

# **Alcohol-related Crashes in Canada: Driver Characteristics and Casualty Trends**

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## Executive Summary

Despite many years of educational, legislative, and enforcement efforts by provinces and territories, some individuals still drink and drive, causing harm to themselves and others. Reducing alcohol-related fatalities and serious injuries is an ongoing challenge for road safety experts.

One of the goals of the Road Safety Vision 2010 initiative is a 40% decrease in the percentage of road users fatally or seriously injured in crashes involving drinking drivers. Achieving this goal means reducing alcohol-related deaths to the point where only 18% of total traffic fatalities are from drinking and driving. Considering that alcohol-related fatalities accounted for about 29% of all traffic fatalities during 2003-2005, there is still much work to be done.

Modest but measurable progress in reducing fatalities and serious injuries can be seen when 2003-2005 is compared to the baseline period of 1996-2001. The number of alcohol-related fatalities dropped by almost ten percent (9.5%) and the number of drinking drivers in fatal crashes dropped by 8.3%.

The largest group of drivers involved in fatal alcohol-related crashes and fatally injured victims were young people (16-24 years). They accounted for 32% of drinking drivers in fatal crashes as well as 32.2% of persons killed.

However, within this group some progress was seen for 16- to 19-year-olds. 14.9% fewer drinking drivers from this age group got into fatal crashes and 25.6% fewer victims were killed in alcohol-related crashes between 1996-2001 and 2003-2005.

On the other hand, 20- to 24-year-olds alone accounted for one in five alcohol-related fatalities (21.5%). This age group experienced a 1.0% increase in fatalities, while other age groups saw reduced fatalities. They also had a much smaller decrease in the number of fatally injured drinking drivers than other age groups (only 1.9%).

A higher number of middle-aged and senior drivers had used alcohol before getting behind the wheel during 2003-2005, compared to the baseline period. The number of drinking drivers involved in fatal crashes increased for drivers aged 45-54, 55-64, and 65 years or older by 4%, 16.7%, and 3.6%, respectively, even as numbers dropped for other age groups. Despite the increases, older drivers were under-represented in fatal alcohol crashes.

All types of road user groups experienced reduced fatalities, but motor vehicle passengers showed the biggest improvement. The number killed in alcohol-related crashes dropped by 24.1%.

Automobile drivers accounted for 57.5% of drinking drivers in fatal crashes during 2003-2005. Drivers of pickups accounted for 18.5% and drivers of other types of light vehicles

such as vans or utility vehicles accounted for 16.2%. Motorcyclists accounted for 5.6% of drinking drivers involved in fatal crashes. Only 2% of drinking drivers in fatal crashes were operating a heavy truck or tractor trailer.

More motorcyclists were getting into fatal crashes, but fewer of those crashes were alcohol-related. Between the baseline and 2003-2005, the total number of motorcyclists involved in fatal crashes increased substantially, but the number who were drinking before a fatal crash decreased by 13.3%. Furthermore, the percentage of fatally injured motorcyclists who had been drinking and were also legally impaired went down from 74.5% to 66.3%. The highest drinking motorcyclist involvement in fatal crashes was found in British Columbia, Quebec, Ontario, and New Brunswick.

About one in five drivers who were involved in a fatal crash during 2003-2005 had been drinking, and almost one in three who were killed had been drinking.

The vast majority (83.2%) of fatally injured drinking drivers were legally impaired (BAC higher than 80 mg%). This percentage was almost unchanged from the baseline. Furthermore, 55.6% of all fatally injured drinking drivers had a BAC more than twice the legal limit. Again, the percentage was virtually unchanged from the baseline.

Alcohol use by drivers was associated with run off the road crashes. Run off the road crashes produced 35.9% of all alcohol-related fatalities during 2003-2005, up from 30.2% during 1996-2001. For single-vehicle crashes in particular, the percentage was even higher (56.2%). The total number of deaths from run off the road crashes was also on the rise, increasing by 7.9%.

29.7% of fatally injured drinking drivers were speeding at the time of the crash. The percentage was virtually unchanged from 1996-2001 to 2003-2005. The cohort of fatally injured drinking drivers who were also speeding at the time of the crash was drivers with a BAC between 81 mg% and 160 mg%.

60.4% of fatally injured drinking drivers were not using seat belts at the time of the crash, compared to 26.8% of fatally injured non-drinking drivers. The figure was even higher for fatally injured drinking drivers with a BAC more than twice the legal limit (67.5%).

Almost one in five (19.4%) fatally injured drinking drivers had also been speeding and not wearing a seat belt. Urban roads (with a speed limit 70 km/h or less) were particularly bad for this combination of high-risk behaviours. 31.1% of drinking drivers fatally injured in urban crashes had also been speeding and had failed to buckle up.

Success in reducing alcohol-related fatalities and drinking drivers in fatal crashes varied among jurisdictions. The Northwest Territories, Yukon, Nova Scotia, and Ontario showed the most progress in reducing the number of victims killed, with decreases of 84.6%, 30.8%, 25.7%, and 18.7%, respectively. These jurisdictions also had larger reductions in drinking drivers in fatal crashes than the national average of 8.3%.

