IMPAIRED DRIVING IN NORTH AMERICA

SoberSmartDriving.tirf.ca

The Sober Smart Driving education program is produced by the **Traffic Injury Research Foundation** with funding from **Beer Canada**. It shares knowledge and science to answer common questions about alcohol, its effects on driving skills, and impaired driving.

How many people die in motor vehicle crashes involving a drinking driver each year in Canada?

The number of motor vehicle deaths resulting from crashes involving a drinking driver in Canada steadily declined since the 1980s to early 2000s. More recently progress has diminished and the number of fatalities has risen.

At the time of publication, coroner data from British Columbia were not yet available for all of the years included in this analysis. Thus, reported fatality data for Canada excludes British Columbia. The number of motor vehicle deaths involving a drinking driver due to road crashes decreased from 706 in 2007 to 424 in 2014. However, between 2014 and 2016 the total number of deaths involving a drinking driver rose to 476 in 2016.

a) What is the percentage of motor vehicle deaths involving a drinking driver on Canadian roadways?

Another way to understand the drinking driving problem is to look at the percentage of total deaths on the nation's roadways that occurred due to the involvement of a drinking driver. The percentage of drinking driver-related deaths in Canada generally rose from 32.0% in 2007 to 34.0% in 2010. It then decreased to 27.1% in 2015 before increasing to 29.3% in 2016.

The following table presents the number of motor vehicle deaths involving a drinking driver and the percentage of all road crash fatalities involving a drinking driver:

Table 1: Canada

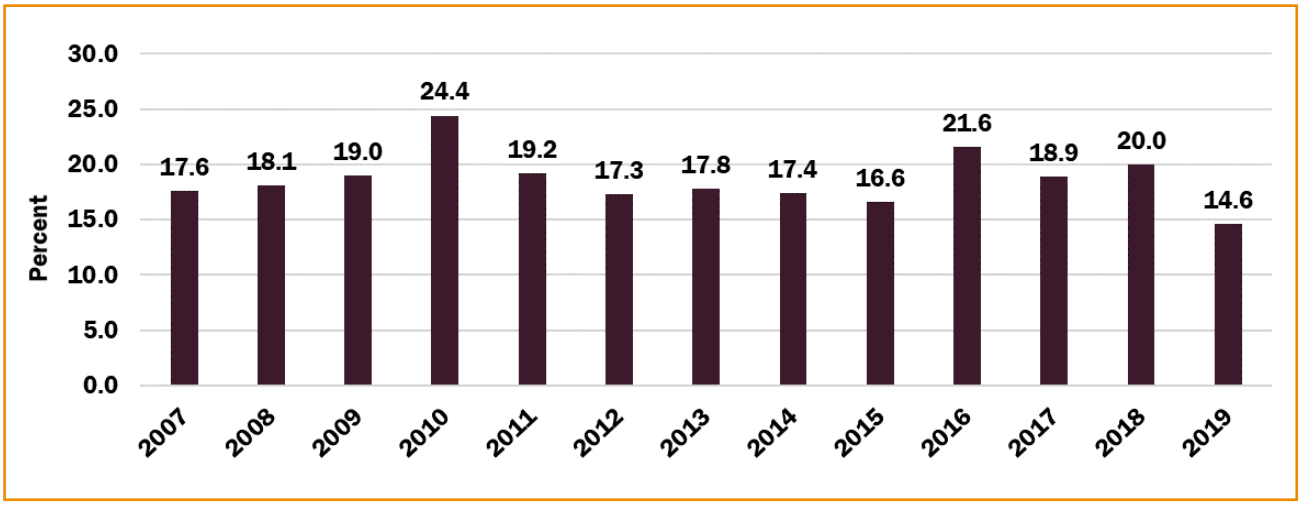
Year	Total number of deaths*	Number of alcohol-related deaths**	% of total alcohol-related deaths***
2007	2,205	706	32.0
2008	1,955	660	33.8
2009	1,790	587	32.8
2010	1,804	613	34.0
2011	1,771	550	31.1
2012	1,856	562	30.3
2013	1,690	477	28.2
2014	1,559	424	27.2
2015	1,633	442	27.1
2016	1,622	476	29.3

* Excluding British Columbia.
** Note: These numbers are estimates based on the percent of deaths for which information was available to determine alcohol use. Only deaths occurring on public roadways using principal vehicle types were included. The number of deaths include those in which the victim died within 30 days of the crash.
*** (Brown, Vanlaar, and Robertson 2020)

b) How frequently do Canadians drink and drive?

