

# Center for Health & Safety Culture

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## **Intervening to Prevent Driving Under the Influence of Cannabis and Alcohol**

Key Findings Report from 2018 Survey

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## Introduction

Alcohol and drug impaired driving is the leading contributing factor in Washington fatal crashes.<sup>1</sup> A national survey conducted in 2008 reported that one in five respondents had driven within two hours of consuming alcohol in the past year.<sup>2</sup> In June 2014 (one month prior to the legalization of recreational cannabis in Washington), a roadside survey of drivers in Washington found that 69% of participants had used cannabis at least once in their lifetime, and 44% had driven within two hours of using cannabis at least once in the past 12 months.<sup>3</sup> Driving under the influence of alcohol and cannabis combined is a growing concern.

The Washington Traffic Safety Commission (WTSC) engaged the Center for Health and Safety Culture (CHSC) in the Western Transportation Institute of Montana State University to explore traffic safety culture in Washington State as it relates to driving under the influence of alcohol and cannabis (DUICA). This report summarizes the key findings of a survey of a representative sample of adults in Washington about their values, attitudes, beliefs, and behaviors regarding DUICA and intervening to prevent someone from driving after consuming alcohol and cannabis. The report reviews the survey methodology, summarizes the findings about intervening behavior, and then examines the shared values, attitudes, and beliefs of respondents. Recommendations are provided at the end.

## Survey Methodology

The CHSC developed a draft of the survey based on behavioral model (see below) and pilot tested the survey twice with a convenience sample of adults (age 18 to 65) in Washington recruited online. To participate in the pilot, the participants had to be over the age of 18, drive a vehicle monthly or more often, consume alcohol monthly or more often, and consume cannabis monthly or more often. The survey was refined based on the pilot testing process. CHSC contracted with NORC at the University of Chicago (formerly the National Opinion Research Center) to implement the survey using their AmeriSpeak's panel. Table 1 summarizes NORC's methodology. NORC invited 373 respondents to participate; 137 completed screening interviews (37%), and 135 were considered eligible (99%). Of the 135 considered eligible, 133 (99%) completed the survey. Participants were offered a cash incentive to participate (\$10 initially and \$15 after several reminders).

The AmeriSpeak's panel was supplemented with 737 respondents from the online opt-in panel Toluna. To be eligible for inclusion in the survey, Toluna respondents must have been age 18-65 and living in Washington state. NORC uses a three-step process to develop statistical weights to align the sample with the general population: weighting the AmeriSpeak respondent sample, weighting the Toluna opt-in respondent sample, and finally combining the completed interview respondents from both sample sources. All results provided in this report are based on weighted responses.

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<sup>1</sup> Grondel, D.T., Hoff, S., and Doane, D., (2018). Marijuana Use, Alcohol Use, and Driving in Washington State: Emerging Issues With Poly-Drug Use on Washington Roadways. Washington Traffic Safety Commission.

<sup>2</sup> Drew, L., Royal, D., Moulton, B., Peterson, A., Haddix, D., (2010). National Survey of Drinking and Driving: Attitudes and Behaviors 2008, Insight Policy Research.

<sup>3</sup> Pacific Institute for Research and Evaluation (2014). Washington State Roadside Survey.

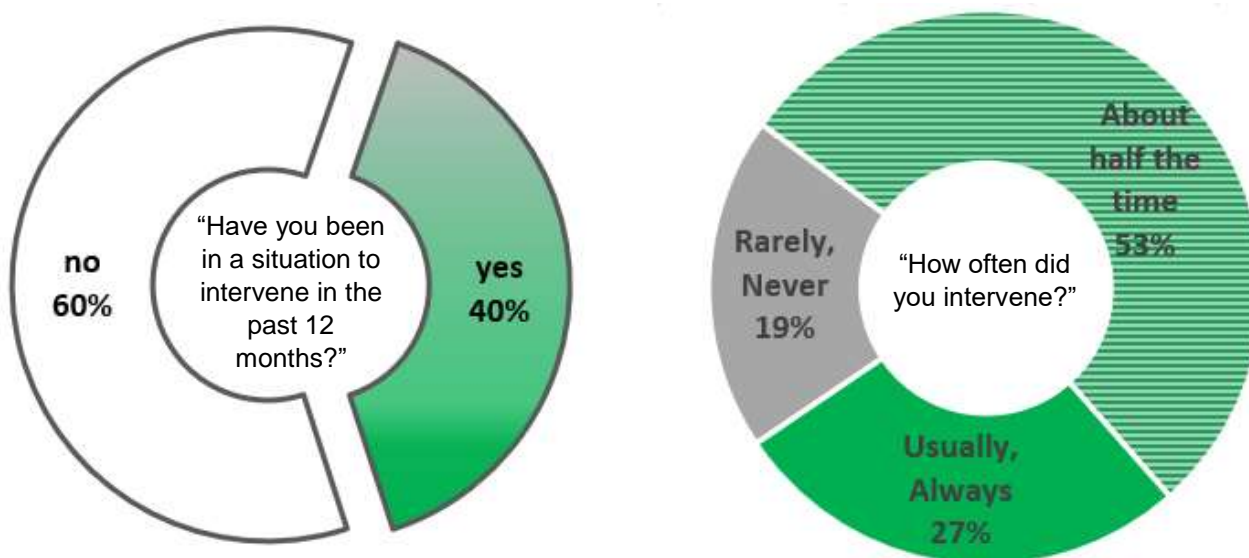
**Table 1. Summary of NORC's Methodology**

"Funded and operated by NORC at the University of Chicago, AmeriSpeak® is a probability-based panel designed to be representative of the US household population. Randomly selected US households are sampled using area probability and address-based sampling, with a known, non-zero probability of selection from the NORC National Sample Frame. These sampled households are then contacted by US mail, telephone, and field interviewers (face to face). The panel provides sample coverage of approximately 97% of the U.S. household population. Those excluded from the sample include people with P.O. Box only addresses, some addresses not listed in the USPS Delivery Sequence File, and some newly constructed dwellings. While most AmeriSpeak households participate in surveys by web, non-internet households can participate in AmeriSpeak surveys by telephone. Households without conventional internet access but having web access via smartphones are allowed to participate in AmeriSpeak surveys by web. AmeriSpeak panelists participate in NORC studies or studies conducted by NORC on behalf of governmental agencies, academic researchers, and media and commercial organizations."

Source: "Washington State Driving Under the Influence of Cannabis And Alcohol Study 2018," AmeriSpeak Field Report, June 08, 2018, NORC at the University of Chicago.

## Intervening Behavior

Among survey respondents, 4 in 10 (40%) report having been in a situation in the past 12 months where someone had consumed alcohol and cannabis and they thought they were too impaired to drive. Among these individuals, about one quarter (27%) report they usually or always intervene; about half (53%) report intervening about half the time; and about one in five (19%) report rarely or never intervening (Figure 1).



