

Road Safety Monitor 2021

Drinking & Driving in Canada

Ward G.M. Vanlaar, Steve Brown & Robyn D. Robertson, December 2021

This fact sheet summarizes results from the Road Safety Monitor (RSM) related to drinking and driving in Canada. The RSM is an annual public opinion survey conducted by the Traffic Injury Research Foundation (TIRF) under sponsorship from Beer Canada and Desjardins. The survey takes the pulse of the nation on key road safety issues by means of an online survey of a random, representative sample of Canadian drivers. Data from TIRF's National Fatality Database that explore trends in the role of alcohol among fatally injured victims are also presented.¹

How many Canadians died in road crashes involving a drinking driver?

In 2018, the most recent year for which data are available, 466 Canadians were killed in a road crash involving a drinking driver. These fatalities occurred within 12 months of crashes on public roadways across the country. As illustrated in Figure 1, the number of persons who died in crashes involving a drinking driver between 1996 and 2018 generally decreased (466 compared to 1,079). This corresponds to an overall decrease of 56.8% since 1996, despite two consecutive increases in fatalities in 2015 and 2016.

What percentage of Canadians died in road crashes involving a drinking driver?

The percentage of persons killed in a crash on a public roadway in Canada involving a drinking driver was 24.8% (or 1 in 4 road deaths) in 2018. As shown in Figure 2, this percentage declined from a peak of 36.1% in 1996 and has since consistently remained below 35%, albeit with some fluctuation. Notably, from 2010 to 2014, there was a steady decrease in this percentage. The percentage of persons killed in road crashes involving alcohol rose slightly in 2015 and 2016, before decreasing to a low of 24.8% in 2018.

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Figure 1: Number of Canadians killed in road crashes involving a drinking driver

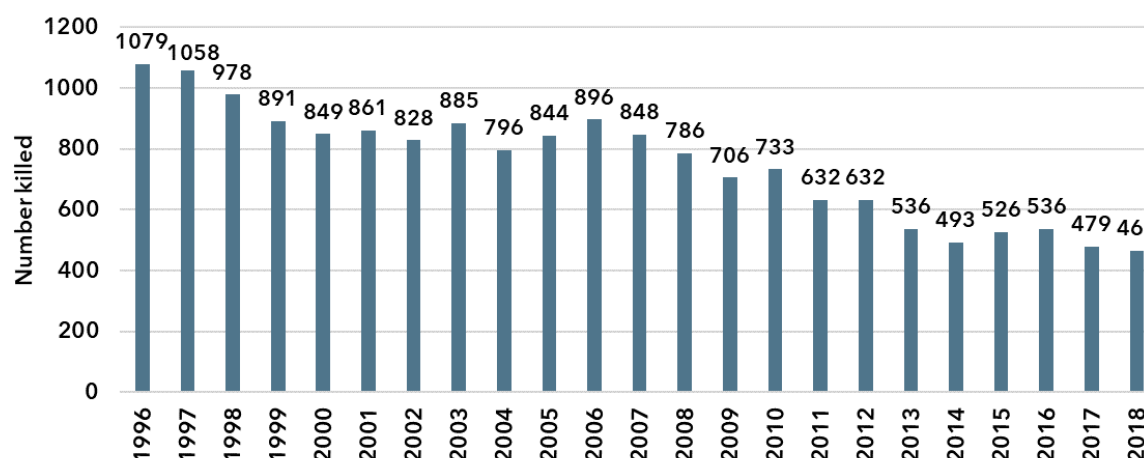
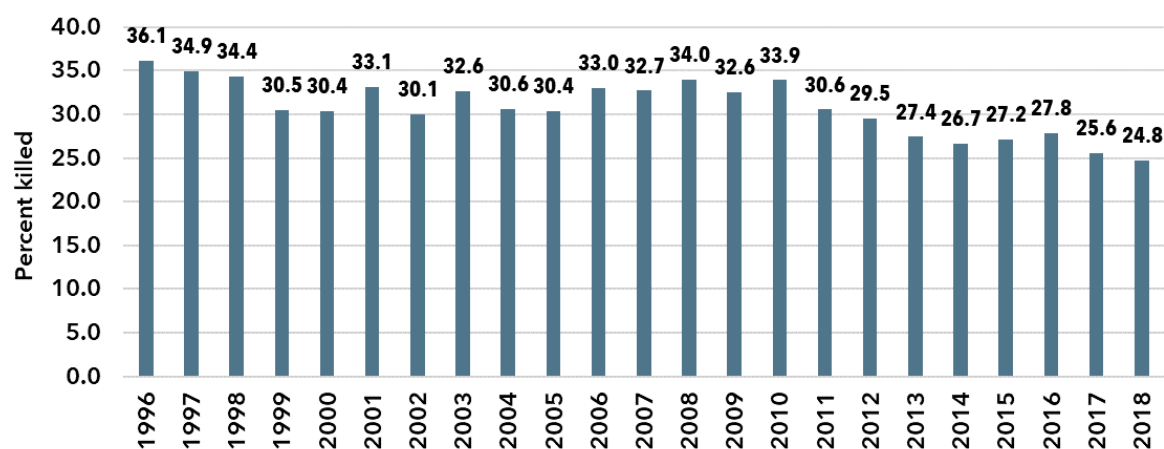


