



# **Exploring Washington State's Traffic Safety Culture About Driving Under the Influence of Cannabis and Alcohol**

August 29, 2019 | 10:15 – 11:30 am

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Montana State University

Center for Health and Safety Culture



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## **About the Center for Health and Safety Culture**

We are an interdisciplinary center serving communities and organizations through research, training, and guidance to cultivate healthy and safe cultures.

# Core Issues



Traffic Safety

Substance Misuse



Domestic Violence



Child Wellbeing



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# Agenda

- Concerns About Impaired Driving
- Traffic Safety Survey
- Washington's Current Culture on Driving Under the Influence of Cannabis and Alcohol
- What YOU Can Do!



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# Concerns About Impaired Driving

## Driving under the influence of cannabis increases crash risk.

- “There is substantial evidence of a statistical association between cannabis use and increased risk of motor vehicle crashes.”<sup>1</sup>
- A meta-analysis of 66 studies shows that the risk of being involved in a crash increases when using cannabis.<sup>2</sup>
- Drivers under the influence of cannabis are more likely responsible for a fatal crash than non-intoxicated drivers.<sup>3</sup>

1. National Academies of Sciences, Engineering, and Medicine. 2017. *The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research*. Washington, DC: The National Academies Press.
2. Elvik, Rune, “Risk of Road Accident Associated with the Use of Drugs: A Systematic Review and Meta-Analysis of Evidence from Epidemiological Studies.” *Accident Analysis & Prevention*, Vol. 60 (November 2013) pp. 254–67.
3. Gadegbeku, Blandine, Emmanuelle Amoros, and Bernard Laumon, “Responsibility Study: Main Illicit Psychoactive Substances among Car Drivers Involved in Fatal Road Crashes.” *Annals of Advances in Automotive Medicine. Association for the Advancement of Automotive Medicine. Scientific Conference*, Vol. 55 (2011) pp. 293–300.





# Concerns About Impaired Driving

Odd ratios (unadjusted) for 2007 U.S. fatal crashes for different drug types

Drug Type	Odds Ratio	95 <sup>th</sup> Confidence Interval
Cannabis	1.83	1.39 – 2.39
Narcotics	3.03	2.00 – 4.48
Stimulants	3.57	2.63 – 4.76
Depressants	4.83	3.18 – 7.21
Any drug (average)	2.22	1.68 – 2.92
Polydrug	3.41	2.43 – 4.73
Alcohol	13.64	11.12 – 16.72
Alcohol + Drug	23.24	17.79 – 30.28

Li, G., Brady, J.E., and Chen, Q. (2013). Drug use and fatal motor vehicle crashes: A case-control study. *Accident Analysis and Prevention*, 60, 205 – 210.

# Concerns About Impaired Driving

- Poly-drug drivers are those drivers testing positive for two or more substances.
- The estimated risk of fatal injury in a crash for was **16 times** greater for drivers combining cannabis with alcohol, than for drivers using cannabis alone.

Chihuri, S., Li, G., and Chen, Q. (2017). Interaction of marijuana and alcohol on fatal motor vehicle crash risk: a case-control study. *Injury Epidemiology*, 4(8), open access: <https://injepijournal.biomedcentral.com/track/pdf/10.1186/s40621-017-0105-z>.



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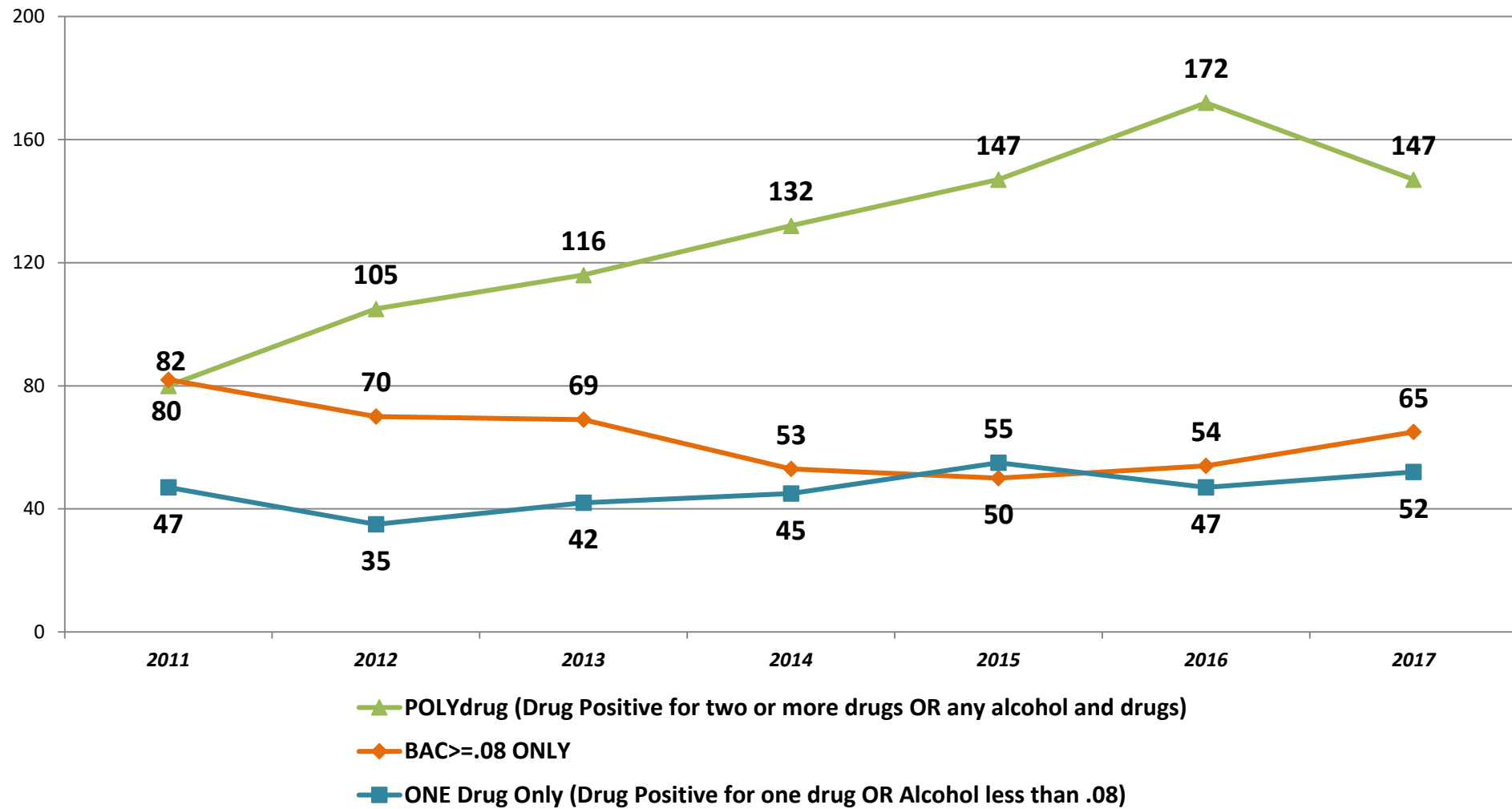
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# Concerns About Impaired Driving

