml</td>
</tr>
<tr>
<td>Cannabinoids</td>
<td>888</td>
<td>.</td>
</tr>
</tbody>
</table>

600 – Delta 9
601 – Hashish Oil
602 – Hashish
603 – Marijuana/Marihuana
604 – Marinol
605 – Tetrahydrocannabinols (THC)
695 – Cannabinoid (Type Unk)
Drug Differences Between NHTSA FARS and WA-FARS

NHTSA FARS

- Limited to three drug types
- Coding hierarchy – cannabinoids are fifth in the hierarchy and superseded by Narcotics, Depressants, Stimulants, and Hallucinogens
- No drug levels
- Don’t know what the lab actually tested for
- Don’t know what lab reporting thresholds are
- Police reported versus lab reported

WA FARS

- All potentially impairing drugs, levels, and units from single toxicology lab
- Matched to NHTSA FARS record via record number, vehicle number, and person number
- Standard lab protocol and testing panel
- Known reporting thresholds
  - THC reporting threshold $>=1$ ng/ml
Driver impairment due to alcohol and/or drugs is the number one contributing factor in Washington fatal crashes and is involved in nearly half of all traffic fatalities. *Poly-drug drivers (combinations of alcohol and drugs or multiple drugs) is now the most common type of impairment among drivers in fatal crashes.* For the first time in 2012, poly-drug drivers became the most prevalent type of impaired drivers involved in fatal crashes. *Since 2012, the number of poly-drug drivers involved in fatal crashes have increased an average of 15 percent every year.*

By 2016, the number of poly-drug drivers were more than double the number of alcohol-only drivers and five times higher than the number of THC-only drivers involved in fatal crashes.

More than half (53 percent) of drivers ages 15-20 believe marijuana use made their driving better. This is a significantly higher rate than drivers ages 21-25 (13.7 percent) and drivers ages 26-35 (17.4 percent).
### Toxicology Testing Rates of Drivers Involved in Fatal Crashes

<table>
<thead>
<tr>
<th>Year</th>
<th>Alcohol Test ONLY</th>
<th>Drug Test ONLY</th>
<th>Alcohol and Drug Test</th>
<th>Not Tested</th>
<th>% Tested</th>
<th>Total Drivers</th>
<th>% Tested for Alcohol and Drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>30</td>
<td>5</td>
<td>402</td>
<td>275</td>
<td>61.4%</td>
<td>712</td>
<td>56.5%</td>
</tr>
<tr>
<td>2009</td>
<td>37</td>
<td>0</td>
<td>369</td>
<td>227</td>
<td>64.1%</td>
<td>633</td>
<td>58.3%</td>
</tr>
<tr>
<td>2010</td>
<td>22</td>
<td>1</td>
<td>377</td>
<td>219</td>
<td>64.6%</td>
<td>619</td>
<td>60.9%</td>
</tr>
<tr>
<td>2011</td>
<td>36</td>
<td>0</td>
<td>344</td>
<td>226</td>
<td>62.7%</td>
<td>606</td>
<td>56.8%</td>
</tr>
<tr>
<td>2012</td>
<td>21</td>
<td>0</td>
<td>345</td>
<td>225</td>
<td>61.9%</td>
<td>591</td>
<td>58.4%</td>
</tr>
<tr>
<td>2013</td>
<td>7</td>
<td>0</td>
<td>373</td>
<td>212</td>
<td>64.2%</td>
<td>592</td>
<td>63.0%</td>
</tr>
<tr>
<td>2014</td>
<td>5</td>
<td>1</td>
<td>342</td>
<td>275</td>
<td>55.9%</td>
<td>623</td>
<td>54.9%</td>
</tr>
<tr>
<td>2015</td>
<td>12</td>
<td>0</td>
<td>396</td>
<td>359</td>
<td>53.2%</td>
<td>767</td>
<td>51.6%</td>
</tr>
<tr>
<td>2016</td>
<td>9</td>
<td>0</td>
<td>416</td>
<td>342</td>
<td>55.4%</td>
<td>767</td>
<td>54.2%</td>
</tr>
<tr>
<td>Total</td>
<td>179</td>
<td>7</td>
<td>3,364</td>
<td>2,360</td>
<td>60.1%</td>
<td>5,910</td>
<td>56.9%</td>
</tr>
</tbody>
</table>

RADD REVIEWS 6-26-2018
Poly-Drug Drivers in Fatal Crashes (page 13)

Rising Frequency of Poly-Drug Drivers in Fatal Crashes

- **THC Only**
- **Alcohol Only**
- **One Drug Only (not Alcohol or THC)**
- **Poly-Drug (Any combination of the other categories)**