Figure 2: Percentage of Canadians killed in road crashes involving a drinking driver



Has the percentage of drinking drivers on roadways increased?

When asked about driving after consuming any amount of alcohol in the past 30 days, 14.4% of drivers admitted to doing this in 2021 compared to 11.9% in 2020. It warrants mentioning this includes drinking and driving after consuming lower levels of alcohol and levels below the legal limit or administrative limits (where they exist). There are some clear, albeit only mildly pronounced trends that have emerged over the years as shown in Figure 3.

A piecewise linear regression model was fit to these data. From 2005 through to 2009, there was a statistically significant upward trend in the percentage of respondents who admitted to driving after consuming any amount of alcohol. This was followed between 2011 and 2015 by a downward trend, although it was not statistically significant. The percentage increased significantly in 2016 followed by a statistically significant downward trend from 2017 to 2020. From 2020 to 2021 there was an increase in the percentage of those who admitted to driving after drinking any amount of alcohol. While this increase is statistically significant, further scrutiny is needed to see whether this is the beginning of an upward trend.

In 2021, 9.7% of respondents admitted they had driven when they thought they were over the legal limit in the past 12 months (Figure 4). This is the highest level reported since data have been collected by TIRF. This is up from 7.5% in 2020 and represents a 29.3% increase.

A piecewise linear regression model was fit to these data showing an increasing trend from 2004 to 2007, although the trend is not statistically significant. Between 2008 and 2014 no strong trends were found. From 2015 to 2021, an increasing trend is apparent which is statistically significant. Overall, the percentage of respondents who report driving when they thought they were above the legal limit has fluctuated, however the past six years have been characterized by general increases, reaching levels not seen since the mid 2000's.

Figure 3: Percentage of drinking drivers who drove after drinking any amount of alcohol