- Alcohol and drug impaired driving is the leading contributing factor in Washington fatal crashes.
- Poly-drugged driving is a factor in one-quarter of Washington's crashes.

## Number of WA Drivers in Fatal Crashes Under the Influence of Alcohol and/or Drugs



# Concerns About Impaired Driving

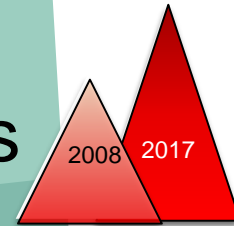
## People in Washington are driving after using cannabis.

- In June 2014, 11% of weekend, night-time drivers reported they had driven within two hours of using cannabis at least once in the past 12 months.<sup>1</sup>
- By 2016, poly-drug drivers (including alcohol) involved in fatal crashes were
  - **more than twice** the number of alcohol-only drivers and
  - **more than five times** the number of cannabis-only drivers.<sup>2</sup>

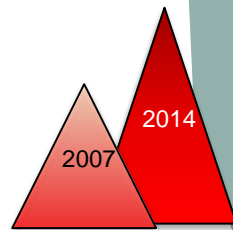
# Concerns About Impaired Driving

**Cannabis use is increasing.**

Past year cannabis use by adults (age 18+) in Washington has increased by 85% in the past 9 years (2008 to 2017).<sup>1</sup>



Weekend, nighttime drivers testing positive for THC increased by 50% from 2007 to 2014.<sup>2</sup>



1. Went from 12.6% in 2008-09 to 23.2% in 2016-17 (SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2018).

2. Berning, A., R. Compton, and K. Wochinger, "Results of the 2013–2014 National Roadside Survey of alcohol and drug use by drivers." *Traffic Safety Facts Research Note. Report No. DOT HS 812 118*. Washington, DC: National Highway Traffic Safety Administration, (February 2015) pp. 1-5.

# Agenda

- Concerns About Impaired Driving
- **Traffic Safety Survey**
- Washington's Current Culture on Driving Under the Influence of Cannabis and Alcohol
- What YOU Can Do!



# Traffic Safety Survey

Center for Health and Safety Culture to assess Washington's Traffic Safety Culture About Driving Under the Influence of Cannabis and Alcohol (DUICA)

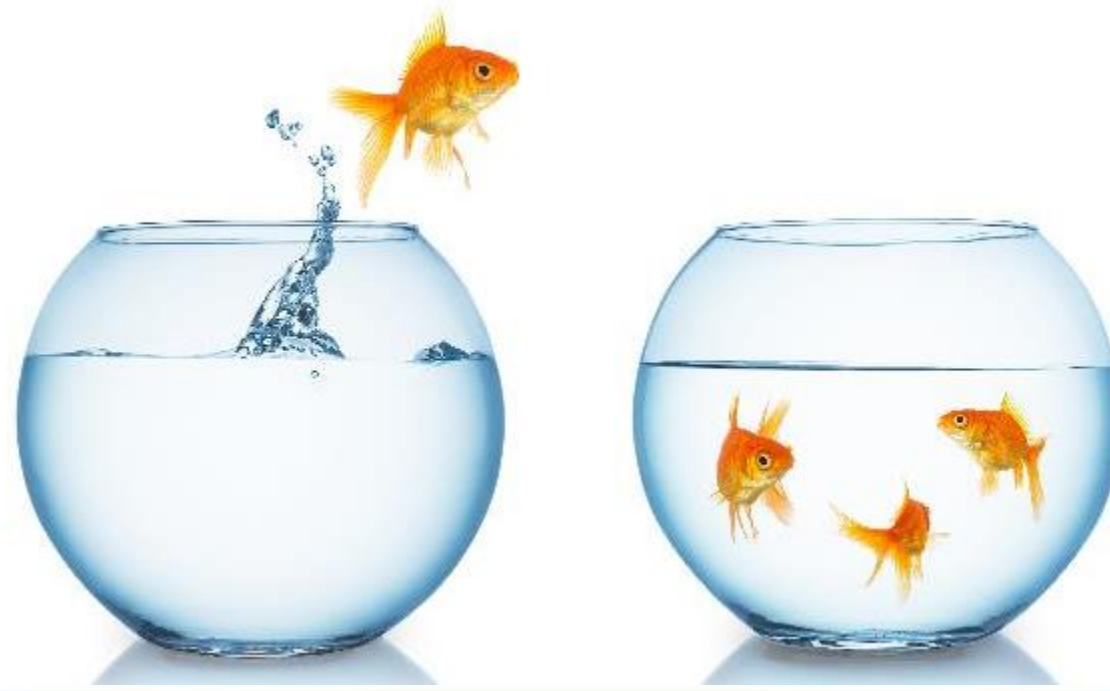
- Understand the culture (shared values, attitudes, beliefs, and behaviors) of people who DUICA
- Understand the culture of people who intervene to prevent someone from driving impaired





# Culture

Shared values, assumptions, and beliefs of a group of people that influence their behaviors



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# Our Core Assumption



The positive exists  
and is worth  
growing.



