Survey of U.S. Drivers about Marijuana, Alcohol, and Driving

December 2016

Angela H. Eichelberger
Insurance Institute for Highway Safety

1005 N. Glebe Road, Suite 800
Arlington, VA 22201
+1 703 247 1500

iihs.org

ABSTRACT

Objective: The primary goals were to gauge current opinions and behaviors related to driving after using marijuana and driving after drinking alcohol, and to examine how these responses vary by state laws on marijuana.

Methods: During July-October 2015, drivers 18 and older completed telephone interviews about their opinions on marijuana, alcohol, and driving, and their marijuana and alcohol use and driving. The study included representative samples of 1,508 drivers in three states with legalized marijuana for recreational use (Colorado, Oregon, and Washington), 2,510 drivers in five comparison states without legalized marijuana for recreational use (Idaho, Montana, Nebraska, Utah, and Wyoming), and 507 drivers in other states and the District of Columbia.

Results: Drivers were more likely to say that drinking and driving is a problem in their community than driving after using marijuana (64% vs. 29%). Drivers were more likely to agree that drinking and driving, relative to driving after using marijuana, is common in the community (56% vs. 34%) and increases the likelihood of a crash (98% vs. 78%). Reported alcohol use (57%) was far more prevalent than marijuana use (9%) within the past year. Drivers in states with legal recreational marijuana, relative to those in comparison states, more often said driving after using marijuana is a problem (43% vs. 28%), were twice as likely to report using marijuana within the past year (16% vs. 8%), more often were drinkers (60% vs. 46%), and more often had driven within 2 hours of using marijuana (6% vs. 3%) or drinking (21% vs. 15%).

Conclusions: Driving after drinking remains a bigger concern for the public than driving after using marijuana. However, this gap may narrow as states implement laws legalizing marijuana for recreational use. This survey can serve as a baseline for monitoring changes over time.

Keywords: marijuana**;** cannabis**;** alcohol; impaired driving

Research topics: Alcohol and drugs: Drinking and driving; Alcohol and drugs: Drugs other than alcohol

INTRODUCTION

In the United States, the issue of driving after using marijuana is receiving increased attention as several states have legalized marijuana for medical and/or recreational use. As of December 2016, 28 states and the District of Columbia have comprehensive medical marijuana programs (National Conference of State Legislatures 2016a), and 8 of these states (Alaska, California, Colorado, Maine, Massachusetts, Nevada, Oregon, Washington) and the District of Columbia also have legalized marijuana for recreational use by adults 21 and older (National Conference of State Legislatures 2016b).

According to national surveys, both support for legalizing marijuana and use of marijuana are rising. About one quarter of the U.S. population supported marijuana legalization throughout the 1980s and 1990s, and support rose to 36% by 2005 and a high point of 58% in 2015 (Jones 2016). Self-reported past-month marijuana use among ages 12 and older increased from 6% in 2005 to 8% in 2014 (Center for Behavioral Health Statistics and Quality 2015), and self-reported past-year marijuana use among U.S. adults increased from 4% in 2001-02 to 10% in 2012-13 (National Institute on Alcohol Abuse and Alcoholism 2015). Marijuana was the most prevalent drug among weekend, nighttime drivers tested in the 2013-14 National Roadside Survey, with 13% testing positive for marijuana in oral fluid and/or blood, up from 9% in 2007 (Berning et al. 2015). A roadside survey conducted in Washington found that 18% of weekend, nighttime drivers tested positive for marijuana in 2014, before retail marijuana sales were effective (Ramirez et al. 2016). One year after retail sales were effective, 22% of weekend, nighttime drivers tested positive for marijuana.

Until recently, there has been limited data regarding opinions about marijuana and driving. The AAA Foundation for Traffic Safety began adding questions pertaining to drugs and driving in the 2013 Traffic Safety Culture Index, an annual survey of a representative sample of U.S. drivers ages 16 and older. In the most recent survey (2015), 91% of drivers said it is unacceptable to drive within one hour of using marijuana, and few drivers (4%) said they had done so in the past year (AAA Foundation for Traffic Safety 2016). In comparison, 97% of drivers said it is unacceptable to drive after having too much to drink, and 13% reported driving when they thought their alcohol level might have been close to or over the legal limit within the past year. A 2015 Gallup survey found respondents were much more likely to

think that people driving while impaired by alcohol was a very serious problem (79%) compared with driving while impaired by marijuana (29%; Ander and Swift 2016).