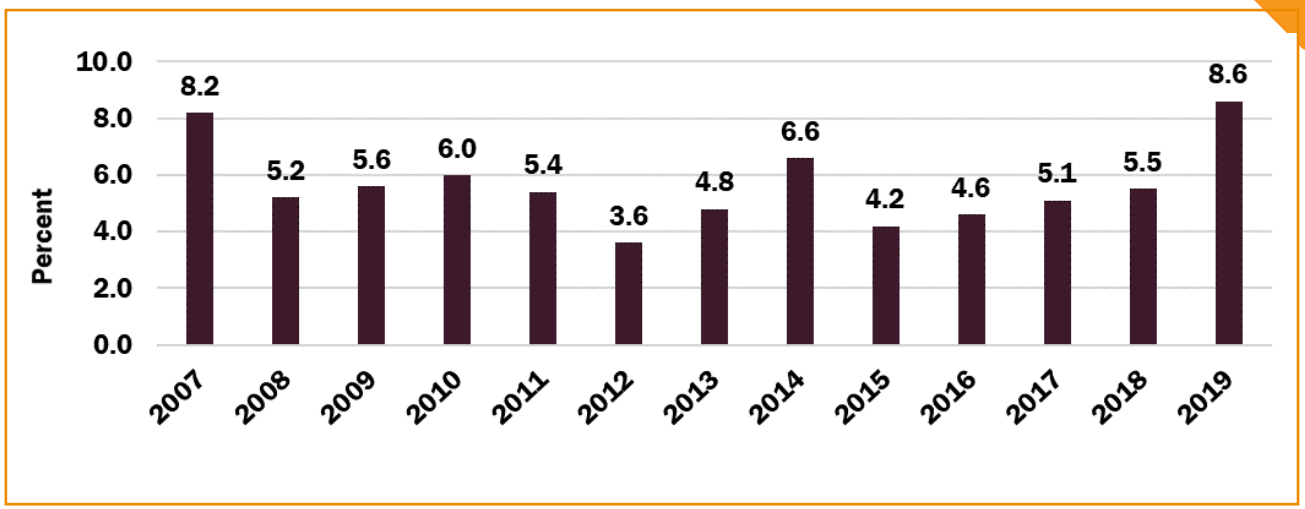
When asked about driving after consuming any amount of alcohol in the past 30 days, an estimated 14.6% of Canadians admitted to driving after drinking in 2019. This represents a decrease from 2010 when 24.4% of Canadians admitted to drinking and driving.

Figure 1: Percentage of drivers who drove after drinking any amount of alcohol



When asked about driving when they thought they were over the legal limit in the last 12 months, 8.6% of Canadians admitted to doing this in 2019. From 2007 to 2015 there was a general decrease in the percentage of drivers who admitted to this behaviour. However, from 2015 to 2017 the percentage increased steadily from 4.2% in 2015 to 8.6% in 2019. Continued monitoring is necessary.

Figure 2: Percentage that drove when they thought they were over the legal limit*



* (TIRF 2008; TIRF 2009; TIRF 2010; TIRF 2011; TIRF 2012; TIRF 2013; TIRF 2014; TIRF 2015; TIRF 2016; TIRF 2017; TIRF 2018; TIRF 2019)

How does the problem of motor vehicle deaths involving a drinking driver in Canada compare to the United States?

Similar to the reduction in the number of motor vehicle fatalities involving a drinking driver in Canada, the United States has seen comparable trends in recent years. The number of persons killed in crashes involving a drinking driver (i.e., the driver's blood alcohol concentration (BAC) was equal to or greater than .01) in the U.S. has steadily decreased. To illustrate, the number of fatalities in crashes involving a drinking driver decreased from 15,534 in 2007 to 12,514 in 2016; the number of fatalities involving an alcohol-impaired driver with a BAC greater than 0.8 decreased from 13,491 in 2007 to 10,497 in 2016.