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**The  
solutions  
are in the  
community.**

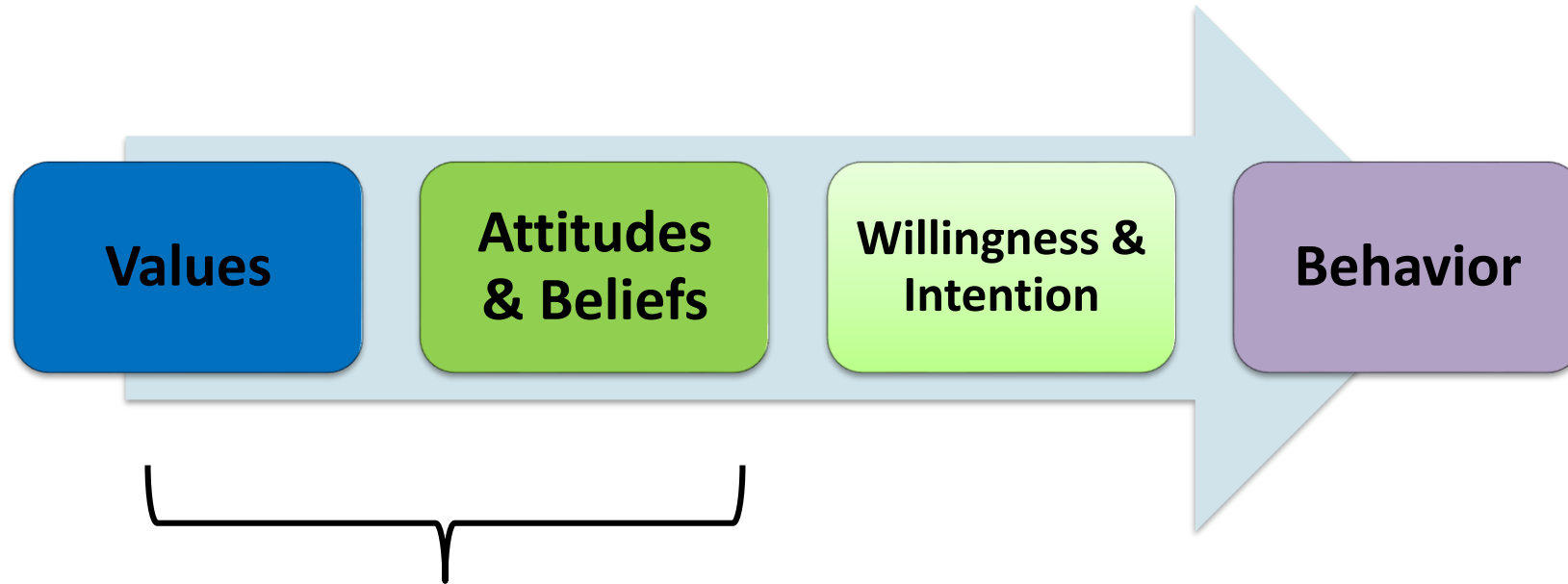


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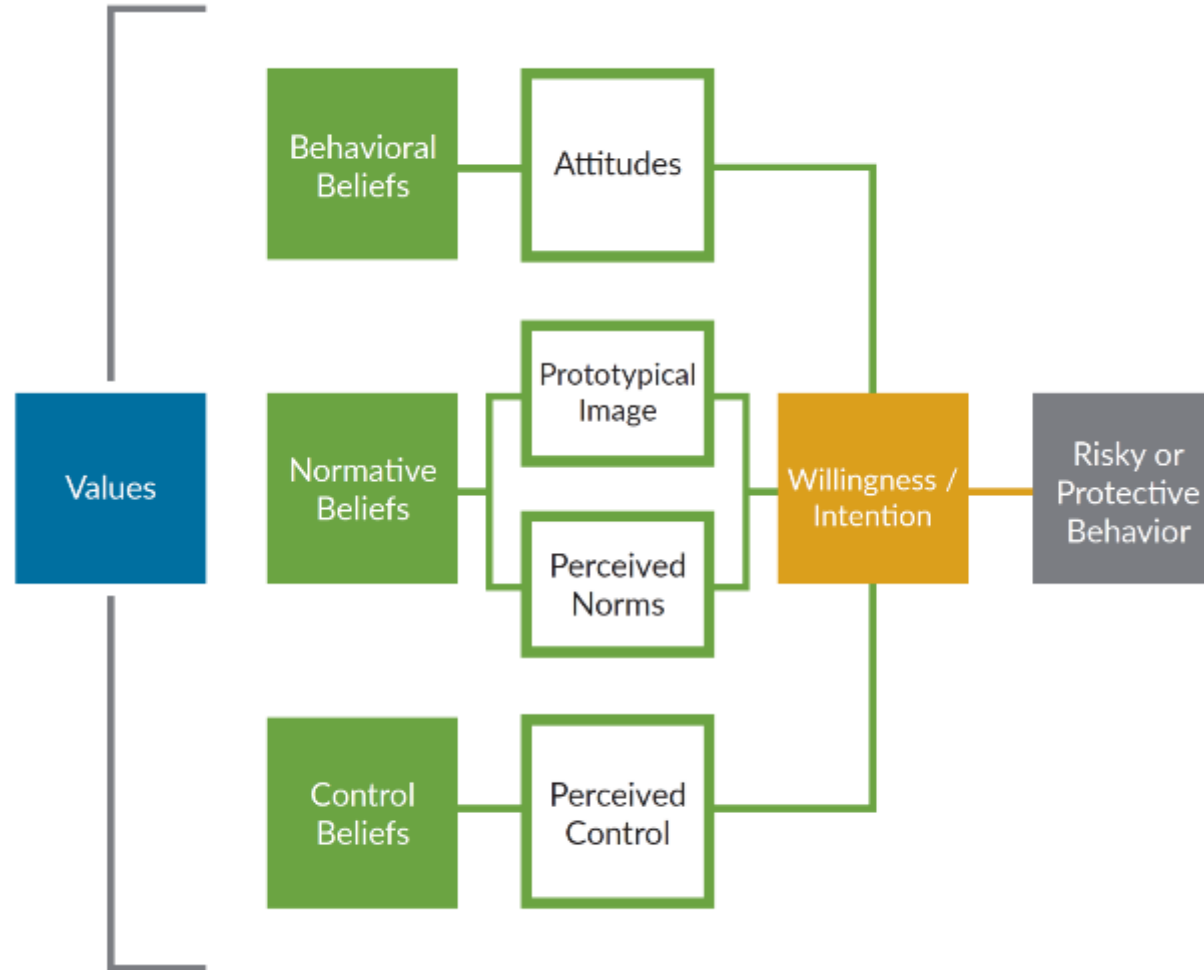
# Simplified Behavioral Model



