

ROAD SAFETY MONITOR 2020: DRINKING & DRIVING IN CANADA

Traffic Injury Research Foundation, December 2020

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Introduction

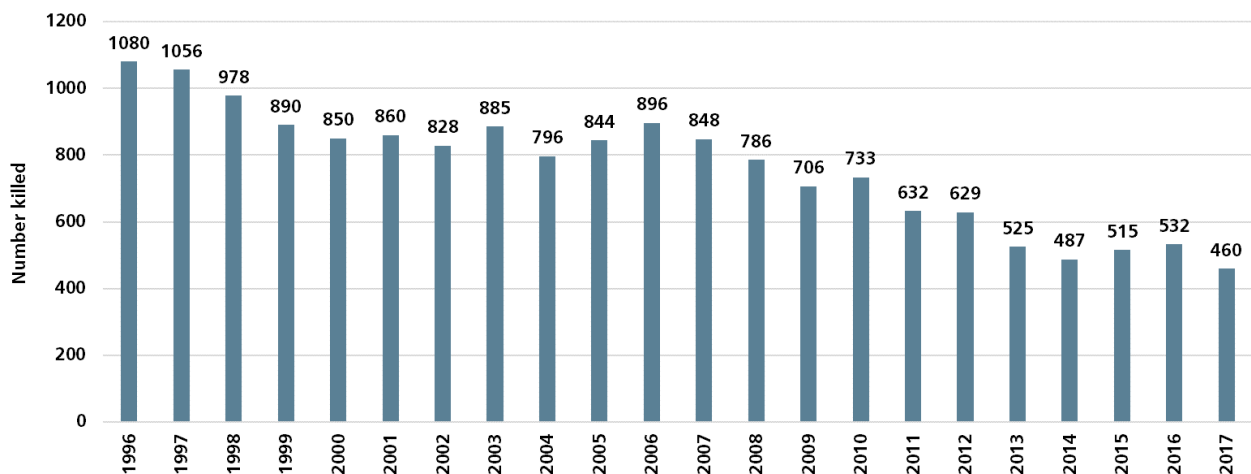
This fact sheet summarizes results from the Road Safety Monitor (RSM) related to drinking and driving in Canada. The RSM is an annual public opinion survey conducted by the Traffic Injury Research Foundation (TIRF) under sponsorship from Beer Canada and Desjardins. The survey takes the pulse of the nation 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. However, unlike previous fact sheets, British Columbia data are included and therefore Canada-wide results for all previous years have been re-calculated accordingly.¹

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

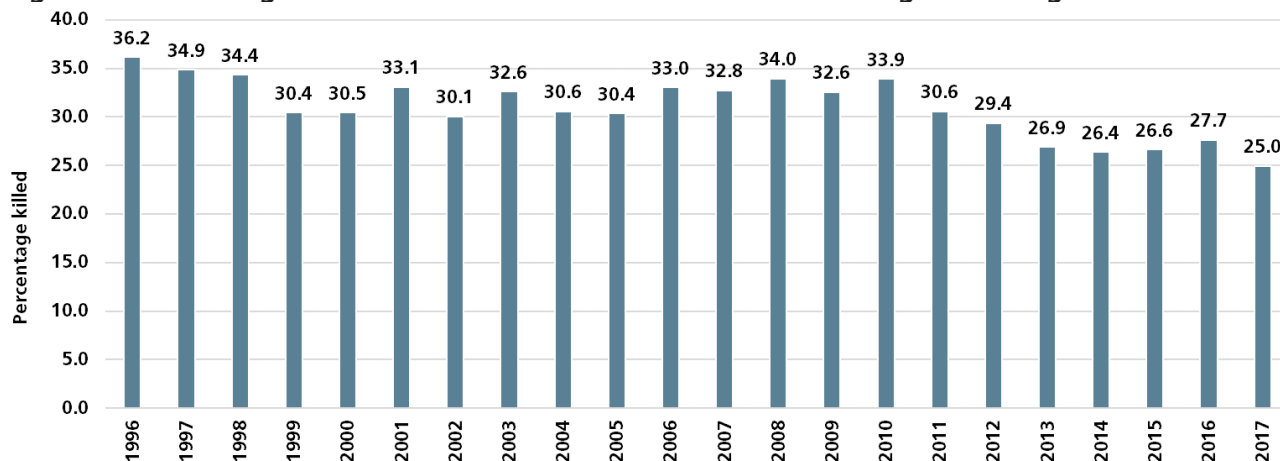
In 2017, the most recent year for which data are available, 460 Canadians were killed in a road

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



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.