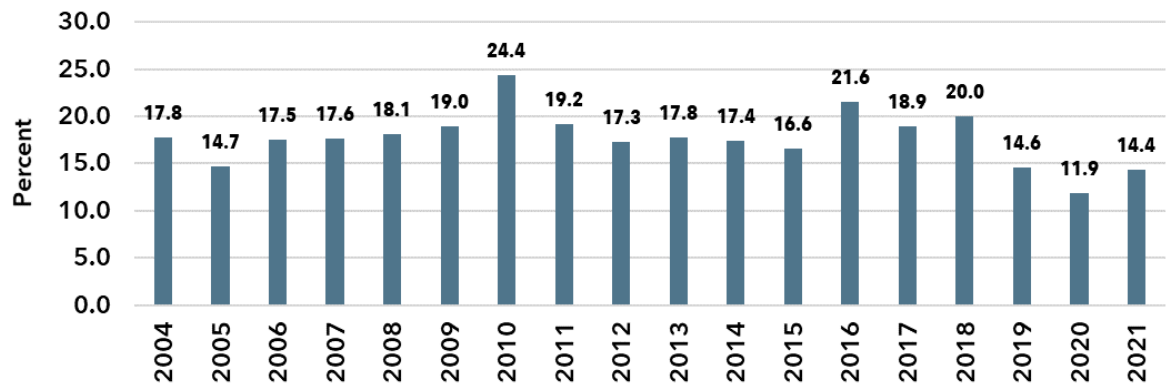
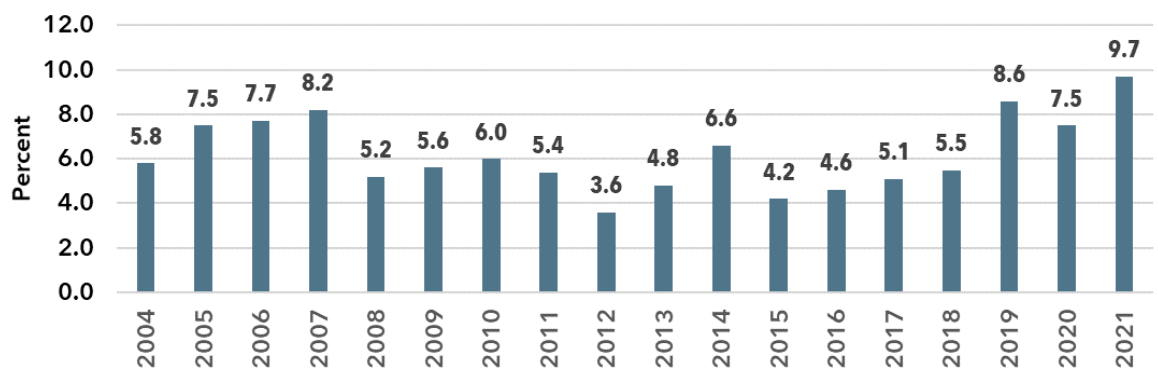


Figure 4: Percentage that drove when they thought they were over the legal limit



Where did drivers do most of their drinking?

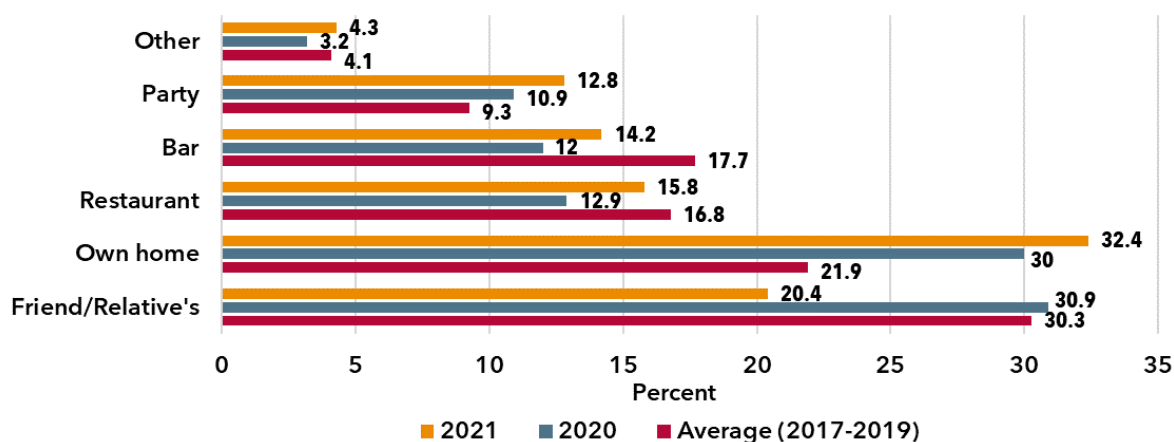
As in previous years, in 2021 respondents who admitted to driving when they thought they were over the legal limit were asked where they did most of their drinking prior to driving. With the COVID-19 pandemic, there were significant changes compared to previous years (Figure 5).

Specifically, in 2021, 32.4% of respondents reported they most often drank at home. This is not a significant increase from 2020 (30.0%) but is a significant increase from the 2017-2019 period (21.9%). Conversely, 20.4% of respondents reported drinking at a friend's or relative's place. This is a significant decrease compared to both those who did so in 2020 (30.9%) and the 2017-2019 period (30.3%).

In 2021, 15.8% of respondents reported that they did most of their drinking at a restaurant before they drove when they thought they were over the legal limit. While this is a significant increase compared to 2020 (12.9%), it is not significantly different than the 2017-2019 average (16.8%).