**Cultural Factors** –shared values, attitudes and beliefs that impact health and safety.



# Behavior Model





# Traffic Safety Survey

- 870 participants ages 18-65 living in Washington
- Statewide representative sample
- 51% female/ 49% male
- Wide range of ages between 18-65

# Traffic Safety Survey

- 30-day use of alcohol
  - **60%** of Washington State adults respondents indicated “yes”

Compared to **60%** of Washington State adults who indicated “yes” on the 2015-2016 National Survey on Drug Use and Health and **59%** of Washington State adults who indicated “yes” on the 2016 Behavioral Risk Factor Surveillance Survey



# Traffic Safety Survey

- Consumed cannabis in the past 12 months
    - **42%** of Washington State adults respondents reported consuming cannabis in the past 12 months
- Compared to **20%** in the 2015-2016 National Survey on Drug Use and Health







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# Agenda

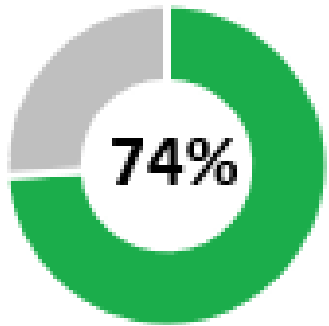
- Concerns About Impaired Driving
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- Washington's Current Culture on Driving Under the Influence of Cannabis and Alcohol
- What YOU Can Do!



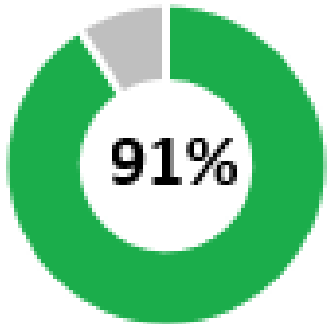
# Traffic Safety Culture

Most adults in Washington are concerned about traffic safety and have strong protective beliefs.

Most are moderately or more concerned about safety on roads and highways.



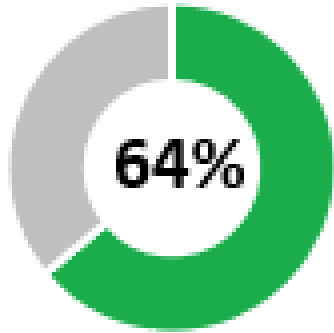
Most (74%) agree the only acceptable number of deaths and serious injuries on our roadways should be zero.



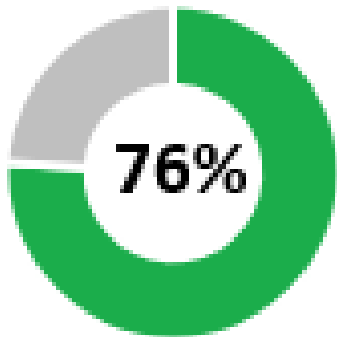
Most (91%) agree that it is the responsibility of the driver to comply with the laws of our roads.



# Traffic Safety Culture



Most (64%) agree that impairment begins with the first sip of alcohol.



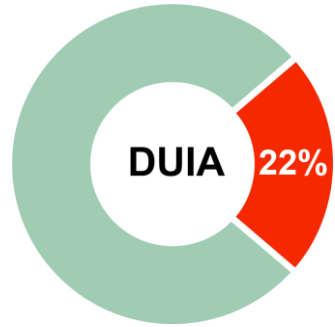
Most (76%) agree that impairment begins as soon as you start consuming cannabis.



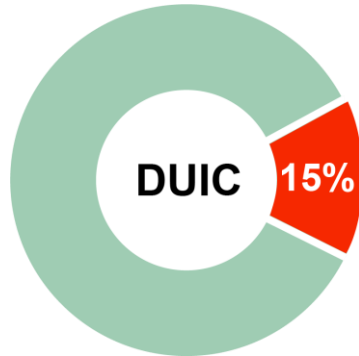
# Traffic Safety Culture

Most adults in Washington don't drive under the influence.

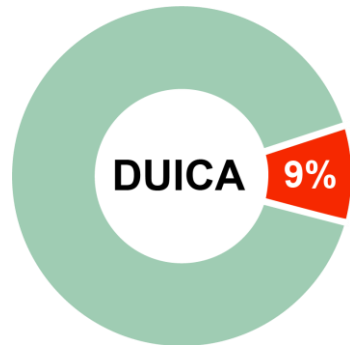
Self-Reported 12-month Driving Behaviors