**Figure 1. Past 12-month Prevalence of Intervening**

Respondents who indicated they had been in a situation where someone had consumed alcohol and cannabis and was too impaired to drive were asked how often they engaged in different strategies to prevent the person from driving.

Among those who intervene, the three most common intervening behaviors are to arrange a ride for the person, engage someone else to help prevent the person from driving, or arrange for the person to stay until they are sober (Figure 2).

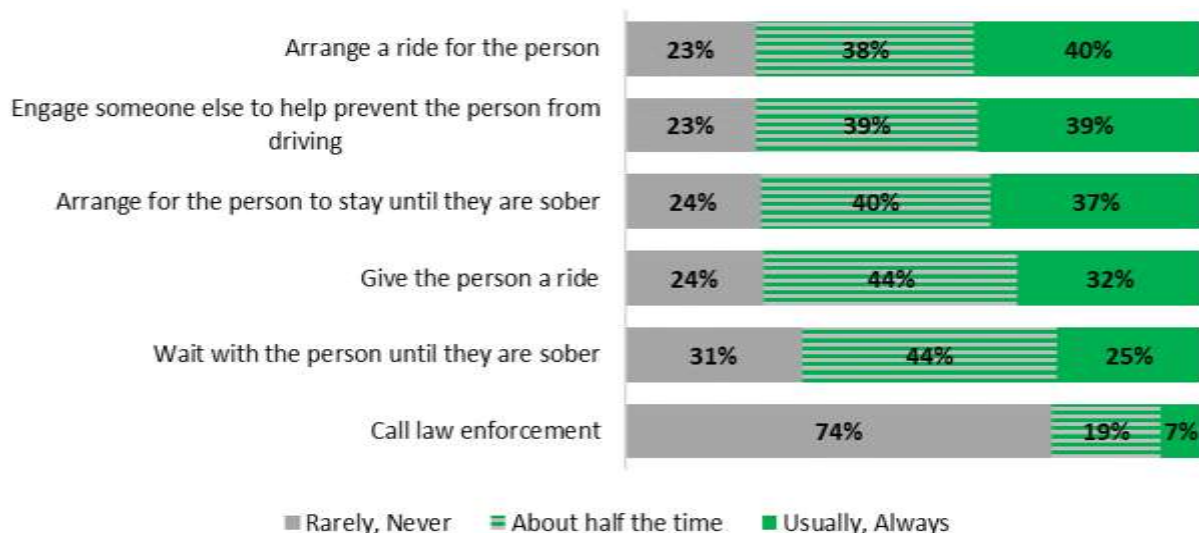


Figure 2. Relative Frequency of Various Intervening Behaviors

## Intervening Behavior and Demographics

- Males are more likely to be in a situation to intervene and are slightly more likely to intervene than females.
- Those being in a situation to intervene decreases slightly with age,<sup>4</sup> and intervening behaviors decrease with age.<sup>5</sup>
- Education attainment has no statistically significant association with intervening.<sup>6</sup>
- Those living in the eastern portion of the state are slightly more likely to be in a situation to intervene<sup>7</sup> and are more likely to intervene than those living in the western portion of the state.<sup>8</sup>
- Those who DUIA are more likely to be in a situation to intervene<sup>9</sup> but are not more likely to intervene.
- Those who DUIC are more likely to be in a situation to intervene<sup>10</sup> and are more likely to intervene.<sup>11</sup>
- Those who DUICA are no more likely to be in a situation to intervene or intervene.

<sup>4</sup> Spearman correlation coefficient of -0.13,  $p < 0.001$ .

<sup>5</sup> Spearman correlation coefficient of -0.20,  $p < 0.001$ .

<sup>6</sup> Spearman correlation coefficient of -0.01,  $p = 0.89$ .

<sup>7</sup> Chi-Square tests:  $\chi^2 (1, N=866) = 10.06, p = 0.002$ .

<sup>8</sup> Chi-Square tests:  $\chi^2 (2, N=339) = 16.72, p < 0.001$ .

<sup>9</sup> Chi-Square tests:  $\chi^2 (1, N=603) = 12.67, p < 0.001$ .

<sup>10</sup> Chi-Square tests:  $\chi^2 (1, N=328) = 21.08, p < 0.001$ .

<sup>11</sup> Chi-Square tests:  $\chi^2 (1, N=197) = 17.09, p < 0.001$ .



## DUICA Traffic Safety Culture

CHSC defines traffic safety culture as the shared values, attitudes, and beliefs of a group of people which affect their traffic safety decisions. To determine which values, attitudes, and beliefs are related to a specific traffic safety decision (like to drive after consuming alcohol and cannabis or to intervene with someone who has been using alcohol or cannabis and should not drive), the CHSC uses a behavioral model (Figure 3). Each component of the model is assessed on the survey (the behavioral model predicting intervening behaviors did not include behavioral, normative, or control beliefs due to limitations in the length of the survey). Most components are assessed with two or more questions. The internal reliability of these components is high (as measured by Chronbach's alpha). Linear regression modeling showed that 41% of the variation in intervening behavior among those who reported they were in a situation to intervene is predicted by willingness ( $F(3,328)=76.192, p<0.001$ ). Similarly, 25% of the variation in willingness ( $F(4,317)=26.491, p<0.001$ ) is predicted by attitudes, perceived norms (injunctive and descriptive), and perceived control.