## Introduction

Drinking and driving kills and injures many people each year in Canada and is an ongoing road safety issue. The risks of using alcohol before getting behind the wheel are well known, yet many drivers still ignore the risk. The consequences are often disastrous.

Reducing the carnage caused by impaired driving is one of the goals of Road Safety Vision 2010. The initiative calls for a 40% decrease in the percentage of road users fatally or seriously injured in crashes involving drinking drivers. To put it more simply, regardless of how many road users were killed or seriously injured each year, the objective is for the percentage that involved alcohol to go down. Of course, from the human perspective, reducing the total number of alcohol crash victims is just as important.

The report examines data about drinking drivers and victims of drinking drivers. It is intended to provide program and policy advisors as well as other key stakeholders with information they can use to develop or enhance their strategies to deal with the alcohol-related crash problem in their respective jurisdictions. In addition, this information can be shared with politicians to help justify requests for additional resources to address drinking and driving issues.

## Report Methodology

For the purpose of the report, an alcohol-related crash is defined as a crash in which at least one operator of a road motor vehicle had been drinking, based on the judgement of a police officer or the results of a BAC test. Cases where only a bicyclist, pedestrian, or operator of a non-road vehicle had been drinking are not counted as alcohol-related.

The report's findings are derived from files created by linking Transport Canada's national collision database (NCDB) to the Traffic Injury Research Foundation (TIRF) Fatality Database. Through this linkage, 97.9% of fatally injured drinking drivers in NCDB could be matched to BAC results from the TIRF Fatality Database.

The linked data files yield figures that differ somewhat from those presented in the *Alcohol-Crash Problem in Canada* reports from TIRF because the TIRF methodology include estimations of alcohol-related fatalities where data is not available.

The target set by Road Safety Vision 2010 uses the average annual number of fatalities and serious injuries during 1996 to 2001 as a baseline figure. Current year figures are compared to this baseline to measure the amount of progress and to determine whether the target has been met. In this report, average annual figures from the years 2003-2005 will be compared to the baseline.

All statistics refer to the 2003-2005 time frame unless otherwise noted. Statistics are based on average annual figures to offset any year-to-year extremes. Where statistics from 1996-2001 are referenced, the data has also been averaged in the same way.

Quebec figures in this report are generally understated because the only crashes that could be identified as alcohol-related in the linked data files were those associated with a driver from the TIRF Fatality Database; i.e. crashes involving a fatally injured driver who tested positive for alcohol in the bloodstream. Comparisons between Quebec and other jurisdictions or Canada as a whole are not meaningful because of this understatement. However, Quebec's progress can be measured against its own baseline figures produced from the linked data files.

It was assumed that proportional distributions of known values for data elements described in this report were representative of those in jurisdictions where the information was not recorded or was reported as unknown.

## **National Overview**

Is Canada making progress in reducing the number of people killed each year by drinking drivers? Generally speaking, yes. Alcohol-related fatalities at the national level are decreasing, largely as a result of the effective measures taken by provinces and territories. Prevention strategies have included initiatives in the areas of education and awareness, policing, policy and legislation, health promotion, and linkage with other agencies.

As mentioned, an alcohol-related crash is defined here as a crash where at least one motor vehicle driver had been drinking and excludes crashes where only a pedestrian had been drinking. At least 736 persons on average were killed each year in alcohol-related crashes between 2003 and 2005. This represents an improvement from the baseline period of 1996-2001, when there were at least 814 persons killed annually in alcohol-related crashes. \*

To put it another way, the number of alcohol-related fatalities dropped by almost ten percent between 1996-2001 and 2003-2005. This is a positive trend, especially when one considers that non-alcohol-related fatalities decreased by only a little more than three percent during the same time period.

Another indicator of progress was a reduction in the percentage of total fatalities that were alcohol-related. On a national level, a minimum of 28.9% of fatalities were alcohol-related, down from 31.1% during 1996-2001.

Serious injuries that result from alcohol-related crashes are also a concern for road safety professionals and law enforcement. Information about drinking drivers in serious injury alcohol crashes is incomplete and alcohol use in general is thought to be under-reported by police. As a result, definitive numbers are hard to obtain. The Traffic Injury Research

Foundation estimates that almost 3,000 drinking drivers per year were involved in serious injury crashes between 2003 and 2005.

\*These numbers are lower than published TIRF numbers because they do not include an estimation of victims from cases where alcohol use data was unavailable. For example, victims from Quebec crashes where a driver was drinking but not killed are missing from the totals.