78% don't drive within 2 hours of consuming alcohol



85% don't drive within 2 hours of consuming cannabis



91% don't drive within 2 hours of consuming cannabis and alcohol

**However, too many do thus creating significant risk to themselves and the general public.**

# Traffic Safety Survey

## Why 2 hours?

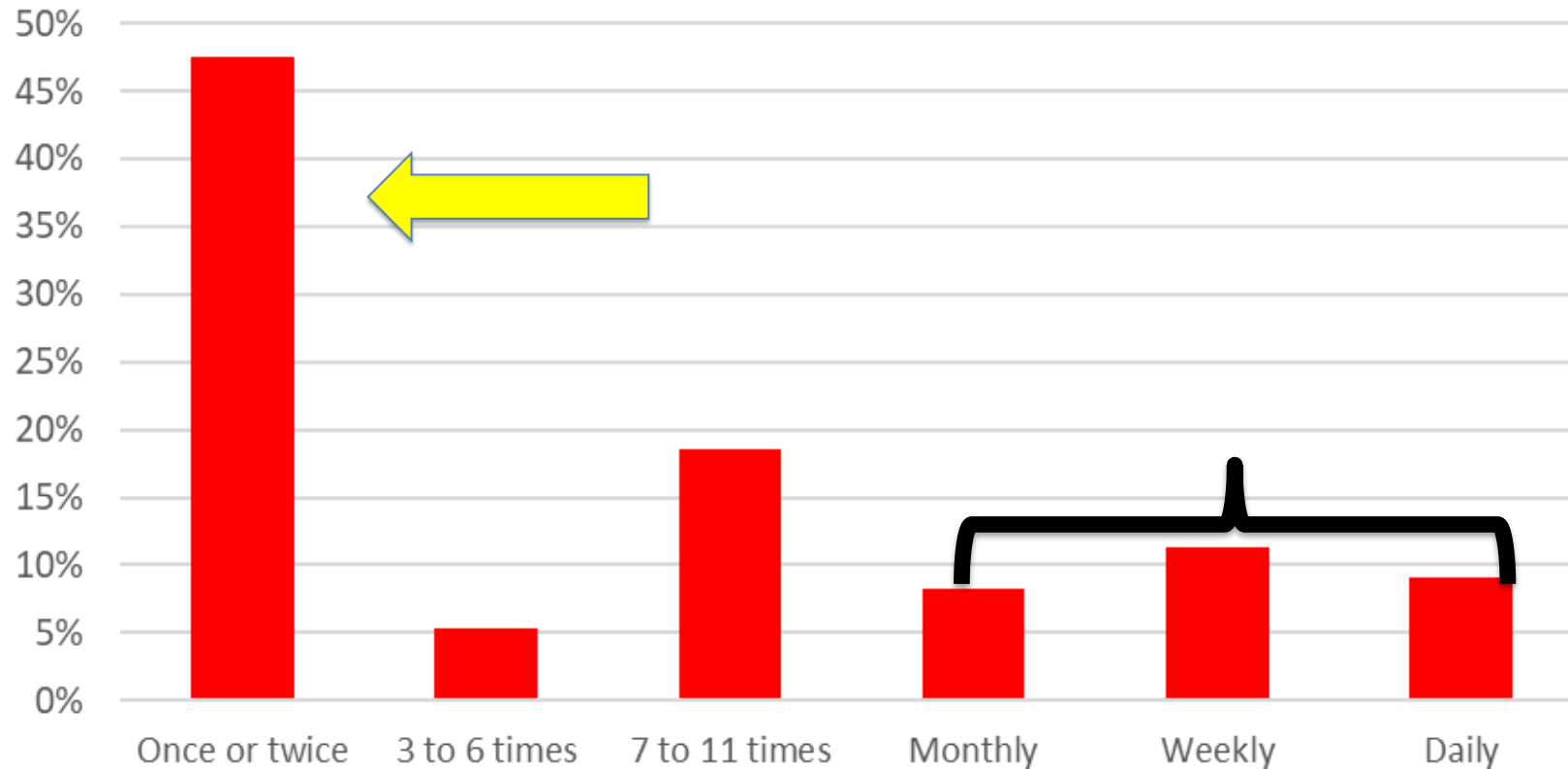
- For survey purposes only
- Easier to answer than longer time periods
- Consistent with other surveys for comparison

**CAUTION:** Driving after 2 hours since consuming cannabis and/or alcohol is NOT safe. Used as a standard survey question.

Driving after consuming alcohol or marijuana is not safe...even after 2 hours. Multiple factors determine how quickly alcohol leaves the body. There is a lack of research for marijuana, since it stored in the fat, effects could last for days.



# Frequency of Behavior in Past 12 Months Among Those who DUICA



# Traffic Safety Culture

- Males are **three times** more likely to DUICA than females.
- DUICA decreases with age.
- Education attainment has no statistically significant association with DUICA.
- Those living in the eastern portion of the state are slightly more likely DUICA than those living in the western.