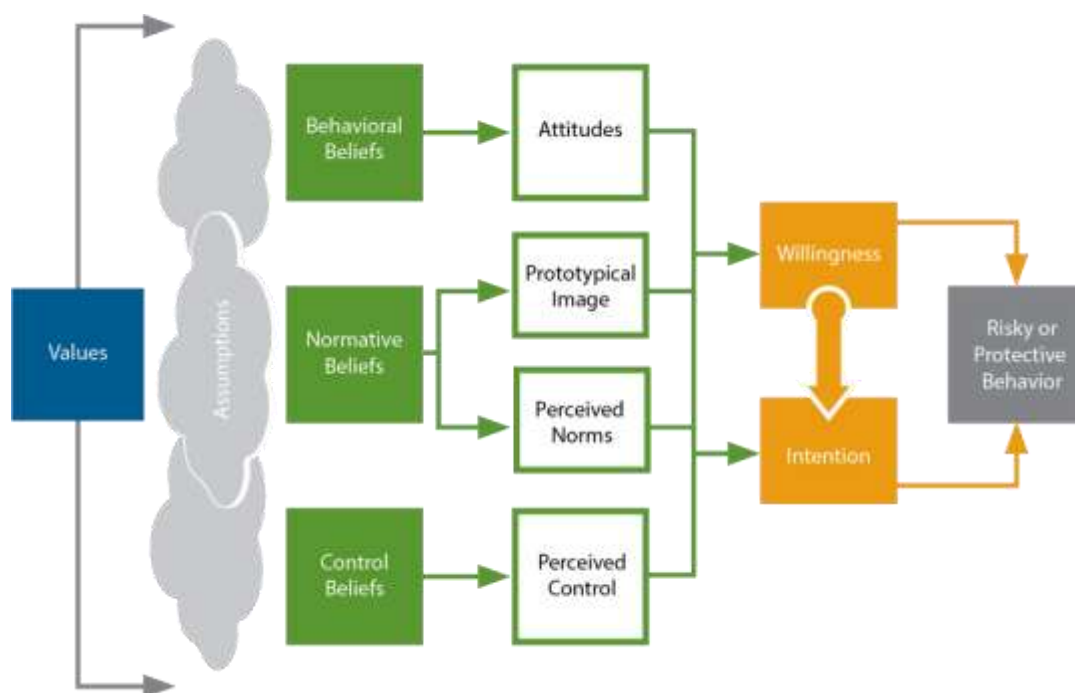
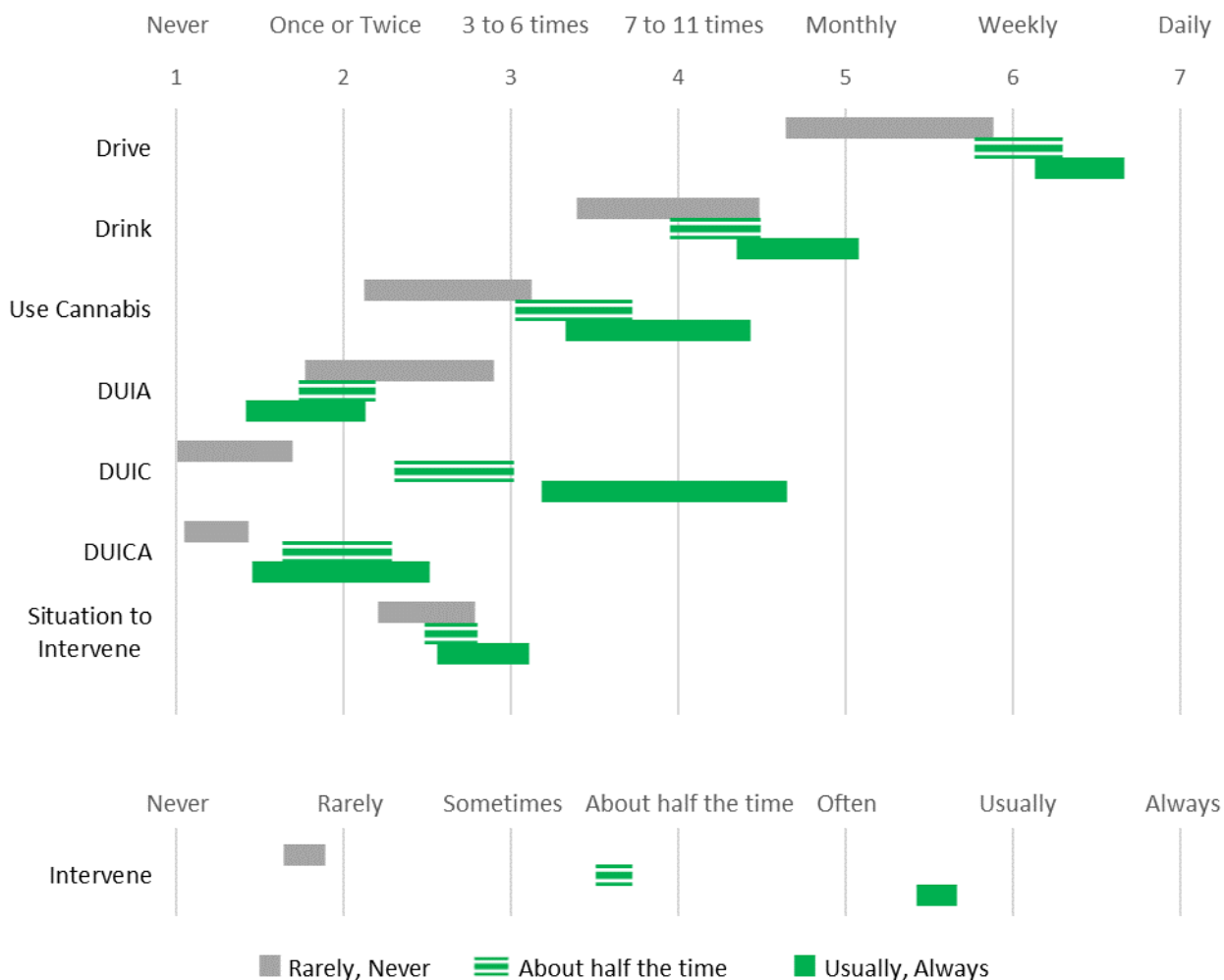


Figure 3. Behavioral Model Used to Inform the Design of the Survey

In the subsequent sections, each component of the behavioral model is explored by comparing the average (i.e., mean) responses of three distinct groups of respondents: those who rarely or never intervened; those who intervened sometimes, about half the time, or often; and those who usually or always intervened. Only respondents who indicated they had been in a situation to intervene in the past 12 months (40% of all respondents) are included. The bars on each graph represent the 95% confidence interval for the mean.

## Basic Behaviors



**Figure 4. Prevalence of Basic Behaviors by Intervening Behaviors**

### Observations

- Among adults in Washington who were in a situation to intervene in the past 12 months, most (81%) did take steps to prevent someone from driving impaired.
- Those who intervene regularly tend to drive slightly more often, drink slightly more often, and use cannabis slightly more often than those who rarely or never intervene.
- Those who intervene regularly also DUIC more often than those who rarely or never intervene.
- Frequency of intervening does not seem to vary significantly based on how often an individual is in a situation to intervene.