## Jurisdictional Overview

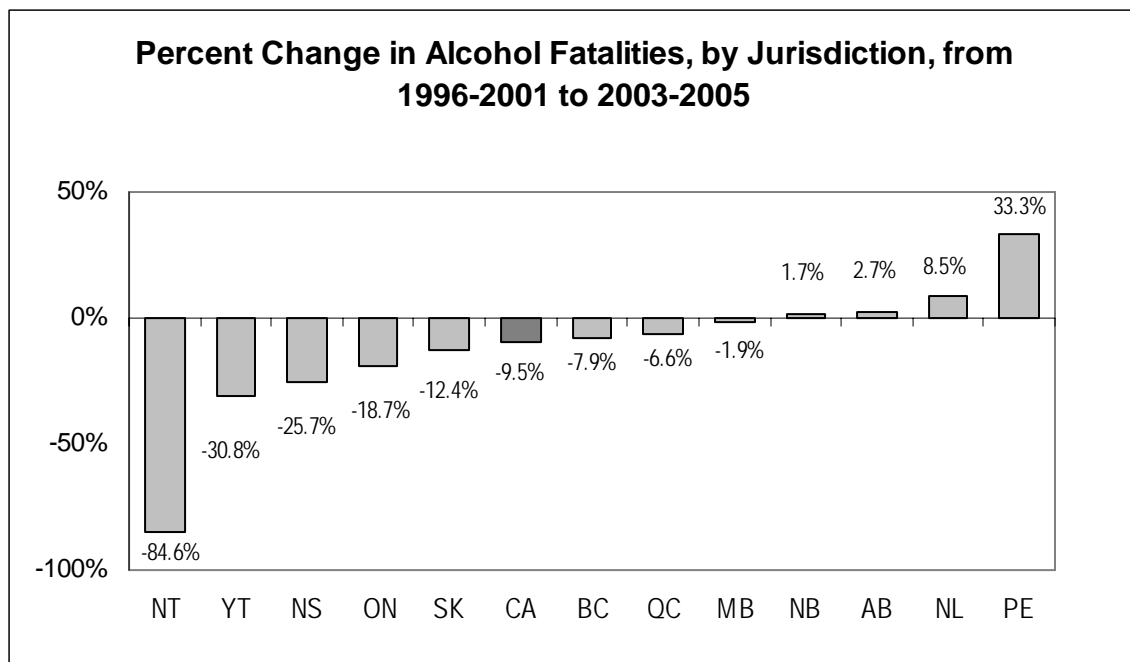
It appears that some provinces and territories are having more success in reducing alcohol-related casualties than others.

The Northwest Territories, Yukon, Nova Scotia, and Ontario showed the most progress in fatality reductions between 1996-2001 and 2003-2005. The number of persons killed in alcohol-related crashes in these jurisdictions decreased by 84.6%, 30.8%, 25.7%, and 18.7%, respectively.

Saskatchewan, British Columbia, Quebec and Manitoba also made progress in reducing fatalities. On the other hand, New Brunswick, Alberta, Newfoundland and Labrador, and Prince Edward Island reported increases in persons killed by drinking drivers.

Figure 1 shows the percentage change in alcohol fatalities by jurisdiction from 1996-2001 to 2003-2005.