Meanwhile, in 2021, 14.2% of respondents reported that they did most of their drinking at a bar before they drove when they thought they were over the legal limit. This is not significantly greater than the percentage that did so in 2020 (12.0%) but it is significantly below the 2017-2019 average of 17.7%.

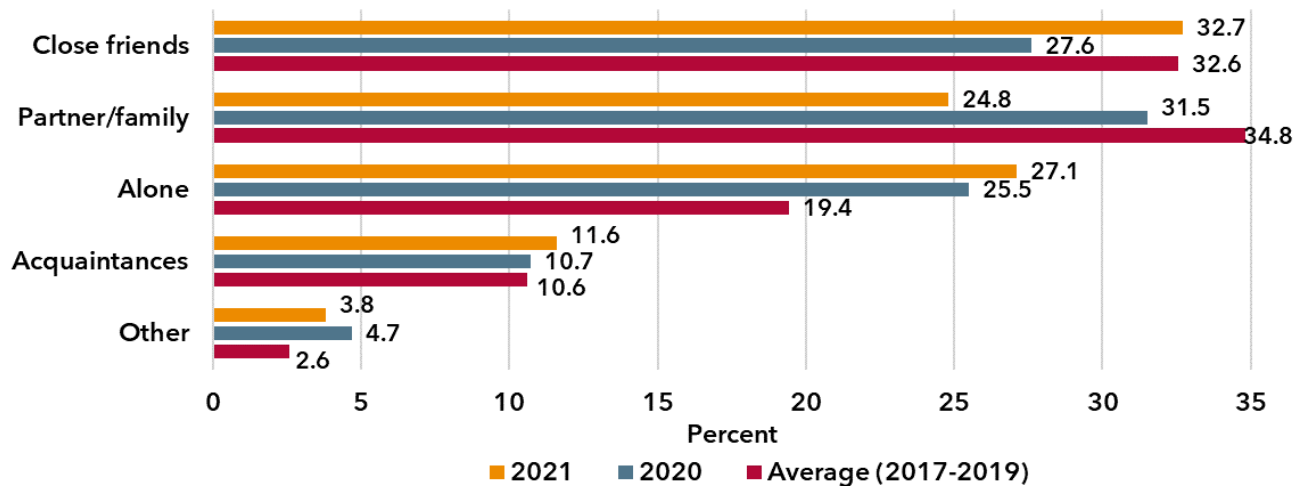
Figure 5: Locations where Canadian drivers indicate doing most of their drinking



These results indicate the COVID-19 pandemic continues to influence where drivers did most of their drinking. Yet for those who reported doing most of their drinking in a bar or restaurant, 2021 results are more in line with the 2017-2019 average than the 2020 results.

The COVID-19 pandemic continues to influence where drivers did most of their drinking.

Figure 6: Persons with whom Canadian drivers reported doing most of their drinking



With whom did drivers do most of their drinking?

In 2021 and in previous years, respondents who reportedly drove when they thought they were over the legal limit were also asked with whom they did most of their drinking. As a result of the COVID-19 pandemic, there were significant changes compared to previous years (Figure 6). One-third of drivers (32.7%) reported they most often drank with close friends in 2021, a significant increase from 27.6% in 2020. Yet this does not significantly differ from the percentage of respondents who reported this from 2017 to 2019 (32.6%).

Significantly fewer Canadians reported drinking with a partner or family members in 2021 (24.8%) than in 2020 (31.5%) or during the 2017-2019 period (34.8%).

The pandemic's effects on drinking and driving behaviours is evident as 27.1% of respondents did most of their drinking alone in 2021 compared to 19.4% in 2017-2019. While increased drinking alone at home may be partially counterbalanced by the lack of other social opportunities to do so, close attention must be paid to this notable change as it could have long-term impacts on drinking and driving behaviours and strategies adopted to effectively tackle this issue.

Are certain groups of drivers more likely to drive after drinking than other drivers?