## Overall Intervention Behavioral Model

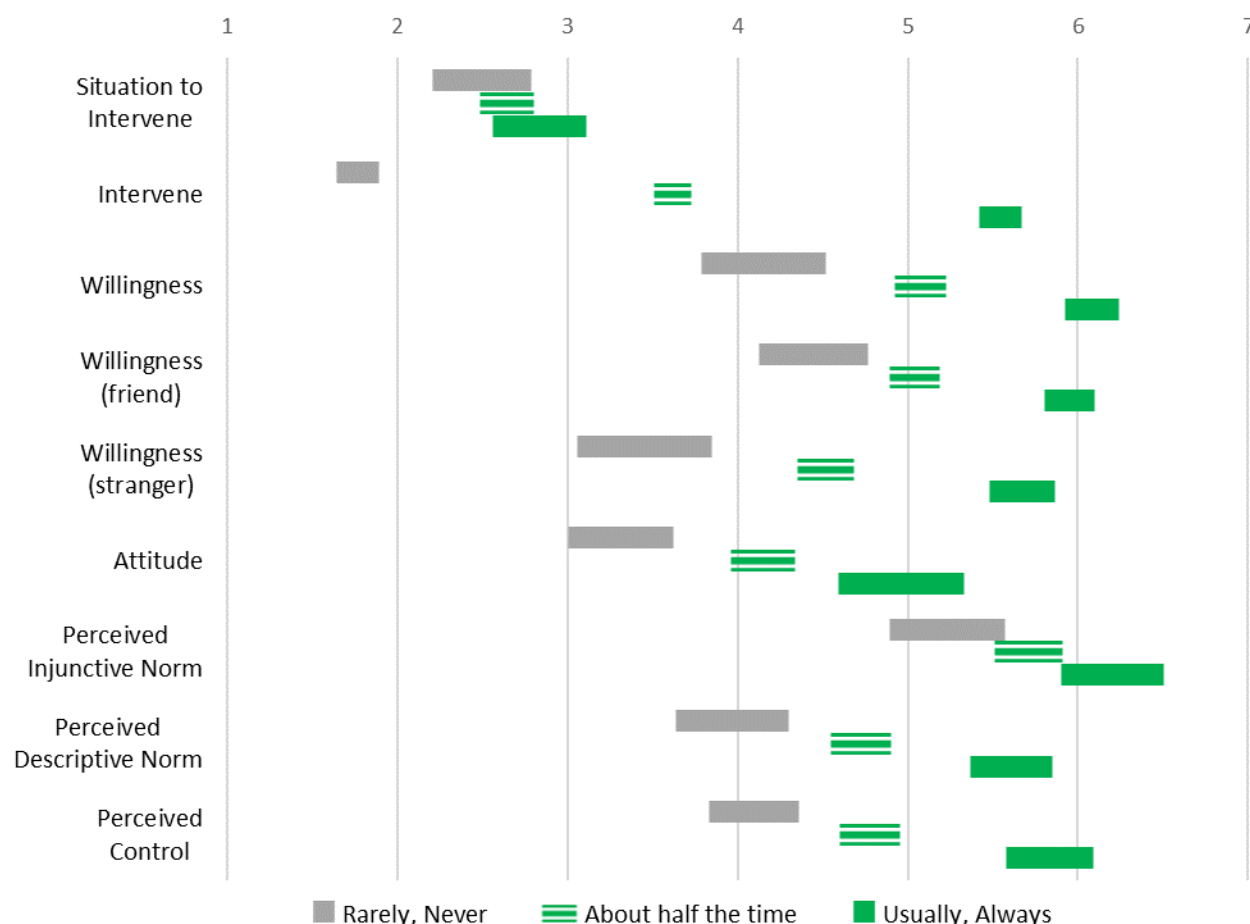


Figure 5. Means of Model Components

### Observations

- Those who regularly intervene have a much higher willingness to intervene with both a friend and a stranger.
- Those who regularly intervene tend to have a positive attitude (e.g., greater than 4) about intervening while those who rarely or never intervene tend to have a negative attitude (e.g., less than 4).
- On average, most people have a perception that people should intervene (perceived injunctive norm); however, those who intervene regularly perceive it to be more acceptable.
- Those who rarely or never intervene perceive intervening behaviors as less prevalent than those who regularly intervene (perceived descriptive norms).
- Those who regularly intervene have a greater sense of control about intervening (perceived control).



## Willingness to Intervene with a Friend or Stranger

Respondents were provided two scenarios (one with a friend, one with a stranger) that described the individual as drinking alcohol and then consuming cannabis. The respondent was then asked how willing they would be to engage in different strategies to prevent the person from driving.