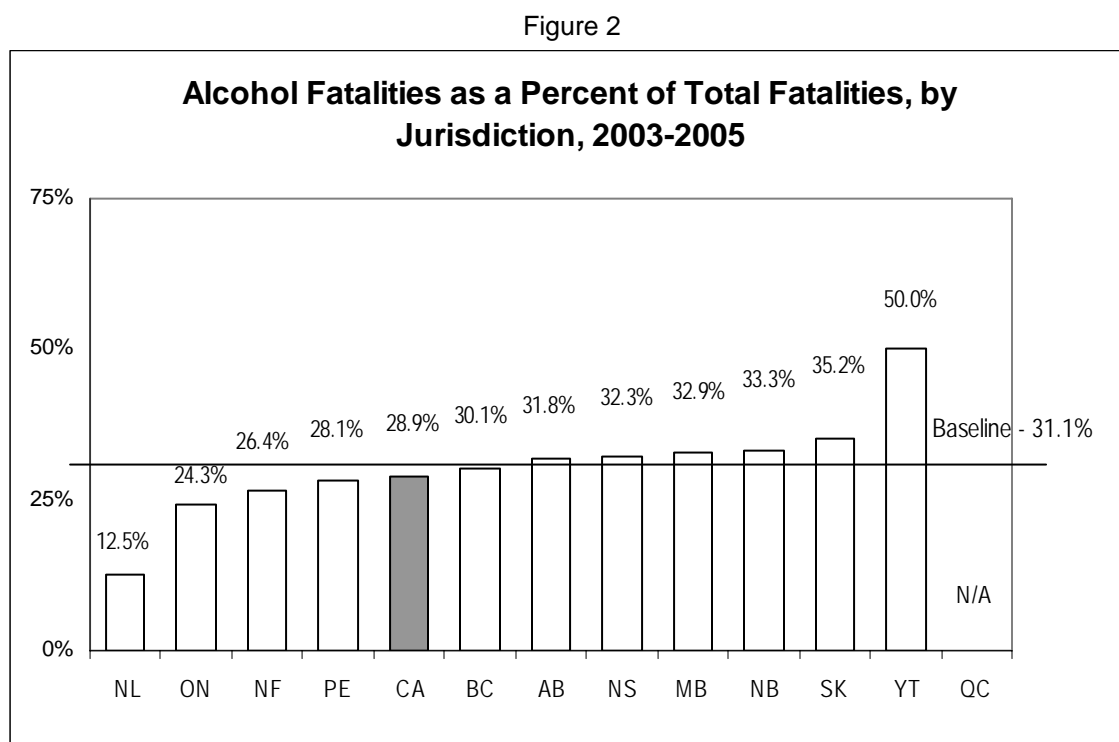
Figure 1



As mentioned, 31.1% of fatalities at the national level were alcohol-related during the baseline period of 1996-2001. Half of the provinces and territories for which data was available had higher fatality percentages than the national figure. This included Nova Scotia, Manitoba, Saskatchewan, Alberta, British Columbia, and Yukon.

At the national level, the alcohol-related fatality percentage decreased to 28.9% during 2003-2005. Again, more than half of the jurisdictions showed higher percentages of alcohol-related fatalities than the national figure. However, several of these jurisdictions improved from their baseline numbers, and that can be counted as progress.

Figure 2 shows alcohol fatalities as a percentage of total fatalities by jurisdiction.



The provinces and territories that showed improvement in reducing **both** the number of alcohol-related fatalities and the percentage of total fatalities were Nova Scotia, Ontario, Saskatchewan, British Columbia, the Northwest Territories, and Yukon.

Alberta experienced a reduced percentage of alcohol fatalities but not a reduction in the total number of alcohol fatalities.

The provinces that made no improvement according to either indicator during the time frame under review were Newfoundland and Labrador, Prince Edward Island, and New Brunswick.

Even though a number of jurisdictions made progress toward reducing the drinking and driving problem, there is still work to be done. For example, Yukon saw a little progress in both indicators. Still, 50% of fatalities during 2003-2005 involved a drinking driver. Saskatchewan, too, achieved reductions in alcohol-related fatalities and alcohol fatality percentage. Even so, 35.2% of road deaths during 2003-2005 involved a drinking driver, and this was the second highest percentage out of all jurisdictions.

## **Victims of Alcohol-related Crashes**

### **Victims and Road User Type**

Within Canada as a whole, alcohol-related fatalities among all types of road users declined by 9.5% between 1996-2001 and 2003-2005. But some road user groups showed more progress than others.

The most significant decrease in terms of numbers was for passengers. The number killed in alcohol-related crashes dropped by a hefty 19.2% between 1996-2001 and 2003-2005. As a side note, more than 88 percent of passengers killed in an alcohol-related crash were riding with a drinking driver. For fatally injured passengers aged 16-24 years, the number soared to about 97 percent.

Pedestrians accounted for only about 4% of fatalities from crashes involving a drinking driver, but the 24.1% reduction in number between the baseline period and 2003-2005 was worth noting.

A little progress was also seen for motorcyclists. The number killed in alcohol-related crashes dropped by 8.8% between 1996-2001 and 2003-2005. Almost 95 percent of those killed in such crashes had been drinking; this was, however, a drop of about one percentage point from 1996-2001.

As for motor vehicle drivers, the number killed in alcohol-related crashes decreased by 4.4%. It's interesting to note that about 92 percent of drivers who were killed in alcohol-related crashes had themselves been drinking.

Table 1 shows the percentage of fatalities by road user type as well as the percentage change in number between 1996-2001 and 2003-2005.

Table 1  
**Percent of Alcohol-related Fatalities and Change in Number of  
 Alcohol-Related Fatalities According to Type of Road User,  
 1996-2001 and 2003-2005**

Road User	1996-2001	2003-2005	% change in number
<b>Drivers</b>	65.2%	68.8%	-4.4%
<b>Passengers</b>	24.4%	21.8%	-19.2%
<b>Motorcyclists</b>	5.6%	5.7%	-8.8%
<b>Pedestrians</b>	4.2%	3.5%	-24.1%
<b>Bicyclists</b>	0.5%	0.2%	-60.0%
<b>All</b>	100.0%	100.0%	-9.5%

### **Victims and Age**

Most age groups experienced a reduction in the number of alcohol-related fatalities between 1996-2001 and 2003-2005.

As a group, persons aged 16-24 years accounted for 32.3% of drinking and driving fatalities, virtually unchanged from the baseline figure (32.5%).

What's interesting, though, is that fatalities of just 16- to 19-year-olds dropped by a noteworthy 25.6% between 1996-2001 and 2003-2005. But fatalities among persons 20-24 years actually grew by 1%, and this was the only age group to see an increase in victims.

The second largest group of victims were those aged 25-34 years. They accounted for 22.6% of alcohol-related fatalities during 2003-2005, down slightly from 23.8% during 1996-2001. More importantly, the number of persons in this age group who were killed in alcohol crashes decreased by 13.8%.