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



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 2017 generally decreased (460 compared to 1,080). This corresponds to an overall decrease of 57% 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 25% (or 1 in 4 road deaths) in 2017. As shown in Figure 2, this percentage declined from a peak of 36.2% in 1996 and has since consistently remained below 35%, although 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 again to 25% in 2017.

Has the percentage of drinking drivers on roadways increased?

When asked about driving after consuming any amount of alcohol in the past 30 days, 11.9% of drivers admitted to doing this in 2020 compared to 14.6% in 2019. 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 post-2005 (excluding the year 2010 which seems to be an outlier). From 2005 through to 2009, there was a statistically significant upward trend in the percentage of respondents who admitted

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

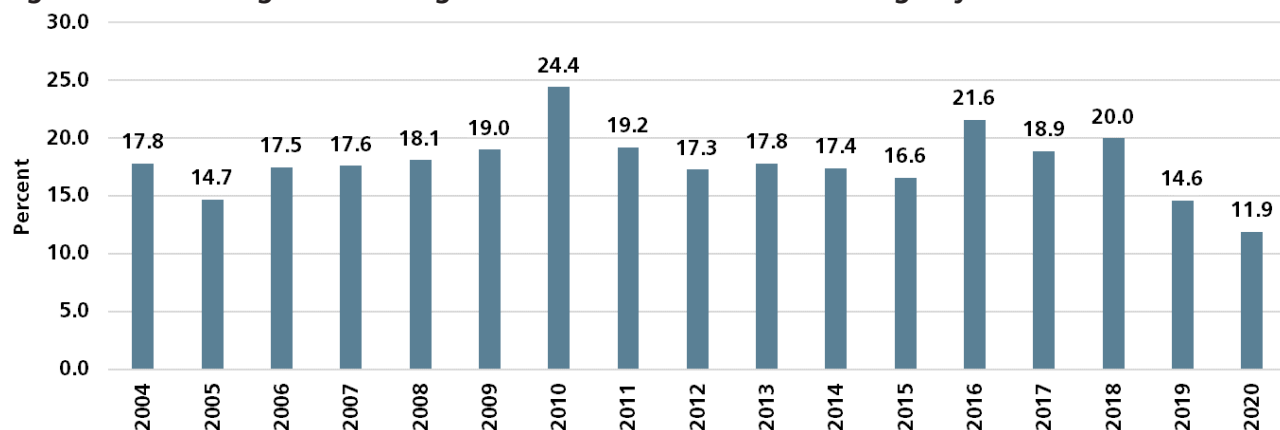
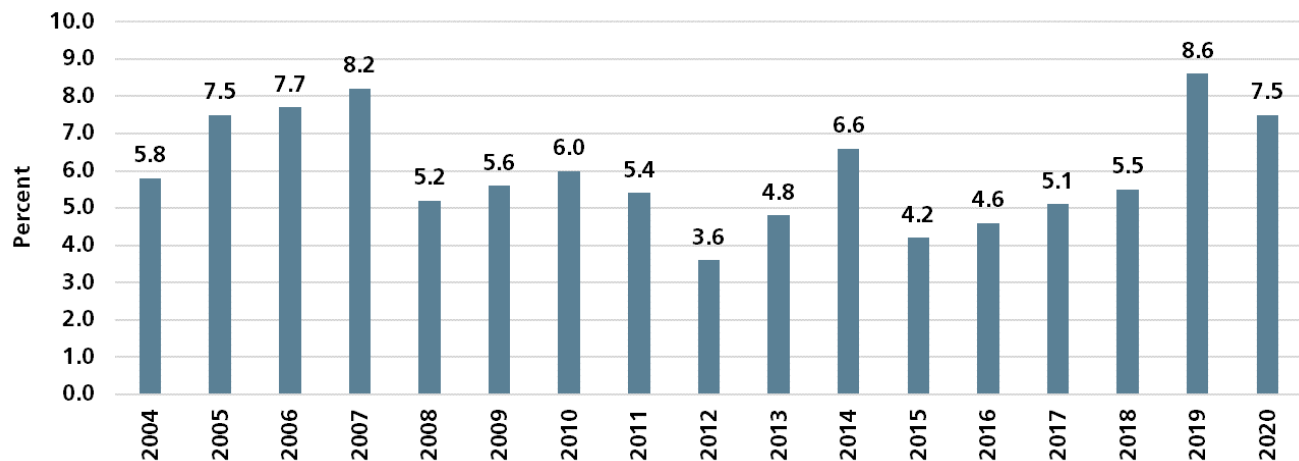