Previous surveys provide limited information regarding opinions about using marijuana before driving. For example, the public may view marijuana use before driving as less of a problem than drinking and driving because they think it is less risky or because they consider it less common. Thus, the current study sought to understand drivers' perceptions of crash risk, prevalence, and effects associated with driving after using marijuana or alcohol. The goals were to gauge current opinions and behaviors related to driving after using marijuana and driving after drinking alcohol; to compare responses for marijuana and alcohol; and to examine how responses vary by sociodemographic factors and presence or absence of a state law legalizing marijuana for recreational use.

METHODS

Data Collection

Participation was restricted to drivers 18 and older. A national sample pool of 147,104 telephone numbers (50% landline and 50% cellphone) was constructed. Eight states were oversampled: three states with legalized marijuana for recreational use (Colorado, Oregon, and Washington) and five comparison states without legalized marijuana for recreational use (Idaho, Montana, Nebraska, Utah, and Wyoming). From the initial sample pool, 13,803 households were reached, and 4,525 drivers completed interviews, which includes 1,508 drivers in the three recreational marijuana states, 2,510 drivers in the five comparison states, and 507 drivers in other states and the District of Columbia. Thus, the overall cooperation rate was 33%. Young people ages 18-29 were oversampled, so that they comprised approximately 25% of the samples in each oversampled state and in the rest of the nation. Those not participating included 3,734 who were not qualified and 1,143 who were over age or state quotas.

Experienced interviewers from Opinion America Group, LLC, a professional survey organization, conducted telephone interviews from July to October 2015. After an initial screening, adults who said they had driven within the past week were asked about their opinions and behaviors related to driving after using marijuana or drinking alcohol, including their perceptions of whether these behaviors are a problem, are common in their community, and increase crash risk. Drivers were also asked for their opinions on marijuana legalization. Behavior questions included drinking, marijuana use, changes in drinking or

marijuana use, and driving after using either marijuana or drinking alcohol. Demographic questions included age, sex, education level, and annual household income.

Weighting

Weighting was used to create nationally representative estimates. Post-stratification weights were calculated using U.S. Census estimates for age, sex, and population by state for 2014 (U.S. Census Bureau 2015). The data were stratified by age group (18-29, 30-69, 70 and older), sex, and sample (i.e., Colorado, Oregon, Washington, Idaho, Montana, Nebraska, Utah, Wyoming, and other), and a weight for each of these groups was calculated by dividing the population percentage by the sample percentage. For analyses comparing certain subgroups (recreational marijuana states vs. comparison states, age groups, and males vs. females), weights were computed in the same manner for each of the subgroups. Analyses using other subgroups (e.g., drivers who supported vs. opposed legalized recreational marijuana) were based on national weights.

One method of calculating the precision of estimates based on weighted data is to rescale the weights using the *effective sample size*. The effective sample size is defined as the size of a simple random sample that would yield the same precision as the weighted sample. Kish (1965) gives the effective sample size as

$$N_e = [\sum w_i]^2 / [\sum w_i^2],$$

where w_i = weight of the i^{th} respondent.

All post-stratification weights were multiplied by the common factor N_e / N, so that the total of the weights was equal to the effective sample size, rather than the actual sample size. For example, the effective sample size for the total sample was 562 and actual sample size was 4,525, so the weights used for national estimates were multiplied by 562 / 4,525. Analyses comparing recreational marijuana states and comparison states were based on 8 heavily sampled states, and post-stratification weights were specific to these subgroups; thus, effective sample sizes were relatively larger for these subgroups (1,367 for recreational marijuana states and 1,957 for comparison states) compared with the total sample (562).

Analyses

All responses were weighted as described above, and descriptive statistics were computed for the total sample and subgroups of interest. The margin of sampling error was calculated based on effective sample size. At a 95% level of confidence the margin of sampling error was ± 4 percentage points for national estimates, ± 3 percentage points for estimates based on recreational marijuana states, and ± 2 percentage points for estimates based on comparison states. The margin of sampling error was larger for estimates based on subsets of the national sample: ± 6 percentage points for males, females, ages 30-59, and drivers who supported or opposed legalization; ± 7 percentage points for ages 60 and older; and ± 8 percentage points for ages 18-29.