Smaller fatality reductions were also seen for persons aged 35-44, 45-54, and 65 years or older.

The biggest percentage decrease was among children under the age of 16. Fatalities in this age group dropped by 51.4% from the baseline number. However, children accounted for only a small number of victims of alcohol-related crashes.

Table 2 shows the percentage of alcohol-related fatalities by age group and the percentage change in number between 1996-2001 and 2003-2005.

Table 2  
**Percent of Alcohol-related Fatalities and Change in Number of Fatalities**  
**According to Age Group, 1996-2001 and 2003-2005**

Age Group	1996-2001	2003-2005	% change in number	% of 2003-2005 population
<b>0-15 years</b>	2.9%	1.5%	-51.4%	19.3%
<b>16-19 years</b>	13.2%	10.8%	-25.6%	5.3%
<b>20-24 years</b>	19.3%	21.5%	1.0%	6.9%
<b>25-34 years</b>	23.8%	22.6%	-13.8%	13.7%
<b>35-44 years</b>	18.6%	18.8%	-8.3%	16.1%
<b>45-54 years</b>	11.8%	12.8%	-1.9%	15.0%
<b>55-64 years</b>	6.0%	6.6%	0.0%	10.6%
<b>65+ years</b>	4.4%	5.3%	-9.3%	13.0%
<b>Total</b>	100.0%	100.0%	-9.5%	100.0%

### Victims Aged 20-24 Years

Persons aged 20-24 years accounted for about one in five alcohol-related fatalities. Given its size and the upward trend in fatalities from 1996-2001 to 2003-2005, this age group is a prime target for prevention strategies.

A closer look at the data reveals that half of the jurisdictions in Canada saw a decrease in victims from this age group, while half saw an increase. Yukon, Prince Edward Island, and Newfoundland and Labrador experienced the largest increases.

Figure 3 shows the growth or decline in 20- to 24-year-olds killed in alcohol-related crashes by jurisdiction.

Figure 3



## Characteristics of Drinking Drivers in Alcohol-related Crashes

### Overview

#### Fatal Crashes

A useful indicator related to the drinking and driving problem is the number of drinking drivers who get into fatal crashes. This number decreased by 8.3% between 1996-2001 and 2003-2005. Interestingly, the number of reported non-drinking drivers becoming involved in fatal crashes declined by only 2.5% during the same time. This demonstrates that jurisdictional strategies to reduce drinking and driving are having a positive effect.

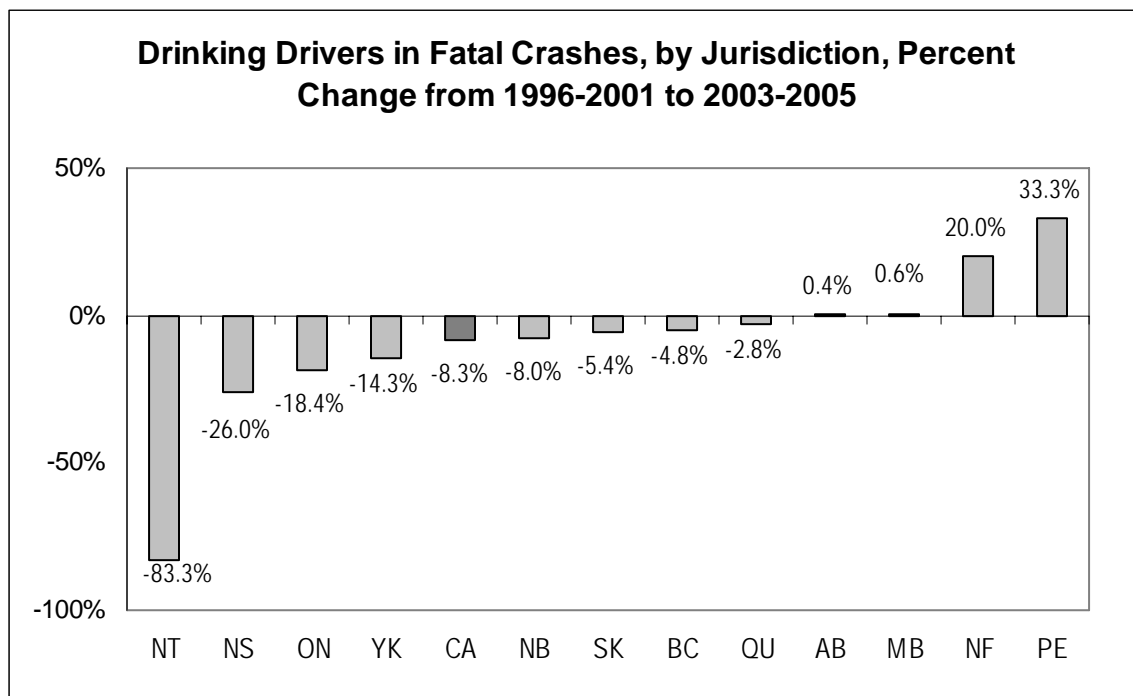
Despite the progress, there is still plenty of room for improvement. About one in five drivers who were involved in a fatal crash during 2003-2005 had been drinking, and almost one in three who were killed had been drinking.