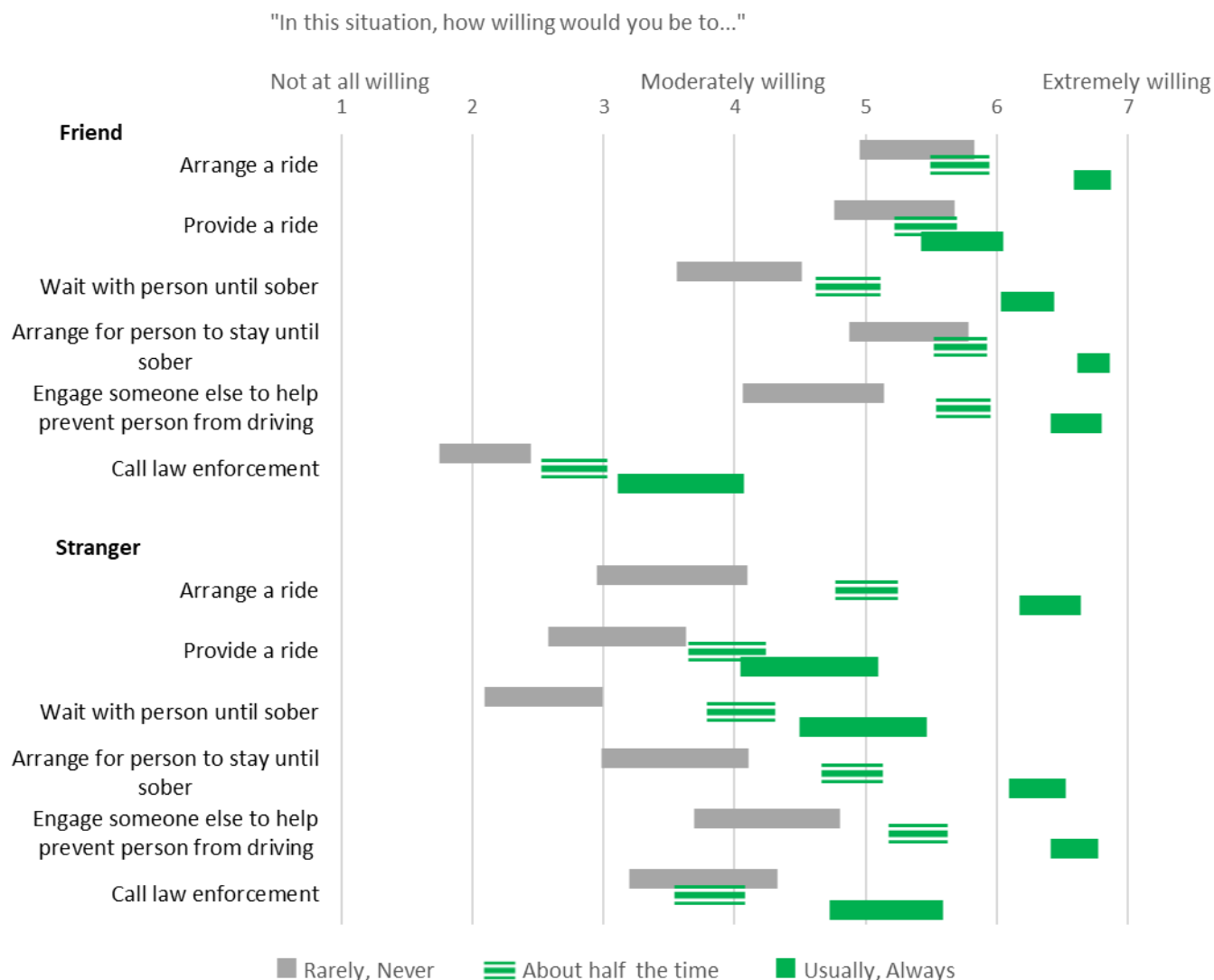


Figure 6. Means of Willingness to Intervene with a Friend or Stranger

### Observations

- Overall, people have higher level of willingness to intervene with a friend than a stranger. Nonetheless, on average, many people have moderate or more willingness to intervene with a stranger.
- People have the highest willingness to arrange a ride or arrange for the person to stay where they are until sober.
- People have much less willingness to call law enforcement.

## Attitude

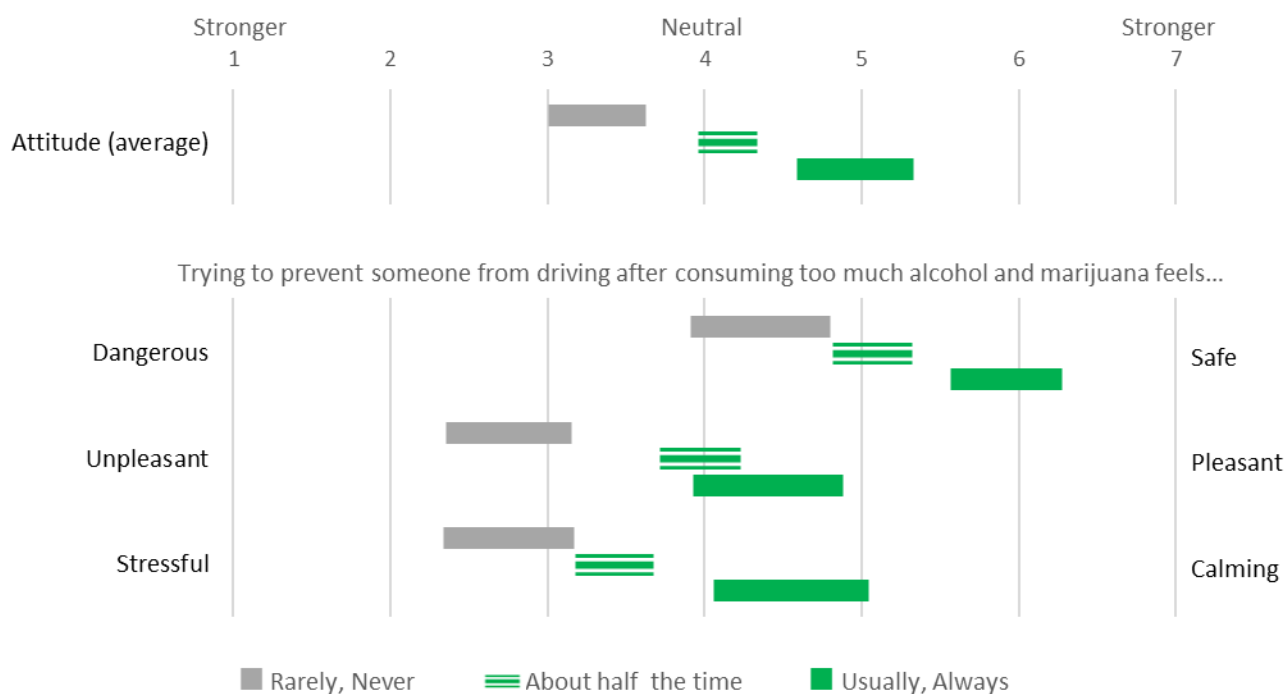
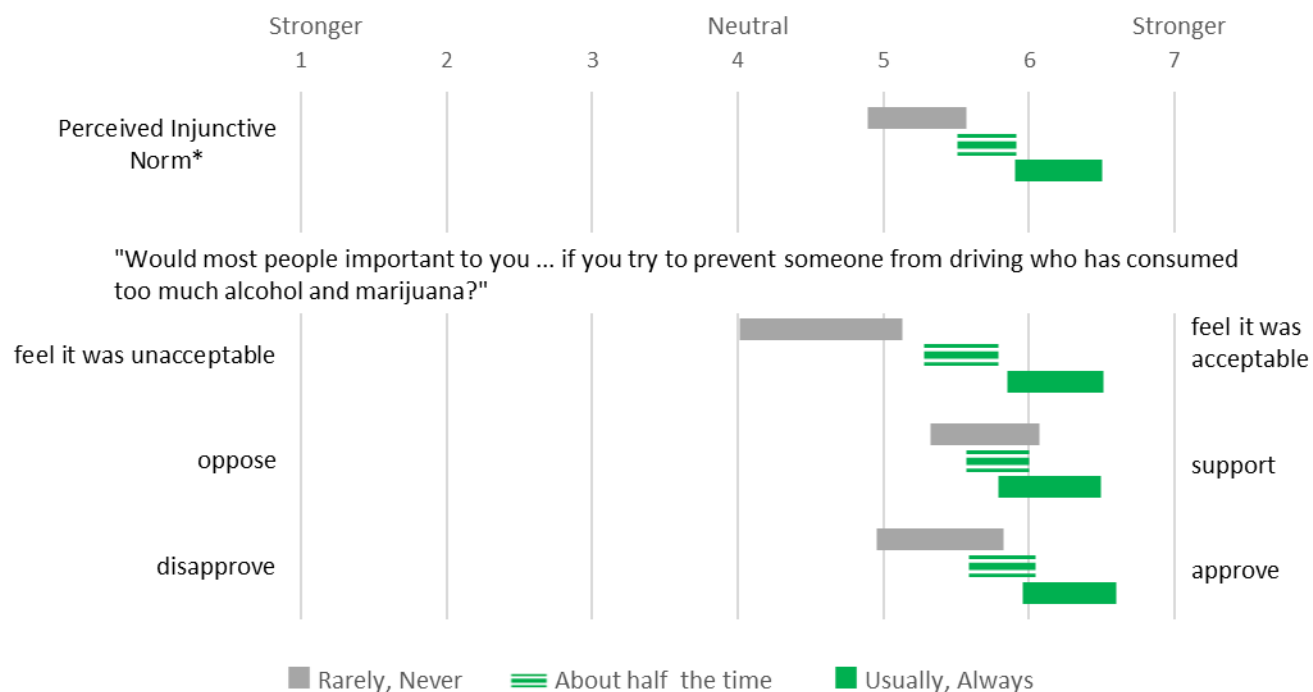


Figure 7. Means of Attitudes

### Observations

- Overall, people feel intervening is safe, although those who intervene regularly feel it is safer than those who intervene rarely or never.
- Those with a positive attitude about intervening are twice as likely to intervene compared to those with a negative attitude.
- People who rarely or never intervene feel it is unpleasant and stressful.