- **2008:** THC Only: 19, Alcohol Only: 7, One Drug Only: 26, Poly-Drug: 7
- **2009:** THC Only: 19, Alcohol Only: 5, One Drug Only: 9, Poly-Drug: 9
- **2010:** THC Only: 27, Alcohol Only: 7, One Drug Only: 7, Poly-Drug: 13
- **2011:** THC Only: 18, Alcohol Only: 7, One Drug Only: 13, Poly-Drug: 7
- **2012:** THC Only: 33, Alcohol Only: 7, One Drug Only: 19, Poly-Drug: 19
- **2013:** THC Only: 29, Alcohol Only: 19, One Drug Only: 24, Poly-Drug: 24
- **2014:** THC Only: 38, Alcohol Only: 24, One Drug Only: 27, Poly-Drug: 27
- **2015:** THC Only: 120, Alcohol Only: 62, One Drug Only: 65, Poly-Drug: 65

RADD REVIEWS 6-26-2018
Poly-Drug Drivers are the Most Prevalent Impaired Drivers in Fatal Crashes (page 13)

Alcohol and Poly-Drug Use in Fatal Crash Involved Drivers, 2008-2016

- Alcohol Only: 38%
- THC Only: 6%
- One Drug Only (not Alcohol or THC): 12%
- Poly-Drug (Any combination of the other categories): 44%
## Driver Drug Results by Age (page 15)

<table>
<thead>
<tr>
<th>Category</th>
<th>Ages &lt;20</th>
<th>Ages 21-25</th>
<th>Ages 26-30</th>
<th>Ages 31-40</th>
<th>Ages 41-50</th>
<th>Ages 51-60</th>
<th>Ages 61-70</th>
<th>Ages 71+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Only</td>
<td>2.5%</td>
<td>11.1%</td>
<td>17.0%</td>
<td>19.0%</td>
<td>14.9%</td>
<td>20.6%</td>
<td>9.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>THC Only</td>
<td>5.9%</td>
<td>15.3%</td>
<td>9.3%</td>
<td>16.9%</td>
<td>15.3%</td>
<td>24.6%</td>
<td>6.9%</td>
<td>5.3%</td>
</tr>
<tr>
<td>One Drug Only (not Alcohol or THC)</td>
<td>19.5%</td>
<td>15.4%</td>
<td>15.9%</td>
<td>17.5%</td>
<td>16.7%</td>
<td>8.1%</td>
<td>7.3%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Poly-Drug (Any combination of the other categories)</td>
<td>4.9%</td>
<td>15.2%</td>
<td>15.9%</td>
<td>21.1%</td>
<td>12.0%</td>
<td>8.9%</td>
<td>6.5%</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

RADD REVIEWS 6-26-2018
Crash Factors (page 16)

- Speeding:
  - THC Only: 30.5%
  - Alcohol Only: 26.3%
  - One Drug Only (not Alcohol or THC): 25.2%
  - Poly-Drug (Any combination of the other categories): 22.5%

- Distracted:
  - THC Only: 45.3%
  - Alcohol Only: 23.1%
  - One Drug Only (not Alcohol or THC): 22.8%
  - Poly-Drug (Any combination of the other categories): 25.2%

- Unlicensed:
  - THC Only: 14.4%
  - Alcohol Only: 22.5%
  - One Drug Only (not Alcohol or THC): 13.8%
  - Poly-Drug (Any combination of the other categories): 29.5%

- Unrestrained:
  - THC Only: 39.5%
  - Alcohol Only: 20.5%
  - One Drug Only (not Alcohol or THC): 22.5%
  - Poly-Drug (Any combination of the other categories): 36.9%

- Fail-to-Yield:
  - THC Only: 9.8%
  - Alcohol Only: 4.2%
  - One Drug Only (not Alcohol or THC): 3.8%
  - Poly-Drug (Any combination of the other categories): 4.0%
Marijuana and Driving
Washington’s Roadside Survey 2014-2015 (page 17)


Percentage of Washington Drivers THC-positive Before and After Recreational Marijuana Sales

Wave 1 (pre-sales) Wave 2 (six mos. Post-sales) Wave 3 (one year post-sales)

Daytime (significant) Over 5ng per se (significant) All Times Nighttime

Wave 1: 7.8% Daytime, 17.5% All Times
Wave 2: 14.5% Daytime, 19.4% All Times
Wave 3: 19.4% Daytime, 22.2% All Times

Nighttime:
Wave 1: 0%
Wave 2: 5.3%
Wave 3: 9.2%
Marijuana Survey (from Roadside Survey) (pages 18, 21)

Have you ever, even once, used marijuana?

- No: 32.0%
- Yes: 67.2%
- Decline to answer: 0.8%

Medical Marijuana Licensed = 6.5%

How long has it been since you last used marijuana? - By age groups

- Ages 15-20
- Ages 21-25
- Ages 26-35
- Ages 36-45
- Ages 46-55
- Ages 56+

- More than 12 months
- Past year
- Past month
- Past week
- Past 24 hours
Do you Drive After Marijuana Use? (page 23)

If you have used marijuana more than once in the past year, have you used any marijuana within two hours before driving?

- No: 55.5%
- Yes: 39.1%
- Decline to answer: 5.4%

Have you ever not driven because you had recently used marijuana?