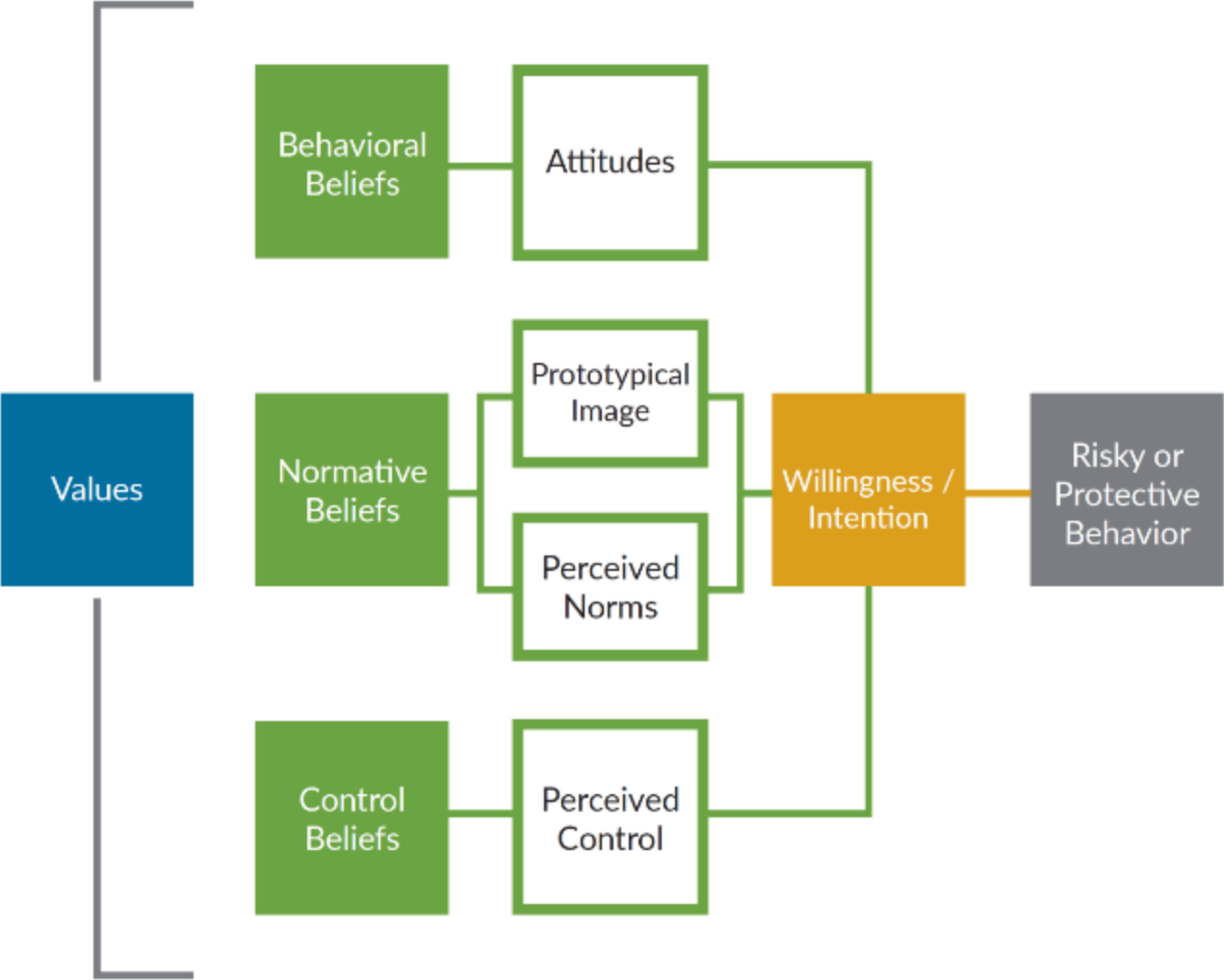


# Traffic Safety Culture

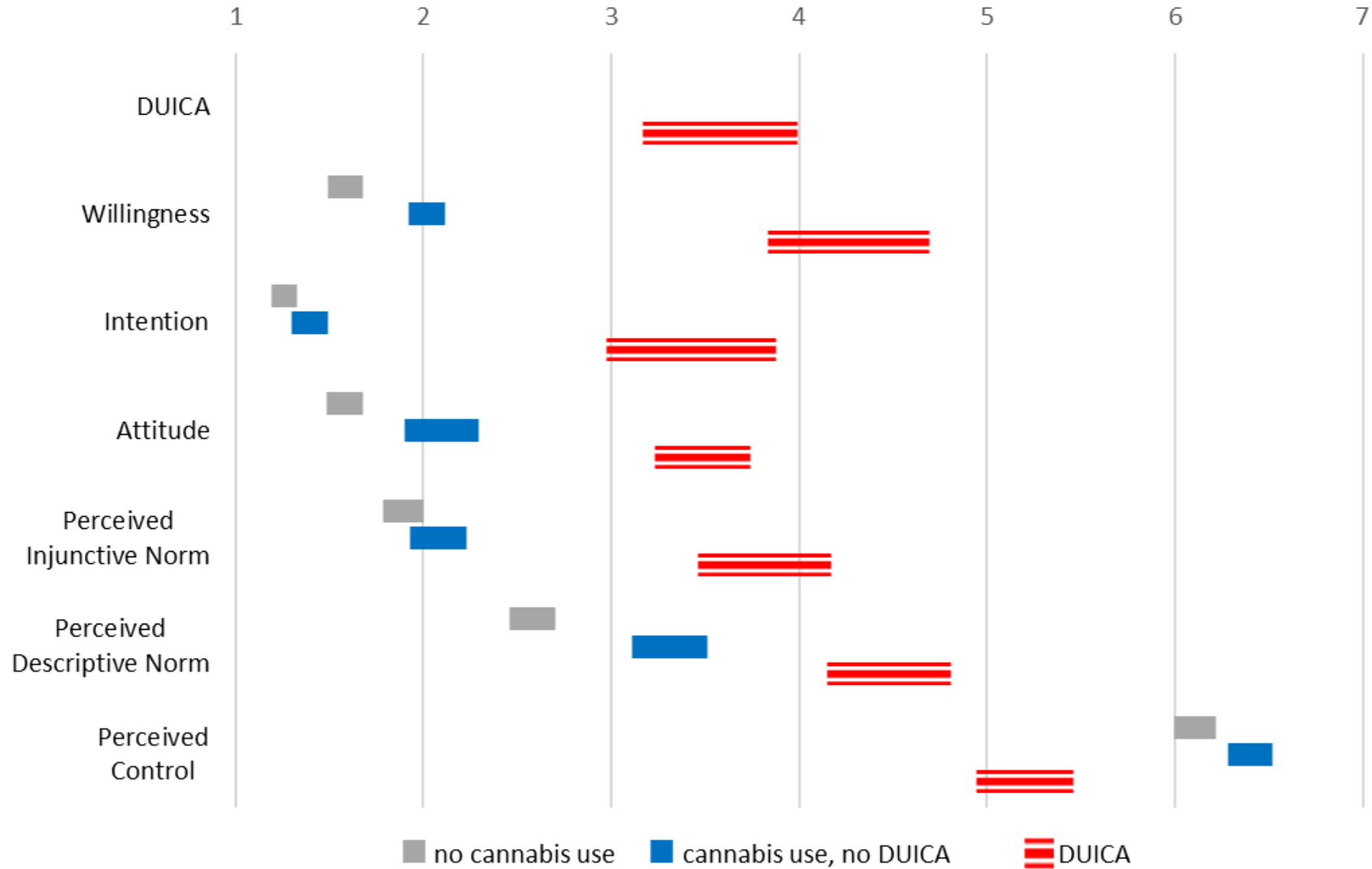
- Chronic users of cannabis are no more likely to DUICA than non-chronic users.
- Whether a respondent indicated using cannabis for medical use, recreational use, or both has no effect on DUICA.
- Whether a respondent uses cannabis for physical, mind, emotional, or spiritual benefit has no effect on DUICA.