Two-tailed paired sample t-tests were used to test differences in responses to marijuana and alcohol questions. Chi-square analysis was used to test differences in survey responses by whether drivers supported legalized recreational marijuana, by state group (legalized recreational marijuana vs. comparison states), and by sociodemographic variables. The Mantel-Haenszel chi-square statistic tested the significance of linear associations between age, income, and education level with other variables, and Pearson's chi-square statistic tested significance in other analyses. Response categories were collapsed where appropriate. All analyses used weighted data and were based on effective sample sizes. Results were considered statistically significant at the 0.05 level.

RESULTS

Sample Characteristics

Table 1 summarizes the characteristics of the weighted sample. Overall, 22% of drivers were ages 18-29, 44% were ages 30-59, and 34% were 60 and older. About half were female, three-quarters had attended college or held a college or graduate degree, and about half reported an annual household income of $50,000 or greater. The distributions of these characteristics were similar among drivers in the recreational marijuana states and in the comparison states.

National Estimates

Drivers were significantly more likely to say that drinking and driving is a problem in their community than driving after using marijuana (64% vs. 29%; Table 2). Drivers were significantly more

likely to agree that drinking and driving, relative to driving after using marijuana, is common in the community (56% vs. 34%) and increases the likelihood of a crash (98% vs. 78%). Compared with alcohol, 46% of drivers thought marijuana's effects on driving are about the same, 34% thought the effects are better, 9% thought the effects are worse, and 11% did not know or refused the question (not shown in table).

Reported drinking was far more prevalent (57%) than marijuana use within the past year (9%; Table 3), and this difference was statistically significant. A significantly bigger proportion of drivers said they had driven within two hours of drinking (19%) compared with driving after using marijuana (3%) during the past year. Most drivers who had driven after using marijuana or drinking alcohol did not think it affected their driving (75% of marijuana users and 82% of drinkers). Drivers who used marijuana within the past year or drank alcohol were asked how these substances might affect their driving and were read a list of possible effects. A majority of marijuana users (54%) agreed marijuana might cause them to drive slower than normal. Among drinkers, the most frequently recognized effects of alcohol on driving were slowed reaction time (72%), impaired judgment (67%), and distraction or reduced concentration (64%).

A large majority (80%) of drivers supported legalizing marijuana for medical use, and 42% supported legalizing it for recreational use by people 21 and older (Table 4). About half of drivers thought legalized medical marijuana would have an effect on traffic safety, and three-quarters thought legalized recreational marijuana would have an effect on traffic safety. Among drivers who thought legalization would have an effect on highway safety, the most frequently mentioned effect of legalization was driver impairment.

Differences in Responses by State Law

Drivers in states with legalized recreational marijuana, relative to those in comparison states, more often said driving after using marijuana is a problem (43% vs. 28%), were twice as likely to report using marijuana within the past year (16% vs. 8%), more often were drinkers (60% vs. 46%), and more often had driven within two hours of using marijuana (6% vs. 3%) or drinking (21% vs. 15%; Table 5); these differences were statistically significant. Drivers in recreational marijuana states, relative to those in comparison states, were significantly more likely to report an increase in marijuana use (3% vs. <1%) or a decrease in drinking (18% vs. 14%) during the past three years.

Differences in Responses by Support for Legalization

Differences in responses were examined by whether drivers supported or opposed legalized recreational marijuana (not shown in tables). Drivers who supported legalized recreational marijuana, compared with those who opposed it, were significantly less likely to see driving after using marijuana as a problem (18% vs. 39%) or as increasing crash risk (61% vs. 91%), were significantly less likely to think legalization would have an effect on highway safety (56% vs. 90%), and were significantly more likely to think that marijuana's effects on driving were better than alcohol's effects (53% vs. 20%). Drivers who supported legalized recreational marijuana, compared with those who opposed it, were significantly more likely to report ever using marijuana (64% vs. 24%) or drinking (67% vs. 49%). Opinions about drinking and driving did not differ significantly by whether drivers supported or opposed legalized recreational marijuana.