Men were the most frequent offenders. They accounted for 85.7% of drinking drivers in fatal crashes, down from 87.4% during 1996-2001.

Individual jurisdictions experienced widely varying degrees of success in their efforts to reduce the number of drinking drivers getting into fatal crashes. In a few jurisdictions, numbers stayed about the same or even increased. On the other hand, the Northwest Territories, Nova Scotia, Ontario, and Yukon had larger reductions than the national average of 8.3%.

Figure 4 shows the percentage change in the number of drinking drivers in fatal crashes by jurisdiction.

Figure 4



### Serious Injury Crashes

The number of drinking drivers involved in serious injury crashes is hard to pin down because data is limited or incomplete.

Using the criteria of alcohol reported as a contributing factor, 9.2% of drivers in serious injury crashes had been drinking, down from the baseline figure of 11.1%. The number of drinking drivers getting into serious injury crashes decreased by 23.7% between the baseline and 2003-2005. In marked contrast, the number of non-drinking drivers in serious injury crashes decreased by only 6.7%.

## Drinking Drivers and Age

Persons of any age may commit the mistake of drinking and driving. It is more commonly the behaviour of younger drivers, but in recent years crash involvement by older drinking drivers has increased.

### Fatal Crashes

Drivers aged 20-24 years contribute significantly to the impaired driving problem. During 2003-2005, this age group accounted for 21.6% of drinking drivers who got into a fatal crash, yet they made up only 8% of licensed drivers.

However, there was progress among drivers aged 16-19 years. The number who became involved in fatal crashes declined by 14.9% between 1996-2001 and 2003-2005.

Progress was also seen for drivers aged 25-34 and 35-44 years. The number of drivers within these age groups who used alcohol and then got into a fatal crash decreased by 16.7% and 13.5%, respectively.

More older drivers were using alcohol before getting behind the wheel, but the increase was largely due to the general aging of the population. The number of drinking drivers involved in fatal crashes grew for drivers aged 45-54, 55-64, and 65 years or older by 4%, 16.7%, and 3.6%, respectively. Even with increased involvement, drivers over 45 years of age were still underrepresented in drinking and driving crashes.

Table 3 shows the percentage of drinking drivers in fatal crashes by age group and the percentage change in number between 1996-2001 and 2003-2005.

Table 3  
Percentage of Drinking Drivers in Fatal Crashes and Change in Number of Drinking Drivers  
in Fatal Crashes According to Age Group, 1996-2001 and 2003-2005

Age Group	1996-2001	2003-2005	% change in number	% of licensed drivers in 2003-2005
16-19 years	11.6%	10.7%	-14.9%	4.8%
20-24 years	20.2%	21.6%	-1.9%	8.1%
25-34 years	27.7%	25.1%	-16.7%	17.7%
35-44 years	20.8%	19.6%	-13.5%	21.7%
45-54 years	11.6%	13.2%	4.0%	20.6%
55-64 years	4.9%	6.2%	16.7%	14.2%
65+ years	3.3%	3.7%	3.6%	12.9%
All age groups	100.0%	100.0%	-8.3%	100.0%

## Average Age

As fewer young drivers used alcohol before driving, the average age of a drinking driver involved in a fatal crash rose. During 2003-2005, the average age was 33.8 years, up marginally from 33.4 years in 1996-2001.

Half the individual jurisdictions had lower average ages. Newfoundland and Labrador had the youngest drinking drivers in fatal crashes, with an average age of 30.4 years. New Brunswick had the second lowest average age, 32.6 years.

The average age of a drinking driver in a fatal crash within each of the four western provinces was also below than the national average.

Quebec had the highest average age (37.3 years), but this figure is based only on fatally injured drinking drivers and isn't directly comparable to other jurisdictional or national figures. The next highest average age for drinking drivers in fatal crashes, 37.0 years, was found in the Northwest Territories.

Table 4 shows the average age of drinking drivers in fatal crashes by jurisdiction for 1996-2001 and 2003-2005.

Table 4  
Average Age of Drinking Drivers in Fatal Crashes  
According to Jurisdiction,  
1996-2001 and 2003-2005

Jurisdiction	Age in years	
	1996-2001	2003-2005
NL	35.0	30.4
NB	34.0	32.6
AB	32.2	32.9
MB	32.8	33.4
SK	33.8	33.5
BC	32.4	33.6
<b>Canada</b>	<b>33.4</b>	<b>33.8</b>
YK	35.3	34.2
ON	34.2	34.7
PE	35.5	34.8
NS	33.7	35.0
NT	31.5	37.0
QU	35.5	37.3

## Serious Injury Crashes

Drivers aged 16-24 accounted for about one in three drinking drivers involved in serious injury crashes. However, 2003-2005 saw reduced numbers across all age groups compared to the baseline. The smallest decreases came among drivers aged 45-54 and 55-64.