Figure 4: Percentage that drove when they thought they were over the legal limit



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. In other words, earlier increases in the percentages of those who admit driving after consuming alcohol have been followed by a general decrease, especially since 2017.

In line with the decline in the percentage of drivers who reported driving after drinking any alcohol in the past 30 days, in 2020, 7.5% of respondents admitted they had driven when they thought they were over the legal limit in the past 12 months (Figure 4). This is down from 8.6% in 2019, and represents a 12.8% decrease. This means that fewer Canadians have been drinking and driving in 2020, however, these percentages remain among the highest reported rates since 2004.

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 2019, an increasing trend is apparent which was statistically significant. However, this was followed by a decrease in 2020. It remains to be seen whether this decrease is the beginning of a downward trend. 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.

Respondents were also asked how likely they were to have driven within two hours of consuming alcohol during COVID-19, as compared to their typical behaviour had these restrictions not been in place.² A small percentage of Canadians (2.4%) admitted they were more likely to do so, however the majority of respondents indicated there was no change in this behaviour (75.4%), and 22.2% reported they were less likely to drive within two hours of consuming alcohol during the pandemic. These results corroborate findings presented in Figures 3 and 4 showing there is an overall reduction in drinking driving.

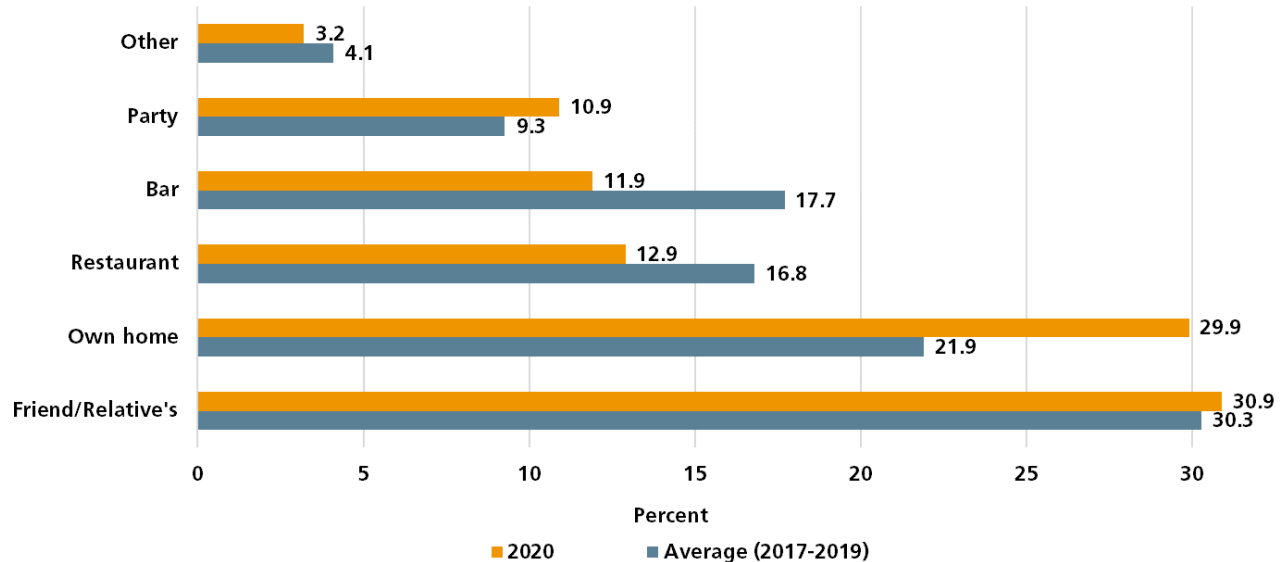
Where did drivers do most of their drinking?