## Perceived Injunctive Norms



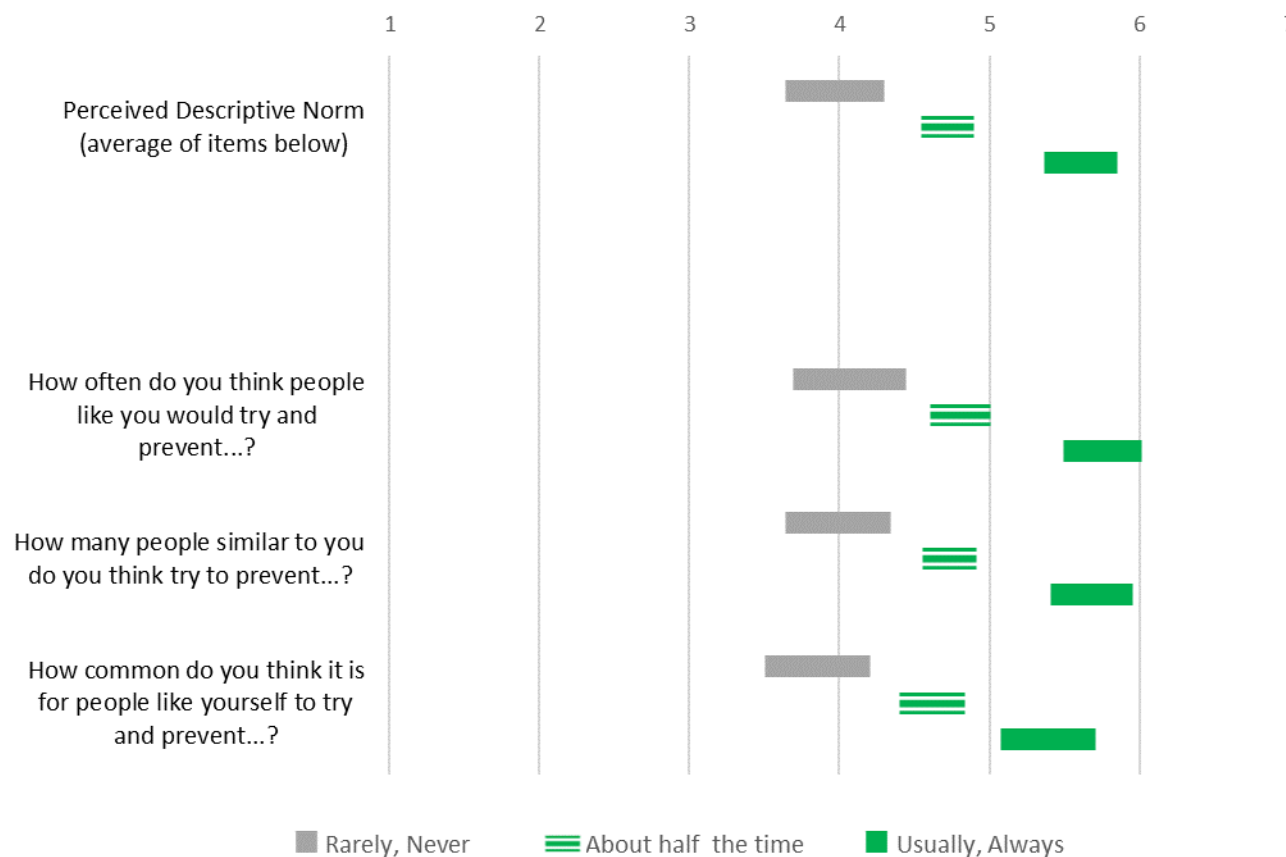
**Figure 8. Means of Perceived Injunctive Norms**

### Observations

- On average, respondents believe that most people important to them feel intervening is acceptable, would support them, and approve of intervening.
- Those with stronger supportive beliefs about intervening are more than 1.5 times as likely to intervene compared to those with less supportive beliefs.

\*Perceived Injunctive Norm is an average of responses to three questions: How much do you agree or disagree: "If I really wanted to, I could try and prevent someone from driving who has consumed too much alcohol and marijuana." How easy or difficult would it be for you to try and prevent someone from driving who has consumed too much alcohol and marijuana? How comfortable would you be to try and prevent someone from driving who has consumed too much alcohol and marijuana?

## Perceived Descriptive Norms



**Figure 9. Means of Perceived Descriptive Norms**

### Observations

- People who intervene regularly perceive intervening to be more common and typical.
- Those who perceive most people intervene are 2.5 times more likely to intervene as compared to those who perceive most people do not regularly intervene.