Differences in Responses by Sociodemographic Variables

Differences in responses were examined by age, sex, education level, and annual household income (demographics other than age not shown in tables). Drivers' perceptions that driving after using marijuana is a problem and that it is common did not differ significantly by age (Table 6). However, age was significantly associated with the perception that marijuana increases crash risk. Young drivers (ages 18-29) were less likely to agree that driving after using marijuana increases crash risk (71%), compared with drivers ages 30-59 (78%) and 60 and older (82%). Young drivers were significantly more likely to report past year marijuana use (19%), compared with drivers ages 30-59 (8%) and 60 and older (4%).

Women, compared with men, were significantly more likely to say drinking and driving is a problem (70% vs. 58%), but women and men were about equally likely to say driving after using marijuana is a problem (30% vs. 28%). Women were significantly more likely to agree that driving after using marijuana increases crash risk (82%), compared with men (73%). Support for legalized medical marijuana did not differ significantly between men and women (82% vs. 78%). However, there was stronger support for legalized recreational marijuana among men (50%), compared with women (33%). Women were significantly more likely to think legalized recreational marijuana would have an effect on highway safety (80%), compared with men (70%). There were no other statistically significant differences in opinions between men and women.

Men, compared with women, were significantly more likely to report ever using marijuana (54% vs. 30%), using it within the past year (11% vs. 6%), or using it within 2 hours of driving during the past year (4% vs. 1%). Men, compared with women, were significantly more likely to report drinking (66% vs. 49%) or drinking within 2 hours before driving during the past year (28% vs. 11%).

Opinions regarding marijuana and alcohol were very similar among drivers of different education and income levels, with a few exceptions. Drivers with a high school education or less were significantly more likely to agree that drivers impaired by marijuana or alcohol are likely to be stopped and arrested by police (58% for marijuana and 80% for alcohol), compared with those who attended or graduated from college (49% for marijuana and 70% for alcohol) or graduate school (44% for marijuana and 58% for alcohol). Similarly, annual household income was inversely associated with perceptions that drivers impaired by marijuana or alcohol are likely to be stopped and arrested by police. Drivers who reported annual incomes of $50,000-74,999 were most likely to say that driving after using marijuana is common in their communities (42%), followed by those reporting incomes of $30,000-49,999 (39%), less than $30,000 (36%), $75,000-99,999 (29%), and $100,000 or more (26%).

Drivers with a high school education or less were less likely to report drinking alcohol (40%), compared with those who attended or graduated from college (61%) or graduate school (66%), and annual household income was positively associated with self-reported drinking and ever having used marijuana.

DISCUSSION

Nationally, drivers more often perceived drinking and driving as a problem than driving after using marijuana and were more likely to think drinking and driving was common and likely to increase crash risk. This difference in perceptions may be due to the overwhelming and well-publicized research on the dangers of drinking and driving. On the other hand, the risks associated with driving after using marijuana are as yet unclear (Compton and Berning 2015). Reported alcohol use and driving after drinking alcohol were far more prevalent than reported marijuana use and driving after using marijuana. Past-year marijuana use in the current survey (9%) was the same as a 2015 national survey of drivers (9%; Arnold and Tefft 2016) and similar to a 2012-13 national survey of U.S. adults (10%; National Institute on Alcohol Abuse and Alcoholism 2015). However, the percentage of drivers who reported that they drink alcohol in

the current survey (57%) was much lower than the percentage of drinkers in a 2015 survey of drivers (65%; Arnold and Tefft 2016) and the percentage of past-year drinkers in a 2012-13 national survey (73%; Dawson et al. 2015).

There was overwhelming support for legalized medical marijuana, whereas less than half of drivers supported legalized recreational marijuana. Drivers in recreational marijuana states, drivers under age 30, and males were most likely to support legalized recreational marijuana. Responses to most questions about marijuana differed by whether drivers supported legalized recreational marijuana in the expected directions. For example, those who supported legalized recreational marijuana were less likely to think it would affect highway safety than those who opposed legalization.

There were some sociodemographic differences in opinions and reported behaviors. Drivers ages 29 and younger, relative to drivers ages 30 and older, and men, relative to women, were less likely to perceive marijuana as increasing crash risk and were much more likely to report using marijuana within the past year. Compared with responses to questions about marijuana, differences between young and older drivers were not as large regarding perceptions of crash risk for alcohol and reported drinking. Most opinions about marijuana and alcohol were similar among drivers of different income and education levels.