- No: 38.0%
- Yes: 58.0%
- Decline to answer: 4.0%
Driving After Marijuana Use – BRFSS (page 27)

Have you used Marijuana in the past 30 days?

- Yes, 12.0% (+/- 0.5%)
- No, 87.4%
- Don't Know, 0.1%
- Refused, 0.5%

In the past 12 months, did you drive within 3 hours of using marijuana?

- Yes, 33.1% (+/- 2.3%)
- No, 65.7%
- Don't Know, 0.6%
- Refused, 0.5%
Does Marijuana Affect Your Driving? By Age Groups

When you used marijuana and drove, how do you think it affected your driving? - By age groups

- Did not make any difference
- Made my driving better

Ages 15-20: 40.3% (Did not make any difference), 53.0% (Made my driving better)
Ages 21-25: 13.7% (Did not make any difference), 72.4% (Made my driving better)
Ages 26-35: 17.4% (Did not make any difference), 67.2% (Made my driving better)
Ages 36-45: 8.9% (Did not make any difference), 74.1% (Made my driving better)
Ages 46-55: 21.7% (Did not make any difference), 69.4% (Made my driving better)
Ages 56+: 15.8% (Did not make any difference), 30.4% (Made my driving better)
One in Four Drivers ages 16-18 in Fatal Crashes are Positive for Drugs or Alcohol

Novice drivers already have an increased crash risk and adding any drug or alcohol use significantly increases that risk. From 2008-2016, 76 drivers ages 16-18 were involved in fatal crashes after consuming drugs and/or alcohol. Fifty-four of these drivers lost their lives and 22 contributed to the death of another, in some cases their own family and close friends. (page 31)

<table>
<thead>
<tr>
<th>Drug/Alcohol Status of Drivers in Fatal Crashes</th>
<th>Number of Drivers Ages 16-18</th>
<th>Driver Deceased</th>
<th>Driver Involved in the Death of Another Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Drug Only</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Only Alcohol</td>
<td>32</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Only THC</td>
<td>16</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Poly-Drug</td>
<td>20</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>Total Alcohol/Drug Drivers</td>
<td>76</td>
<td>54</td>
<td>22</td>
</tr>
</tbody>
</table>
Do You Think Marijuana Impairs Driving?

How likely do you think it is that marijuana impairs a person's ability to drive safely if used within two hours of driving?

Drivers who have used marijuana more than once in the past year:

- Not at all likely: 2.5%
- Somewhat Likely/Probable: 42.5%
- Very/Likely: 36.6%
- Decline to answer: 1.5%

Drivers who have NOT used marijuana more than once in the past year:

- Not at all likely: 18.4%
- Somewhat Likely/Probable: 6.9%
- Very/Likely: 14.6%
- Decline to answer: 77.0%
How likely do you think it is that a person could be arrested for impaired driving after using marijuana within two hours of driving?

Drivers who have used marijuana more than once in the past year.

Drivers who have NOT used marijuana more than once in the past year.
Other High Risk Behaviors – BRFSS (page 29)

Other high risk behaviors of drivers reporting yes to driving within 3 hours of marijuana use versus drivers reporting no.

- Always Wears Seatbelt: 84.7% Drove within 3 hours, 91.5% Did NOT drive within 3 hrs
- Binge Drinking=Yes: 45.4% Drove within 3 hours, 38.1% Did NOT drive within 3 hrs
- Heavy Drinking=Yes: 17.7% Drove within 3 hours, 15.5% Did NOT drive within 3 hrs
- Drinking/Driving=Yes: 14.5% Drove within 3 hours, 3.9% Did NOT drive within 3 hrs
Healthy Youth Survey (pages 30-31)

HYS: Rode in a Vehicle Driven by Someone Who Had Been Using Marijuana

- Grade 12: 25.9% in 2014, 25.2% in 2016
- Grade 10: 19.0% in 2014, 17.6% in 2016
- Grade 8: 9.6% in 2014, 10.8% in 2016

HYS: Drove a Vehicle Within 3 Hours of Using Marijuana

- Grade 12: 16.8% in 2014, 16.5% in 2016
- Grade 10: 9.1% in 2014, 9.3% in 2016
The Drugged Driving Impact in Washington

The recent rise in traffic fatalities is most certainly due in part to an increase in poly-drug use among drivers on Washington roadways.

While alcohol is still the most common substance mixed with other drugs among this high-risk group, alcohol-specific countermeasures alone will not be sufficient for impacting this emerging issue.

While it is still largely unknown what role marijuana alone plays in fatal crash risk, it is clear that marijuana mixed with other substances, most commonly alcohol, is contributing to fatal crashes in Washington State.

While alcohol driving very much remains a significant issue, the interplay of drugged driving must be equally considered if we are ever to reach our goal of zero fatalities and serious injuries on Washington roadways. This complex issue will require government, non-profit, corporate, and community response to reverse a rapidly increasing trend.
Questions?