Table 5 shows the percentage of drinking drivers in serious injury crashes by age group and the percent change in number from 1996-2001 to 2003-2005.

Table 5  
**Percent of Drinking Drivers in Serious Injury Crashes and Percent Change in Number of Drinking Drivers in Serious Injury Crashes According to Age Group, 1996-2001 and 2003-2005**

Age Group	1996-2001	2003-2005	% change in number	% of licensed drivers in 2003-2005
<b>16-19 years</b>	13.2%	11.6%	-33.0%	4.8%
<b>20-24 years</b>	21.1%	23.0%	-17.0%	8.1%
<b>25-34 years</b>	29.1%	25.0%	-34.6%	17.7%
<b>35-44 years</b>	21.7%	21.7%	-23.7%	21.7%
<b>45-54 years</b>	9.4%	12.2%	-1.4%	20.6%
<b>55-64 years</b>	3.5%	4.4%	-3.1%	14.2%
<b>65+ years</b>	2.0%	2.2%	-19.2%	12.9%
<b>All age groups</b>	100.0%	100.0%	-23.7%	100.0%

## **Drinking Drivers and BAC**

Because there's a likelihood that a driver killed in a crash had been drinking, most fatally injured drivers are tested for the presence of alcohol in their blood. The results produce useful data on a subset of drinking drivers; namely, those who were killed in a crash and also tested positive for alcohol.

The data shows that the number of fatally injured drivers who had been drinking declined by 4.4% between 1996-2001 and 2003-2005.

One question of interest is whether drinking drivers were less impaired during 2003-2005 compared to 1996-2001. In general, this was not the case. The percentages of fatally injured drinking drivers with various levels of impairment stayed almost the same.

The vast majority of fatally injured drinking drivers were legally impaired, i.e. had a BAC higher than 80 mg%. During 2003-2005, 83.2% of fatally injured drinking drivers were legally impaired compared to the baseline figure of 83.1%.

Furthermore, 55.6% of those fatally injured drivers had a BAC higher than 160 mg% (more than twice the legal limit). Again, this was almost unchanged from the figure of 55.9% during 1996-2001.

It should be remembered that even a small amount of alcohol can contribute to a deadly outcome. During 2003-2005, 11.5% of fatally injured drinking drivers who tested positive for alcohol had a BAC lower than 50 mg%.

Table 6 shows the percentage of fatally injured drinking drivers by their BAC levels.

Table 6  
**Percent of Fatally Injured Drinking Drivers**  
**According to Blood Alcohol Concentration (BAC),**  
**1996-2001 and 2003-2005**

BAC	% of tested fatally injured drinking drivers	
	1996-2001	2003-2005
<b>1 to 49 mg%</b>	11.3%	11.5%
<b>50 to 80 mg%</b>	5.6%	5.3%
<b>81 to 160 mg%</b>	27.2%	27.6%
<b>161+ mg%</b>	55.9%	55.6%
<b>Legally impaired (&gt; 80 mg%)</b>	83.1%	83.2%

### **Drinking Drivers and BAC by Jurisdiction**

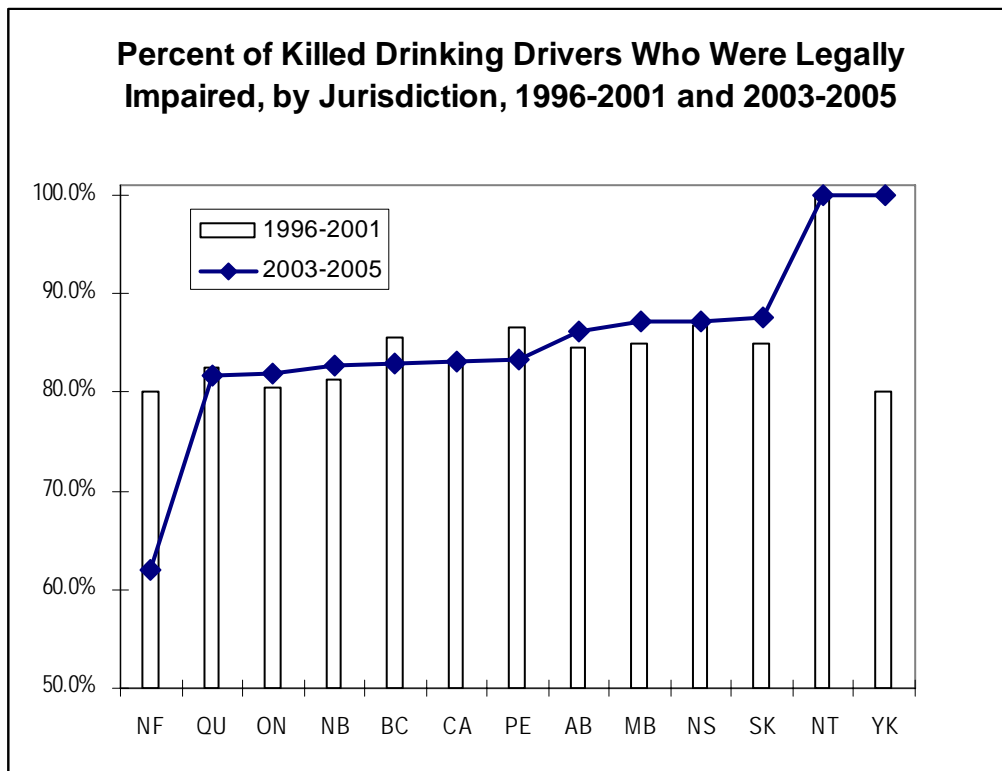
At the national level, 83.2% of drinking drivers killed in a crash were determined to be legally impaired. But the overall degree of impairment among fatally injured drivers varied widely between jurisdictions.