As mentioned earlier, 14.4% of respondents admitted to driving after consuming any amount of alcohol in the past 30 days in 2021. A logistic regression analysis was conducted to assess the impact of sex and age on this behaviour. Compared to males, female respondents were 66.7% less likely to report driving after consuming any amount of alcohol (OR: 0.33, CI: 0.23-0.48, $p=0.000$). This corresponds with data on fatally injured drivers showing males have historically been far more likely to test positive for alcohol than female drivers (Brown et al. 2018). For every 10-year increase in age, the odds of drivers reporting driving after consuming any amount of alcohol decreased by 16.3% (OR: 0.84, CI: .76-.92, $p=0.000$).

Among survey respondents, 9.7% admitted to driving when they thought they were over the legal limit in the past 12 months in 2021. Results from a logistic regression analysis showed that, compared to males, female respondents were 36.3% less likely to report driving when they thought they were over the legal limit (OR: 0.64,

CI: 0.41-0.99, $p=0.043$). Age was also a significant factor in this behaviour. For every 10-year increase in age, the odds of drivers reporting driving when they thought they were over the legal limit decreased by 35.7% (OR: 0.64, CI: 0.57-0.73, $p=0.000$).

Where does the issue of drinking and driving sit on the public agenda?

Canadians were asked how concerned they were with various public agenda priorities. Respondents rated their concern ranging from 1 (not concerned at all) to 6 (extremely concerned); for scoring purposes, respondents were coded as being concerned about an issue if they chose 5 or 6.

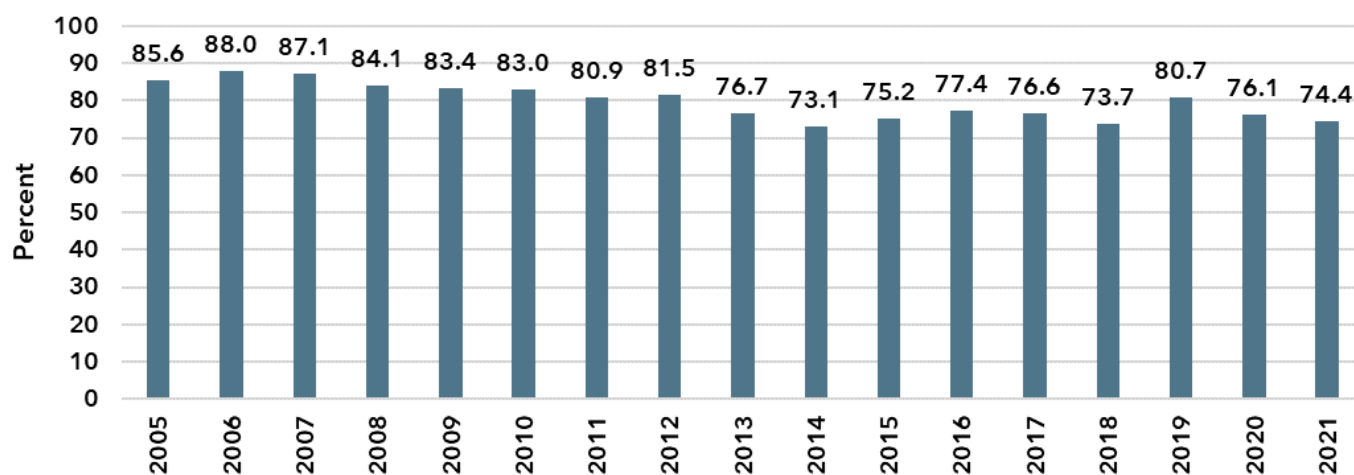
Approximately 2 in 3 Canadian drivers (66.0%) cited drinking and driving as an issue of concern on the public agenda, the highest percentage of any societal issues presented to respondents. Second to this was the price of gas, with 64.3% of Canadians reporting their concern. Concern about the economy was third, with 59.0% reporting they were very or extremely concerned.

66.0% of Canadian drivers cited drinking and driving as an issue of concern on the public agenda, the highest percentage of any societal issues presented to respondents.

Is drinking and driving a major road safety issue for Canadians?

Canadians were asked how concerned they were with drinking drivers and other road safety issues (rather than societal issues). Respondents were asked to rate their concern ranging from 1 (not a problem at all) to 6 (an extremely serious problem); for scoring purposes, respondents were coded as being concerned about an issue if they chose 5 or 6. The results for 2005 to 2021 are presented in Figure 7. In 2021, respondents were significantly more likely to cite drivers texting messages on their phones while driving (81.0%) than drinking drivers as a very or extremely serious problem (74.4%). Drinking and driving was cited more often than drivers using cell phones (71.4%), drugged drivers (69.2%), pedestrians or bicyclists behaving unsafely on the road (59.2%), sleepy drivers (58.5%), and drivers distracted by entertainment systems, vehicle apps, passengers or eating or drinking (57.0%).