In 2020, and in previous years, 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 2020, 29.9% reported they most often did this at their own home; a significant increase from an average of 21.9% of respondents who reported this from 2017 to 2019. Conversely, a significant decrease was observed among those who reported doing most of their drinking at a bar, with 11.9% reporting this in 2020 compared to an average of 17.7% of respondents who reported this from 2017 to 2019. Similarly, fewer respondents (12.9%) reported doing most of their drinking at a restaurant in 2020 compared

² The question was asked on a scale from 1 (far less likely) to 5 (far more likely); for scoring purposes, respondents were coded as more likely to engage in the behaviour while driving if they chose a four or five. For more information, see: Vanlaar et al. 2020.

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



to the average from 2017 to 2019 (16.8%), corresponding to a significant decrease of 23%. These results indicate the COVID-19 pandemic influenced where drivers did most of their drinking.

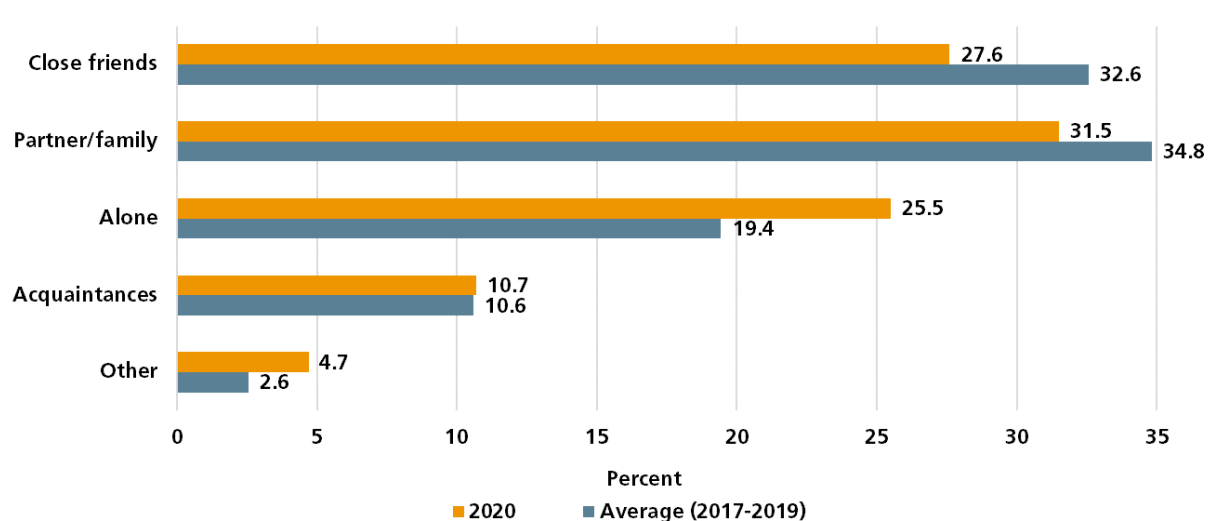
With whom did drivers do most of their drinking?

In 2020 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). More than 1 in 4 drivers (27.6%) reported they most often drank with close friends in 2020; a significant

decrease from an average of 32.6% of respondents who reported this from 2017 to 2019. Conversely, significantly more Canadians reported drinking alone, as 25.5% reported this in 2020, compared to an average of 19.4%.

In sum, the effects of the COVID-19 pandemic on drinking and driving behaviours is evident with an uptick in the percentage of respondents who reported doing most of their drinking at home alone. Although an increase in 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.

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



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

As mentioned earlier, 11.9% of respondents admitted to driving after consuming any amount of alcohol in the past 30 days in 2020. A logistic regression analysis was conducted to assess the impact of sex and age on this behaviour. Compared to males, female respondents were 55.7% less likely to report driving after consuming any amount of alcohol (OR: 0.44, CI: 0.31-0.64, $p=0.000$). 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). Age was not a significant predictor of this behaviour.

Among survey respondents, 7.5% admitted to driving when they thought they were over the legal limit in the past 12 months in 2020. Results from a logistic regression analysis showed that, compared to males, female respondents were 63.9% less likely to report driving when they thought they were over the legal limit (OR: 0.36, CI: 0.23-0.57, $p=0.000$). 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 19.5% (OR: 0.81, CI: 0.71-0.91, $p=0.001$).