Substantial differences in attitudes and behaviors were reported by drivers in states with legal recreational marijuana compared with comparison states. Although drivers in recreational marijuana states, relative to those in comparison states, were more likely to support legalized marijuana, they were more likely to perceive driving after using marijuana as a problem. Recreational marijuana states had higher reported prevalence of both drinking and driving and driving after using marijuana, compared with comparison states.

This study has some limitations. It is unclear whether differences between drivers in states with and without recreational marijuana were influenced by law changes or whether these differences existed prior to legalization. At the time of the survey, Oregon did not allow retail sales of marijuana, and the prevalence of marijuana use in that state may change after the law is fully implemented. Behaviors seen as controversial by some, such as marijuana use, may be underreported, especially in states without

legalized marijuana. Thus, differences in marijuana use between the two groups of states may be overestimated.

Driving after drinking remains a bigger concern for the public than driving after using marijuana. However, this gap may narrow as states implement laws legalizing marijuana for recreational use. This survey can serve as a baseline for monitoring changes over time.

ACKNOWLEDGEMENTS

This work was supported by the Insurance Institute for Highway Safety.

REFERENCES

AAA Foundation for Traffic Safety. 2015 Traffic Safety Culture Index. Washington, DC: AAA Foundation for Traffic Safety; 2016.

Ander S, Swift A. More say alcohol threatens auto safety than pot, pills. 2015. Available at: http://www.gallup.com/poll/183878/say-alcohol-threatens-auto-safety-pot-pills.aspx. Accessed April 11, 2016.

Arnold L, Tefft BC. Driving under the influence of alcohol and marijuana: beliefs and behaviors, United States, 2013-2015. Washington, DC: AAA Foundation for Traffic Safety; 2016.

Berning A, Compton R, Wochinger K. Results of the 2013-2014 National Roadside Survey of alcohol and drugs use by drivers. *Traffic Safety Facts Research Note*. Washington, DC: National Highway Traffic Safety Administration; 2015. Report No. DOT HS 812 118.

Center for Behavioral Health Statistics and Quality. Behavioral health trends in the United States: Results from the 2014 National Survey on Drug Use and Health (HHS Publication No. SMA 15-4927, NSDUH Series H-50). Rockville, MD: Substance Abuse and Mental Health Services Administration; 2015.

Compton R, Berning A. Drug and alcohol crash risk. *Traffic Safety Facts Research Note*. Washington, DC: National Highway Traffic Safety Administration; 2015. Report No. DOT HS 812 117.

Dawson DA, Goldstein RB, Saha TD, Grant BF. Changes in alcohol consumption: United States, 2001-2 to 2012-13. *Drug Alcohol Depend*. 2015;148:56-61.

Jones J. In U.S., 58% back legal marijuana use. 2015. Available at: http://www.gallup.com/poll/186260/back-legal-marijuana.aspx. Accessed April 6, 2016.

Kish L. *Survey Sampling*. New York: Wiley; 1965.

National Conference of State Legislatures. State medical marijuana laws. 2016a. Available at: http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx. Accessed December 2, 2016.

National Conference of State Legislatures. Marijuana overview. 2016b. Available at: http://www.ncsl.org/research/civil-and-criminal-justice/marijuana-overview.aspx. Accessed December 2, 2016.

National Institute on Alcohol Abuse and Alcoholism. Prevalence of marijuana among U.S. adults doubles over past decade [press release]. 2015. Available at: http://www.niaaa.nih.gov/news-events/news-releases/prevalence-marijuana-use-among-us-adults-doubles-over-past-decade. Accessed April 11, 2016.

Ramirez A, Berning A, Carr K, Scherer M, Lacey JH, Kelley-Baker T, Fisher DA. Marijuana, other drugs, and alcohol use by drivers in Washington State. Washington, DC: National Highway Traffic Safety Administration; 2016. Report No. DOT HS 812 299.

U.S. Census Bureau. Annual estimates of the civilian population by single year of age and sex for the United States and states: April 1, 2010 to July 1, 2014. Washington, DC: U.S. Census Bureau; 2015 June.