## Perceived Control

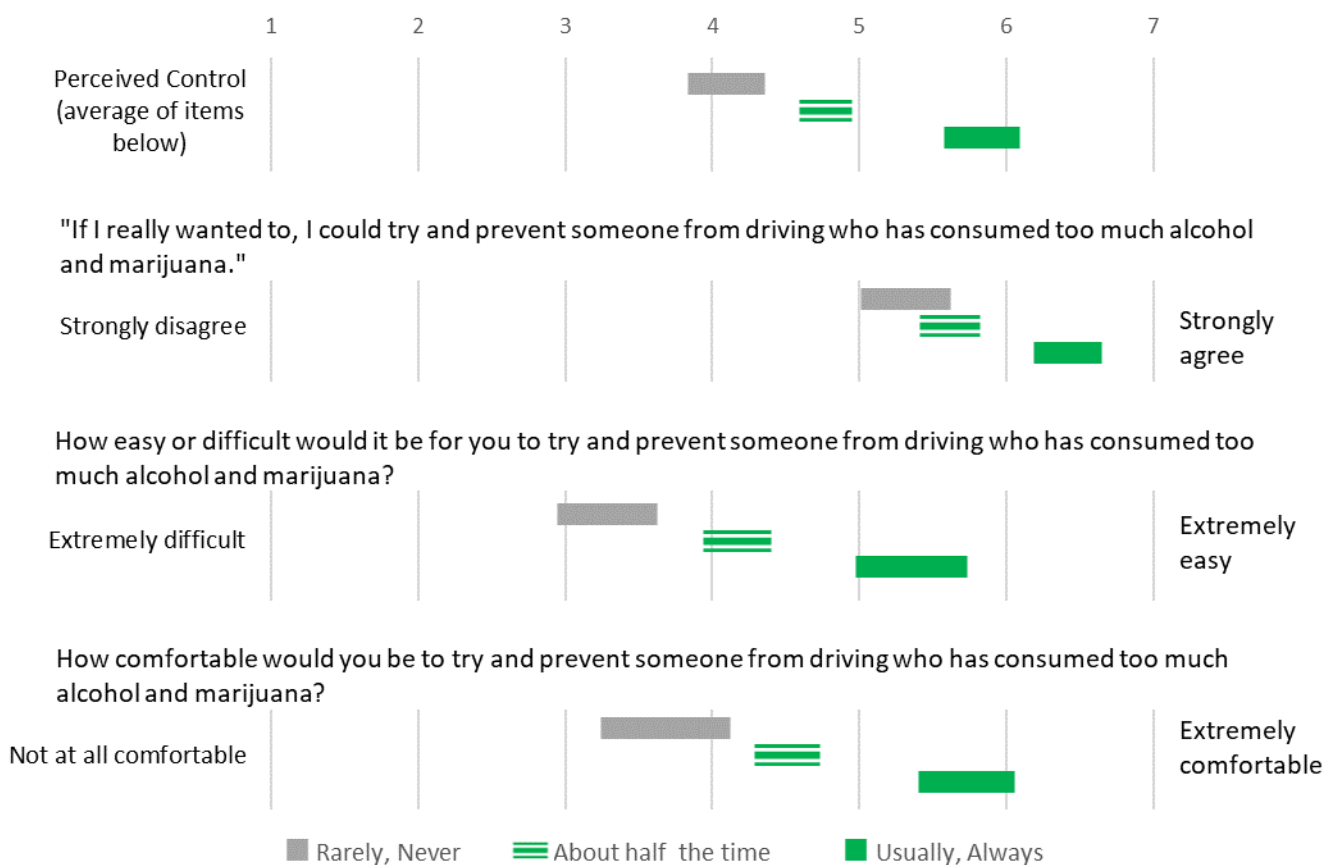


Figure 10. Means of Perceived Control

### Observations

- On average, respondents feel like they could intervene if they wanted to.
- Those who have high levels of perceived control about intervening are more than twice as likely to intervene compared to those with low levels of perceived control.
- Those who intervene regularly report it is easier compared to those who intervene rarely or never.
- Those who intervene regularly are more comfortable intervening than those who intervene rarely or never.

## Values



Figure 11. Means of Values

### Values

Broad-mindedness (beauty of nature and arts, social justice, a world at peace, equality)

Helpfulness (honesty, forgiveness, loyalty, responsibility)

Conformity (obedience, honoring parents and elders, self-discipline, politeness)

Tradition (respect for tradition, humbleness, accepting one's position in life, devotion)

Security (national security, family security, social order, cleanliness)

Power (social power, authority, wealth)

Achievement (success, capability, ambition, influence on people and events)

Enjoyment in life (gratification of desires, self-indulgence)

Stimulation (daring, a varied and challenging life, an exciting life)

Self-Direction (creativity, freedom, curiosity, independence, choosing one's own goals)

### Observations

- Those who intervene regularly tend to value broadmindedness and tradition more than those who intervene less regularly.