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

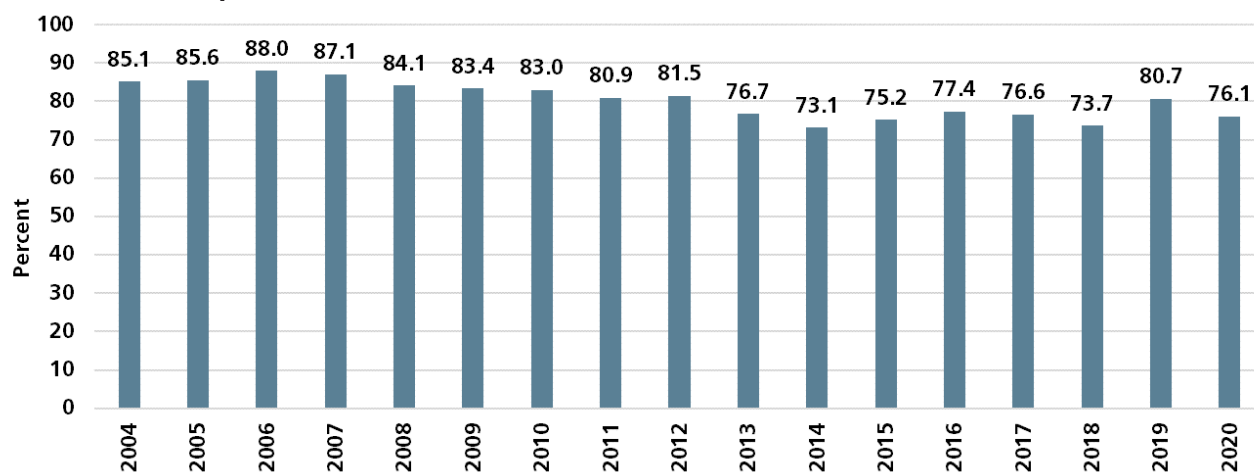
purposes, respondents were coded as being concerned about an issue if they chose 5 or 6.

Approximately 2 in 3 Canadian drivers (65.6%) 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 economy, with 64.3% of Canadians reporting their concern. Concern about the pandemic was third, with 60.9% reporting they were very or extremely concerned.

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 2004 to 2020 are presented in Figure 7. In 2020, respondents were more likely (although not significantly) to cite drivers texting messages on their phones while driving (78.5%) than drinking drivers as a very or extremely serious problem (76.1%). Drinking and driving was cited more often than drivers using cell phones (68.9%), drugged drivers (68.8%), pedestrians or bicyclists behaving unsafely on the road (56.1%), and drivers distracted by entertainment systems, vehicle apps, passengers or eating or drinking (53%).

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 2017, there was a 57% 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 13.5% decrease to 460 in 2017. Positively, in 2020, the percentage of Canadians that reported driving when they believed themselves to be over the legal limit decreased, however more data is necessary to see if this is the beginning of a declining trend. When exploring the correlation between these two indicators,³ 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 2020, a higher percentage of respondents indicated they most often drank at home alone, likely due to the COVID-19 pandemic and physical distancing measures. Additionally, there was a small but notable percentage of Canadians indicating they were more likely to drive within two hours of consuming alcohol during the pandemic, despite an overall decrease in this behaviour. Although the full effect of COVID-19 on road safety in general, and alcohol-impaired driving specifically remains unknown, these data suggest some drinking and driving behaviours have changed as a result. 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, the *new normal* necessitates that enforcement strategies to reduce and prevent alcohol-impaired driving are adapted accordingly.

References

Brown, S.W., Vanlaar, W.G.M., Robertson, R.D. (2018). The Alcohol and Drug Crash Problem in Canada: 2015 Report. Ottawa, Ontario: Canadian Council of Motor Transport Administrators.

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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 2020. 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.

Traffic Injury Research Foundation

The mission of the Traffic Injury Research Foundation (TIRF) is to reduce traffic-related deaths and injuries. TIRF is a national, independent, charitable road safety institute. Since its inception in 1964, TIRF has become internationally recognized for its accomplishments in a wide range of subject areas related to identifying the causes of road crashes and developing programs and policies to address them effectively.

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³ 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, 2017 fatalities covers January to December 2017 whereas the 2017 RSM self-reported drinking and driving covers October 2016 to September 2017.