Table 1 Sample characteristics (weighted percentages)

	Recreational marijuana states (N_e=1,367)	Comparison states (N_e=1,957)	Total (N_e=562)
Age (years)			
18-20	4	6	4
21-24	8	8	7
25-29	10	9	11
30-39	12	12	12
40-49	15	14	14
50-59	19	18	18
60-69	21	20	21
70-79	8	8	9
80 or older	4	4	4
Sex			
Male	49	50	48
Female	51	50	52
Highest grade level completed			
Less than high school	2	3	3
High school diploma or equivalent	22	26	22
Some college or college degree	55	55	53
Some graduate school or graduate degree	20	16	22
Don't know/refused	<1	<1	<1
Annual household income			
Less than $30,000	18	21	19
$30,000 to less than $50,000	20	19	20
$50,000 to less than $75,000	19	21	16
$75,000 to less than $100,000	14	14	15
$100,000 or greater	21	17	21
Don't know/refused	9	8	9
Census region			
Northeast	0	0	15
Midwest	0	24	25
South	0	0	32
West	100	76	28

Note: Percentages do not always sum to 100 percent due to rounding.

Table 2 Drivers' opinions regarding driving after using marijuana or alcohol (weighted percentages)

	Driving after using marijuana (N_e=562)	Driving after drinking alcohol (N_e=562)
Think it is a problem in community		
Yes	29	64
No	46	28
Don't know/refused	25	8
Agree/disagree it is common in community		
Strongly agree	18	28
Somewhat agree	17	28
Neither agree nor disagree	2	1
Somewhat disagree	25	25
Strongly disagree	18	11
Don't know/refused	21	7
Agree/disagree it increases the likelihood of having a crash		
Strongly agree	47	90
Somewhat agree	31	8
Neither agree nor disagree	2	<1
Somewhat disagree	8	1
Strongly disagree	6	1
Don't know/refused	6	<1
Agree/disagree impaired drivers are likely to be stopped and arrested by police		
Strongly agree	21	36
Somewhat agree	30	34
Neither agree nor disagree	4	2
Somewhat disagree	26	18
Strongly disagree	13	8
Don't know/refused	8	2

Note: Percentages do not always sum to 100 percent due to rounding.

Table 3 Drivers' self-reported behaviors regarding marijuana and alcohol (weighted percentages)

	Marijuana	Alcohol
Have you used marijuana within past year?/Do you drink alcohol?	N_e=562	N_e=562
Yes	9	57
No	91	43
Don't know/refused	<1	<1
In the past year, have you used marijuana/alcohol within 2 hours before driving?		
Yes	3	19
No or do not use/drink	97	80
Don't know/refused	<1	<1
In the past year, have you driven when you thought you were over the legal alcohol limit?		
Yes	--	2
No or do not drink	--	98
Don't know/refused	--	<1
(If drove within 2 hours) How do you think it affected your driving?	N_e=14	N_e=109
Made driving worse	8	16
No difference	75	82
Made driving better	16	1
Don't know/refused	<1	1
(If use marijuana/drink alcohol) How might your driving be affected by using marijuana/drinking alcohol?*	N_e=49	N_e=319
Driving slower than normal	54	57
Slowed reaction time	42	72
Drowsiness or fatigue	41	61
Distraction or reduced concentration	35	64
Impaired judgment	35	67
Missing stoplights or stop signs	31	54
Impaired vision	30	60
Difficulty staying in lane	29	58
Driving faster than normal	25	47
No effect on driving	24	11
Other effect	8	6

Note: Percentages do not always sum to 100 percent due to rounding.
*Multiple responses permitted.