In Canada and the United States, deaths involving at least one drinking driver account for approximately one-third of the total deaths on roadways.

With regard to the total number of motor vehicle deaths, the percentage of deaths involving a drinking driver has remained stable with slight increases and decreases. The percentages have consistently fallen between 35-38% over the past 10 years. It is important to note that while the U.S. has far more motor vehicle deaths involving drinking drivers than Canada (due to differences in population size), the percentages are still comparable. In each country, deaths involving at least one drinking driver account for approximately one-third of the total deaths on roadways. Furthermore, in both countries, while there was a decrease in the percentage of alcohol-related fatalities between 2007 and 2014, there has been a slight increase in the past two years.[1]

1. Vanlaar, W., et al. (2016). "Fatal and serious injuries related to vulnerable road users in Canada." Journal of Safety Research 58: 67-77.

The following table illustrates the magnitude of the drinking and driving problem in the U.S. using two indicators. Alcohol-related deaths are those resulting from crashes in which at least one driver had a BAC of .01 or greater. Alcohol-impaired deaths are those resulting from crashes in which at least one driver had a BAC of .08 or greater.

Table 2: United States

Year	Total number of deaths*	Number of alcohol-related deaths (driver BAC .01+)**	% of total alcohol-related deaths***	Number of alcohol-impaired deaths (driver BAC .08+)**	% of total alcohol-impaired deaths***
2007	41,259	12,,731	37.6	13,041	31.6
2008	37,423	13,826	36.9	11,711	31.3
2009	33,883	12,731	37.6	10,759	31.8
2010	32,999	11,906	36.1	10,136	30.7
2011	32,479	11,527	35.5	9,865	30.4
2012	33,782	12,118	35.9	10,366	30.6
2013	32,893	11,918	36.2	10,084	30.7
2014	32,744	11,743	35.9	9,943	30.4
2015	35,485	12,257	34.5	10,320	29.1
2016	37,461	12,514	33.4	10,497	28.0

* The table depicts the estimated number of deaths, estimated number of drinking and driving-related deaths, and the percent of drinking and driving-related deaths from 2007 to 2016 based on FARS data. Note: Total number of deaths from motor vehicle crashes includes fatalities in crashes in which there was no driver or motorcycle rider present.

** (NHTSA 2018)

*** (Brown, Vanlaar, and Robertson 2020)

What types of vehicles are involved in drinking driver crashes in Canada?

In Canada in 2016, of all the fatally injured drinking drivers (i.e., drivers with a BAC of .01 or greater), almost one-half (47.1%) were in an automobile; 25.7% were light truck drivers (e.g., pick-up trucks); 16.1% were motorcycle drivers; and 8.2% were van drivers.

Note that in 2016, the highest incidence of drinking was found among light truck drivers. In fact, over two-fifths (41.9%) of light truck drivers in fatal crashes had been drinking, and 75.0% of them had an illegal BAC, compared to tractor-trailer drivers among whom only 10.0% had been drinking.

Pedestrians are also at an increased risk of being hit by a vehicle if they have consumed alcohol (Vanlaar et al. 2016). To illustrate this, during 2016 there were 282 pedestrians fatally injured and 192 of them were tested for the presence of alcohol. Among those tested, 34.9% had a BAC of .01 or greater.

What does the Sober Smart Driving Education Program (SSD) contain?

The Sober Smart Driving Education Program contains facts to help Canadians learn about the risks associated with drinking and driving and encourages everyone to speak up and talk about why they choose not to drink and drive.

Key topics discussed on this site include:

- Drinking and its effects on driving
- Magnitude & characteristics of drinking & driving
- Basics of the impaired driving system
- Impaired driver programs & penalties
- Myths & misconceptions about drinking and driving

Each of these topics contains a series of fact sheets structured in a question and answer format which are available for free download and sharing (with attribution). These resources are designed to support the education and prevention efforts of communities, schools, health and road safety professionals and advocacy organizations.

To view more fact sheets, or to get more information about alcohol, its effects on driving skills, and impaired driving, visit **SoberSmartDriving.tirf.ca**.

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 research 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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