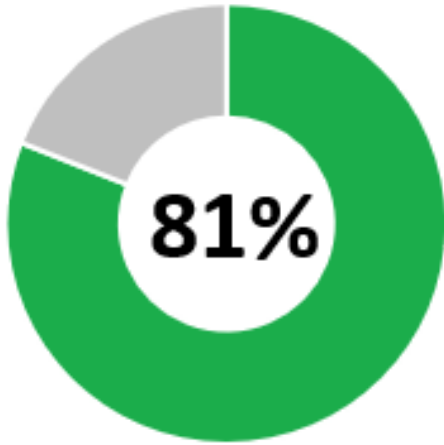
# Behavior Model



# Means of Model Components



# Traffic Safety Culture



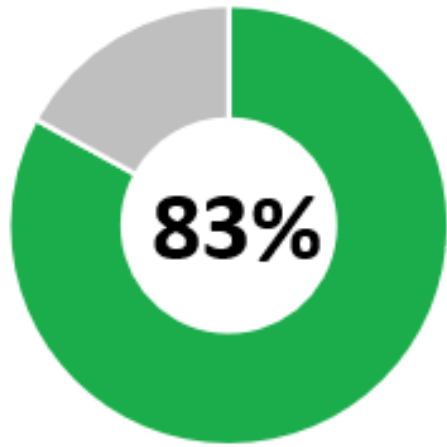
Most adults in Washington (81%) have a **NEGATIVE** attitude about DUI/CA.

Those with a *positive* attitude are **TWICE** as likely to DUI/CA.  
Those who do DUI/CA are:

- More likely to believe that driving under the alcohol and cannabis improves their driving; and
- Less likely to believe that they are at risk to be arrested or be in a crash.



# Traffic Safety Culture

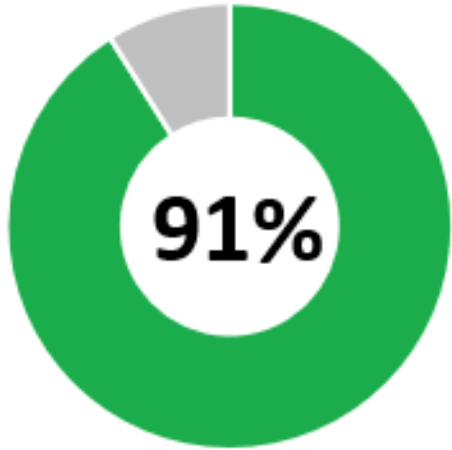


Most adults (83%) believe it is **UNACCEPTABLE** to drive within two hours of consuming alcohol and cannabis.

Those who perceive DUICA is acceptable are more than **4.5 TIMES** more likely to DUICA themselves.



# Traffic Safety Culture



Most adults (91%) **DON'T** drive within two hours of consuming alcohol and cannabis.

Those who perceive most people DUICA frequently are **TWICE** as likely to DUICA themselves.

Those who do DUICA perceive most adults in Washington do as well (when in fact, most do **NOT**)!



# Traffic Safety Culture

**People's sense of control about avoiding DUICA behavior matters!**

- People who have low levels of perceived control are more than **3.5 times** as likely to DUICA compared to those with high levels of perceived control.



# Traffic Safety Culture

People who DUICA may be using cannabis because they believe it “**calms them down**” and “**sobers them up**” when they have had too much to drink.

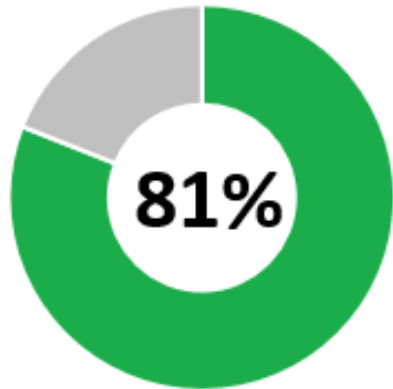
- 77% of those who DUICA are likely to feel anxious after drinking and use cannabis to calm down
- 52% of those who DUICA are likely to feel too impaired after drinking and then use cannabis to sober up
- Using cannabis after drinking does NOT make it safer to drive.<sup>1,2,3</sup>

1. National Academies of Sciences, Engineering, and Medicine. 2017. The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research. Washington, DC: The National Academies Press.
2. Elvik, Rune, “Risk of Road Accident Associated with the Use of Drugs: A Systematic Review and Meta-Analysis of Evidence from Epidemiological Studies.” Accident Analysis & Prevention, Vol. 60 (November 2013) pp. 254–67.
3. Gadegbeku, Blandine, Emmanuelle Amoros, and Bernard Laumon, “Responsibility Study: Main Illicit Psychoactive Substances among Car Drivers Involved in Fatal Road Crashes.” Annals of Advances in Automotive Medicine. Association for the Advancement of Automotive Medicine. Scientific Conference, Vol. 55 (2011) pp. 293–300.