Table 4 Drivers' opinions regarding marijuana legalization (weighted percentages)

	Percent
Marijuana should be legal for medical use	N_e=562
Strongly agree	52
Somewhat agree	27
Neither agree nor disagree	2
Somewhat disagree	5
Strongly disagree	11
Don't know/refused	3
Marijuana should be legal for recreational use by adults age 21 and older	
Strongly agree	23
Somewhat agree	18
Neither agree nor disagree	2
Somewhat disagree	12
Strongly disagree	43
Don't know/refused	2
Think marijuana being legal for medical use has an effect on highway safety	
Yes	49
No	38
Don't know/refused	13
(If yes) What effect do you think it has on highway safety?*	N_e=275
Drivers will be impaired	58
Effects similar to alcohol	19
More crashes and/or injuries	13
Negative effect	7
Depends on individual or how much used	2
Other responses	16
Don't know	1
Think marijuana being legal for recreational use has an effect on highway safety	N_e=562
Yes	75
No	17
Don't know/refused	8
(If yes) What effect do you think it has on highway safety?*	N_e=422
Drivers will be impaired	57
Effects similar to alcohol	20
More crashes and/or injuries	18
Negative effect	9
Depends on individual or how much used	1
Other responses	10
Don't know	<1

Note: Percentages do not always sum to 100 percent due to rounding.
*Multiple responses permitted.

Table 5 Differences in opinions and self-reported behaviors by state law (weighted percentages)

	Recreational marijuana states (N_e=1,367)	Comparison states (N_e=1,957)
Marijuana-related opinions and behaviors		
Think driving after using marijuana is a problem in community	**43**	**28**
Agree driving after using marijuana is common in community	**49**	**30**
Agree driving after using marijuana increases the likelihood of having a crash	**75**	**79**
Agree drivers impaired by marijuana are likely to be stopped and arrested	**41**	**51**
Have ever used marijuana	**54**	**37**
Have used marijuana within the past year	**16**	**8**
Reported increase in use of marijuana during the past 3 years	**3**	**<1**
Have used marijuana within 2 hours before driving during past year	**6**	**3**
Agree marijuana should be legal for medical use	**84**	**73**
Agree marijuana should be legal for recreational use by adults age 21 and older	**54**	**34**
Agree legal medical marijuana will have effect on highway safety	54	52
Agree legal recreational marijuana will have effect on highway safety	**75**	**79**
Alcohol-related opinions and behaviors		
Think drinking and driving is a problem in community	**64**	**69**
Agree drinking and driving is common in community	51	52
Agree drinking and driving increases the likelihood of having a crash	98	98
Agree drivers impaired by alcohol are likely to be stopped and arrested	**62**	**70**
Drink alcohol	**60**	**46**
Reported an increase in drinking during the past 3 years	4	3
Reported a decrease in drinking during the past 3 years	**18**	**14**
Have drunk alcohol within 2 hours before driving during past year	**21**	**15**
Have driven when thought over the legal alcohol limit during past year	**4**	**3**

Note: Differences shown in bold are statistically significant (p<0.05).

Table 6 Differences in opinions and self-reported behaviors by age (weighted percentages)

	Age		
	18-29 (N_e=136)	30-59 (N_e=228)	60 and older (N_e=209)
Marijuana-related opinions and behaviors			
Think driving after using marijuana is a problem in community	31	26	33
Agree driving after using marijuana is common in community	41	34	33
Agree driving after using marijuana increases the likelihood of having a crash	**71**	**78**	**82**
Agree drivers impaired by marijuana are likely to be stopped and arrested	46	50	54
Have ever used marijuana	**42**	**50**	**27**
Have used marijuana within the past year	**19**	**8**	**4**
Reported increase in use of marijuana during the past 3 years	2	2	1
Have used marijuana within 2 hours before driving during past year	**5**	**3**	**1**
Agree marijuana should be legal for medical use	**84**	**81**	**72**
Agree marijuana should be legal for recreational use by adults age 21 and older	**56**	**44**	**27**
Agree legal medical marijuana will have effect on highway safety	48	52	44
Agree legal recreational marijuana will have effect on highway safety	71	77	76
Alcohol-related opinions and behaviors			
Think drinking and driving is a problem in community	61	63	68
Agree drinking and driving is common in community	53	55	59
Agree drinking and driving increases the likelihood of having a crash	97	99	99
Agree drivers impaired by alcohol are likely to be stopped and arrested	76	68	70
Drink alcohol	**63**	**62**	**45**
Reported an increase in drinking during the past 3 years	**12**	**1**	**1**
Reported a decrease in drinking during the past 3 years	**23**	**11**	**12**
Have drunk alcohol within 2 hours before driving during past year	22	21	14
Have driven when thought over the legal alcohol limit during past year	5	1	2

Note: Differences shown in bold are statistically significant (p<0.05).