Figure 7: Percentage of Canadians who regard drinking drivers as a 'very' or 'extremely' serious problem



Conclusion

Significant progress has been achieved in Canada to combat drinking and driving based upon recent trends in the number of alcohol-related road deaths as well as the percentage of total road deaths attributed to drinking drivers. To illustrate, between 1996 and 2018, there was a 56.8% decrease in the number of Canadians who have died in road crashes involving a drinking driver. Despite two consecutive increases in this number in 2015 and 2016, there was a 13.1% decrease to 466 in 2018. On the other hand, from 2015 to 2021, the percentage of Canadians that reported driving when they believed themselves to be over the legal limit consistently increased, especially in more recent years. This rising trend is concerning and suggests the number of alcohol-related fatalities will most likely rise. When exploring the correlation between such fatalities and self-reported drinking and driving behaviour,² indeed it suggests an increase in alcohol-related crashes might occur following an increase in the proportion of drivers admitting to driving while they thought they were over the legal limit. As such, further monitoring of both sources of data will help inform efforts to prevent and reduce alcohol-impaired driving in Canada.

Findings regarding where and with whom Canadians do most of their drinking before driving when they believed themselves to be over the legal limit has changed significantly from previous years. In 2021, a higher percentage of respondents indicated they most often drank at home alone, likely due to the COVID-19 pandemic and physical distancing measures. While most drivers have not changed their driving behaviour during the pandemic, more drivers admit to driving after drinking.

It is essential to tailor key messages to reach this subgroup of Canadians who are drinking at home alone and then getting behind the wheel. Moreover, during the COVID-19 pandemic and its aftermath, enforcement strategies and information campaigns designed to reduce and prevent alcohol-impaired driving may need to be adapted to reduce alcohol-impaired driving and other risky behaviours.



References

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Fatality Database Disclaimer

Data from TIRF's National Fatality Database may be subject to change as the closure of cases is ongoing. As such, there may be minor differences in this document compared to previous documents reporting on the same topic.

About the poll

These results are based on the RSM, an annual public opinion poll developed and conducted by TIRF. A total of 1,500 Canadians completed the poll in September of 2021. Results can be considered accurate within plus or minus 2.5%, 19 times out of 20. The majority of the questions were answered using a scale from one to six where six indicated high agreement, concern, or support and one indicated low agreement, concern or support.

About TIRF's National Fatality Database

TIRF's National Fatality Database is the only Canadian road safety database that includes both police-reported collision data and coroners'/medical examiners' data (Simpson et al. 1978). It includes population data on victims, crashes and vehicles from seven Canadian jurisdictions since 1973 and from all Canadian jurisdictions since 1987. Comprehensive toxicological data on alcohol and drug use are based on chemical tests of body fluid samples, typically blood.

¹ When comparing this fact sheet with those published in previous years, slight differences in the data reported may be observed as fatality data from British Columbia are now included.

² A medium to strong, significant correlation coefficient ($\rho=0.66$, $p=0.01$) exists between the number of alcohol-related fatalities from TIRF's National Fatality Database and self-reported drinking and driving when probably over the legal limit from TIRF's RSM. When assessing this correlation's strength, it must be considered that the monitoring periods for both indicators do not completely overlap. To illustrate, 2018 fatalities cover January to December 2018 whereas the 2018 RSM self-reported drinking and driving covers October 2017 to September 2018.

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The vision of the Traffic Injury Research Foundation (TIRF) is to ensure people using roads make it home safely every day by eliminating road deaths, serious injuries and their social costs. TIRF's mission is to be the knowledge source for safer road users and a world leader in research, program and policy development, evaluation, and knowledge transfer. TIRF is a registered charity and depends on grants, awards, and donations to provide services for the public. Visit www.tirf.ca.

171 Nepean Street, Suite 200, Ottawa, ON, Canada
K2P 0B4
Toll Free: 1-877-238-5235

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