# Traffic Safety Culture



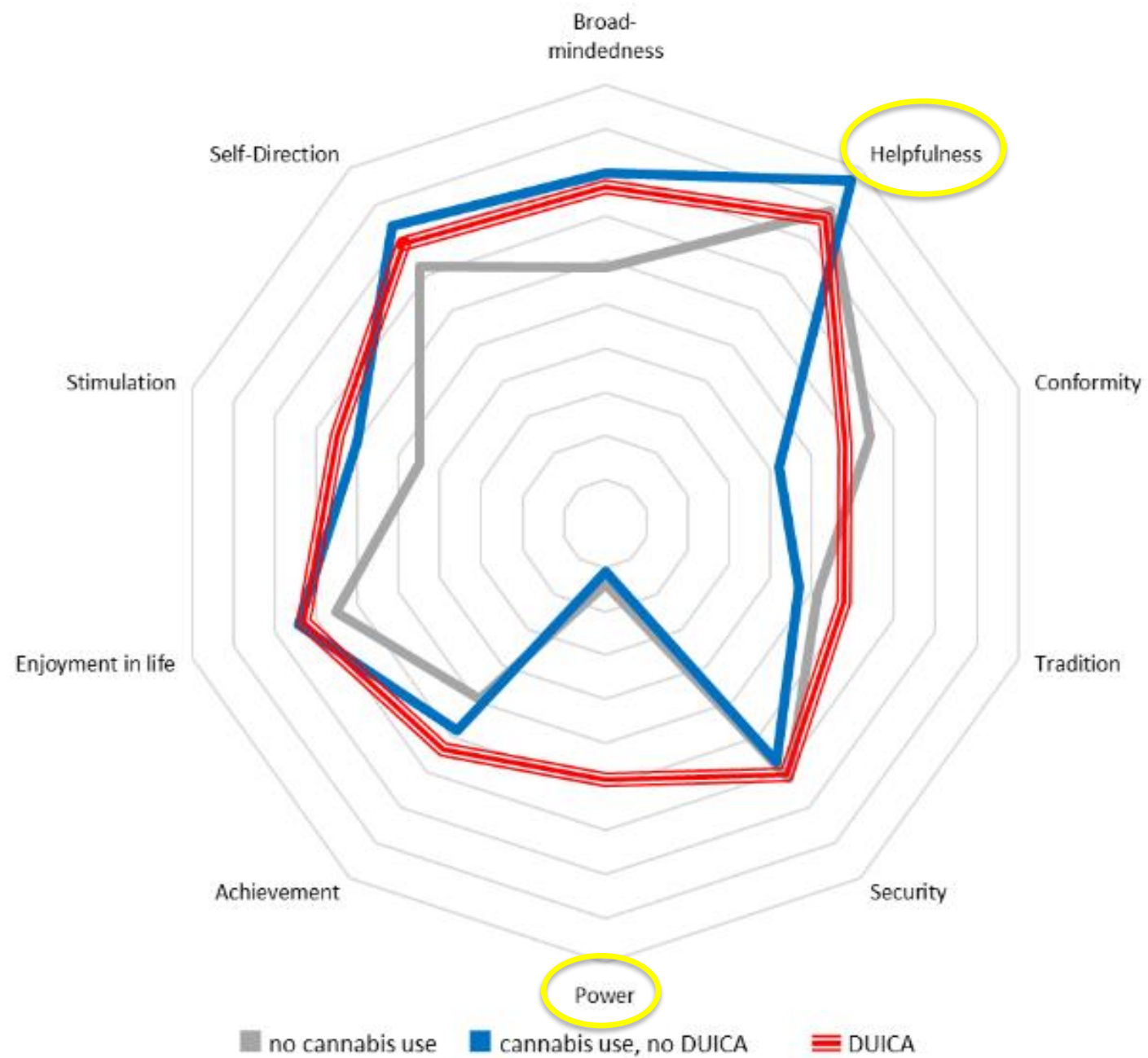
## Bystander Intervention

Among adults in Washington in a situation to intervene, most (81%) take steps to prevent someone from driving impaired.

They do safe things like:

- Arranging or providing a ride for the person;
- Arranging for the person to stay where they are; or
- Engaging someone else to help including being prepared to call 911 if the person drives





# Small Group Reflection

- What stood out for you?
- What surprised you?
- What challenged you?

# Agenda

- Concerns About Impaired Driving
- Traffic Safety Survey
- Washington's Current Culture on Driving Under the Influence of Cannabis and Alcohol
- What YOU Can Do!



# What YOU Can Do!

## Share and discuss these results.

- Leverage the existing positive shared values, attitudes, and beliefs
- Correct misperceptions
  - DUICA is NOT safe
  - Most people believe DUICA is unacceptable
  - Most people do NOT DUICA
  - Using cannabis after drinking does NOT make it safer to drive



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# What YOU Can Do!

**Integrate accurate information into existing programs, strategies, and communications.**

- Frame communications about impaired driving in the context of safety.
- Review materials, media, and strategies and revise or augment language.



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# What YOU Can Do!

- Revise or augment language to establish that...
  - Driving after consuming alcohol or cannabis increases the risk of a crash.
  - Most people in Washington State never drive after consuming alcohol or cannabis.



# What YOU Can Do!

- Revise or augment language to establish that...
  - Most people in Washington State believe driving after consuming alcohol and cannabis is unacceptable.
  - Using cannabis after consuming alcohol does not reduce crash risk; in general, it increases crash risk.





# What YOU Can Do!

- Revise or augment language to establish that...
  - People should plan ahead to:
    - Avoid driving after consuming alcohol or cannabis,
    - Use alternative transportation,
    - Or to stay where they are.
  - Communication about the legalization of cannabis should include reiteration of laws prohibiting impaired driving and emphasizing that driving under the influence of cannabis increases crash risk.



# What YOU Can Do!

## Grow bystander engagement to prevent impaired driving.

Integrate SAFE bystander engagement practices into existing programs, strategies, and communications.

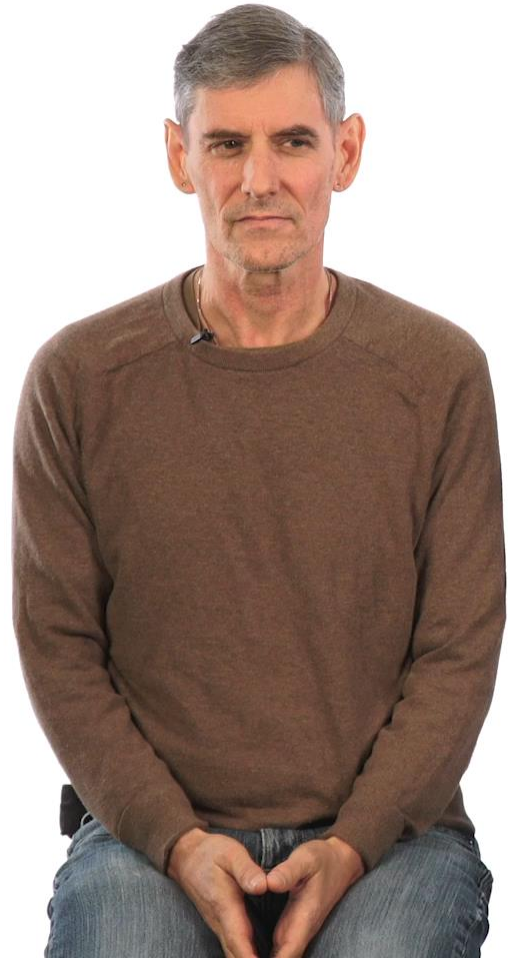
- Do NOT promote disabling vehicles, allowing impaired people to walk, or the use of physical intervention.
- Do promote safe strategies like:
  - arranging or providing a ride for the person;
  - having the person stay where they are; or
  - engaging others to help (including 911 if the person drives).



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# Partner Share

- What can you take away from this session today, that can be applied in your work tomorrow?
- What possibilities exist for engaging your community on the issue of DUICA?





Thank you!

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