## Concern for Traffic Safety

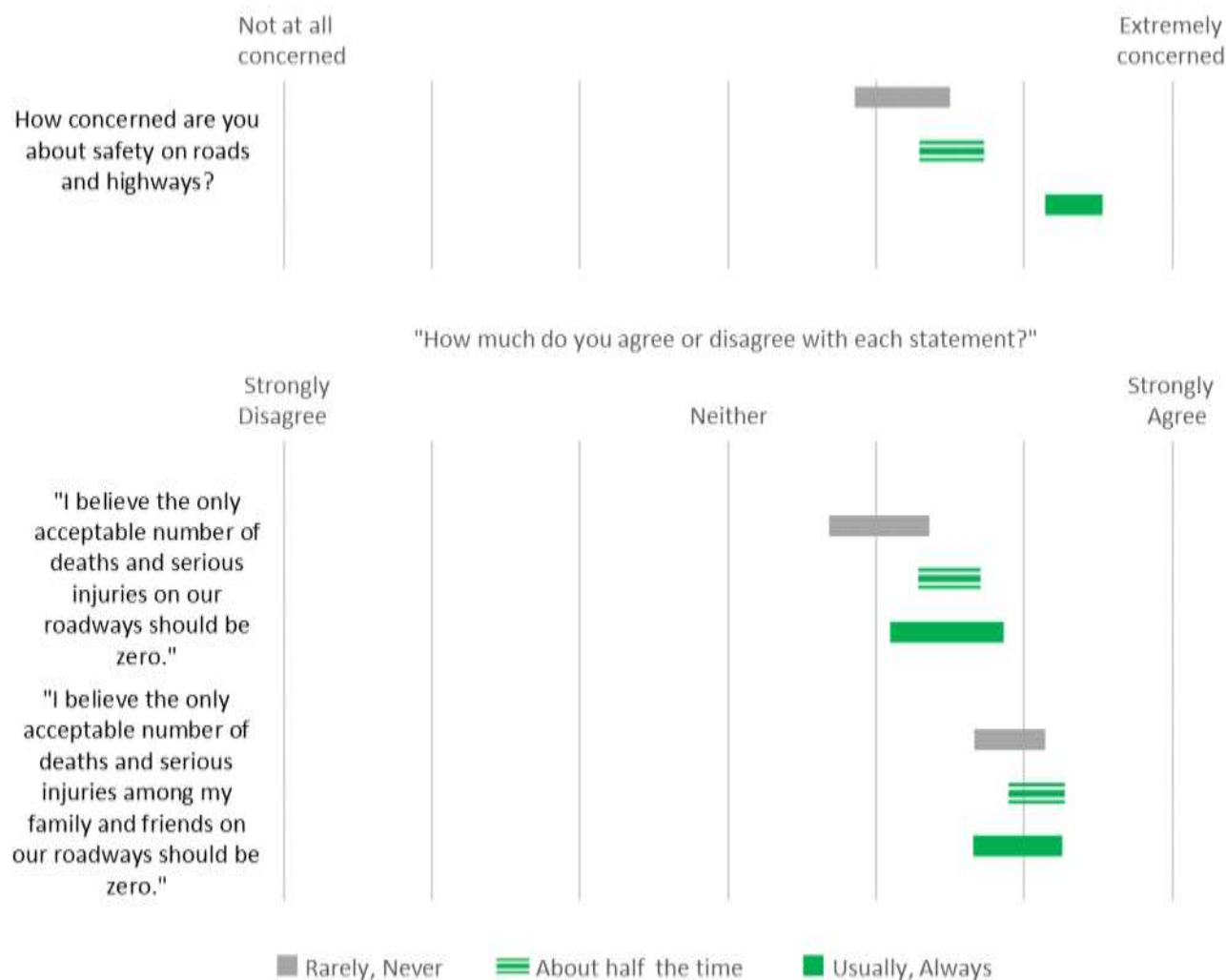
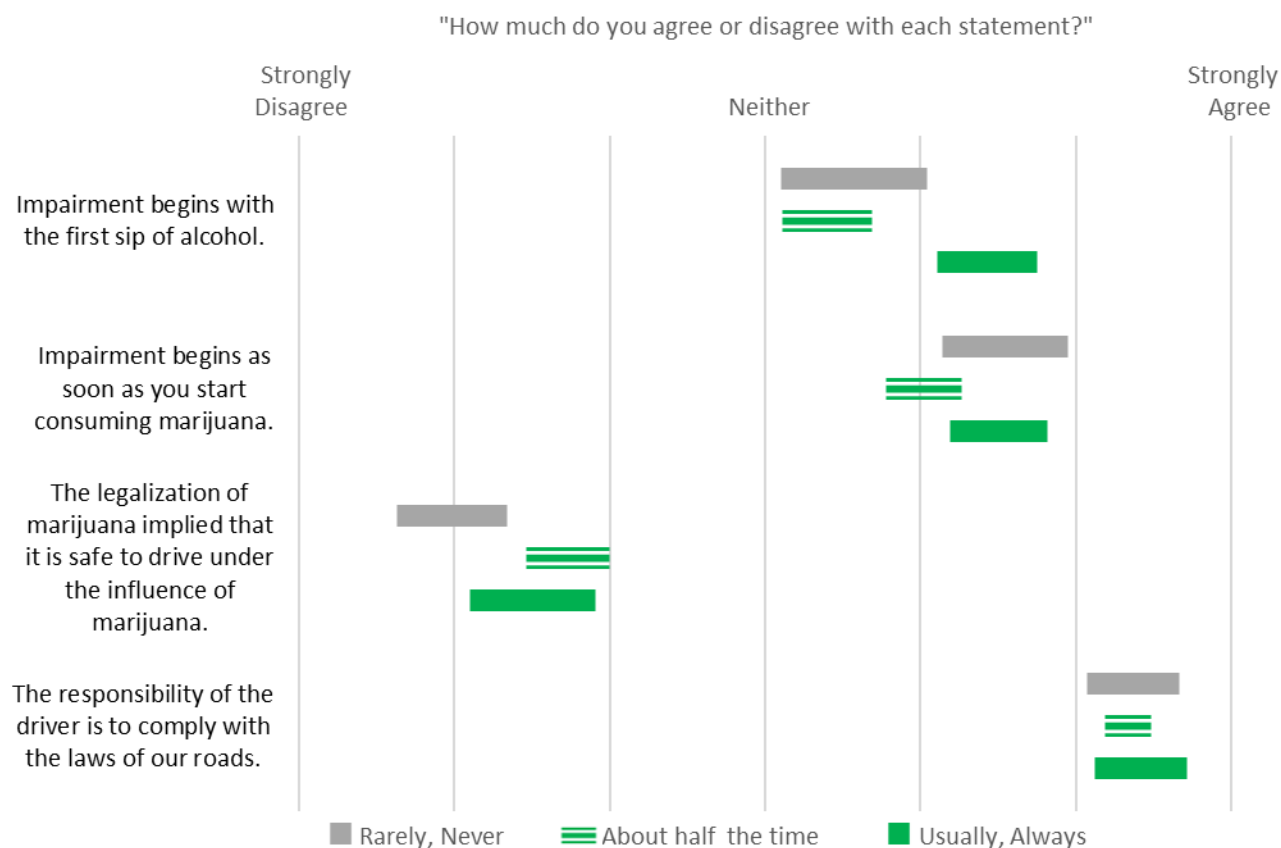


Figure 12. Means of Concern for Traffic Safety

### Observations

- General concern for traffic safety is slightly higher among those intervene regularly.
- All three groups have similar levels of agreement with the goal of zero traffic-related deaths and serious injuries.

## Assumptions



**Figure 13. Means of Assumptions**

## Observations

- On average, most people tend to agree (although not strongly) that impairment begins with the first sip of alcohol or as soon as you start consuming cannabis.
- Those who intervene regularly are more likely to agree that impairment begins with the first sip of alcohol.
- All three groups have similar beliefs about the impact of legalization on beliefs about DUI and the responsibility of drivers to comply with roadway laws.

## What YOU Can Do

While the results show that many adults have healthy beliefs, attitudes, and behaviors about intervening to prevent driving after consuming alcohol and cannabis, there are opportunities to improve.

- Share these results with community members, key stakeholders, and local leaders. Use the questions listed below to foster constructive dialogue.
- Frame communications about impaired driving in the context of safety.
- Review materials, media, and strategies and revise or augment language to establish that:
  - Driving after consuming alcohol or cannabis increases the risk of a crash.
  - Most people are very concerned about traffic safety and agree with the goal of zero traffic fatalities.
  - Most people believe drivers are responsible for obeying traffic laws.
  - There is a sense of approval and support for people who intervene.
  - There are safe ways to prevent someone from driving impaired.
  - Many people do intervene to prevent someone from driving impaired, especially friends, but also strangers.
- Establish and frame intervening as an example helpfulness.
  - “It’s what we do.”
  - “It’s part of my commitment to being a good Washington citizen.”
  - “If I was in that situation, I would want help too.”
- Provide examples of intervening and opportunities to practice (e.g., in driver’s education).
  - Use universal media to demonstrate intervention (demonstrate that it is easy and safe).
  - Normalize a culture of intervening (make it expected and typical).
- Create services to support those seeking to intervene.
  - Facilitate providing someone a ride home with no risk to person intervening.
- Increase sense of community and grow social capital.
  - Make strangers seem less like strangers; make them a “part of our village.”

### Questions to Foster Meaningful Dialogue

#### Questions to Focus Collective Attention

- What opportunities can you see that the data are revealing?
- What do we still need to learn about this issue?
- What would someone who had a very different set of beliefs than you do say about these data?

#### Questions to Reveal Deeper Insights

- What has had real meaning for you from what you’ve seen in the data?
- What surprised you? What challenged you? What encouraged you?
- What needs clarification?
- What’s been your major learning, insight, or discovery so far from these data?

#### Questions to Create Forward Movement

- What’s possible here?
- What will it take to create change?
- What needs our immediate attention going forward?

Adapted from Brown, J., Isaacs, D., Community, W. C., Senge, P., & Wheatley, M. J. (2005). *The World Café: Shaping Our Futures Through Conversations That Matter* (1st edition). San Francisco, CA: Berrett-Koehler Publishers.



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