As an example, Newfoundland and Labrador had the lowest percentage of fatally injured drivers who were legally impaired, 61.9%. This was quite a drop from 1996-2001, when 80% of drinking drivers killed in a crash were legally impaired. Unfortunately, the overall reduced level of driver impairment in Newfoundland and Labrador did not translate into fewer alcohol-related crash fatalities.

The highest level of impairment was found in Northwest Territories and Yukon, where 100% of fatally injured drivers whose BAC was known were legally impaired.

Figure 5 shows the percentage of fatally injured drinking drivers who were legally impaired by jurisdiction.

Figure 5



### Drinking Drivers and BAC by Age

Across all age groups, 83.2% of fatally injured drinking drivers were found to be legally impaired. But there were some variation between age groups. Young drinking drivers (aged 16-19 years) who were killed in a crash were less likely to be legally impaired than most other age groups. 75.8% of this age group had a BAC higher than 80 mg%. This was slightly worse than during 1996-2001, when 73.8% were legally impaired.

At the high end of the scale, 89.2% of fatally injured drinking drivers aged 35-44 years were legally impaired, compared to 88.7% during the baseline period.

Drivers aged 35-44 years also had the highest percentage of killed drivers who were not just impaired but had a BAC more than twice the legal limit (higher than 160 %mg). In 2003-2005, 68.6% of fatally injured drivers in this age group had a BAC higher than 160 %mg, compared to 65.8% during 1996-2001.

Tables 7 and 8 show the distribution of fatally injured drinking drivers in each age group by BAC for 1996-2001 and 2003-2005.

Table 7  
**Distribution of Fatally Injured Drinking Drivers by BAC  
 According to Age Group, 1996-2001**

Age Group	Percent of tested fatally injured drinking drivers				
	1 to 49 mg%	50 to 80 mg%	81 to 160 mg%	161+ mg%	Legally impaired
16-19 years	14.0%	12.2%	39.4%	34.4%	73.8%
20-24 years	10.7%	4.9%	36.5%	47.9%	84.4%
25-34 years	8.7%	5.6%	25.2%	60.5%	85.7%
35-44 years	7.2%	4.1%	22.9%	65.8%	88.7%
45-54 years	12.9%	5.0%	21.8%	60.3%	82.1%
55-64 years	18.9%	5.7%	16.6%	58.9%	75.4%
65-74 years	24.5%	2.0%	22.4%	51.0%	73.5%
75+ years	45.8%	4.2%	16.7%	33.3%	50.0%
<b>All age groups</b>	11.3%	5.6%	27.2%	55.9%	83.1%

Table 8  
**Distribution of Fatally Injured Drinking Drivers by BAC  
 According to Age Group, 2003-2005**

Age Group	Percent of tested fatally injured drinking drivers				
	1 to 49 mg%	50 to 80 mg%	81 to 160 mg%	161+ mg%	Legally impaired
16-19 years	12.9%	11.4%	41.7%	34.1%	75.8%
20-24 years	9.4%	4.7%	37.8%	48.2%	86.0%
25-34 years	11.6%	3.8%	28.5%	56.1%	84.6%
35-44 years	8.4%	2.4%	20.6%	68.6%	89.2%
45-54 years	11.7%	3.7%	21.5%	63.1%	84.6%
55-64 years	16.5%	9.7%	14.6%	59.2%	73.8%
65-74 years	15.9%	15.9%	22.7%	45.5%	68.2%
75+ years	42.1%	10.5%	15.8%	31.6%	47.4%
<b>All age groups</b>	11.5%	5.3%	27.6%	55.6%	83.2%

The total number of legally impaired drivers killed in crashes grew for certain age demographics. For drivers aged 45-64, increases were related to the general aging of the driver population.

The largest changes were among fatally injured drinking drivers aged 45-54. Those with a BAC between 81 mg% and 160 mg% increased in number by 10.8%, while there were 17.9% more with a BAC higher than 160 mg%.

The situation among drivers aged 55-64 also worsened. There were 3.4% more fatally injured drivers with a BAC between 81 mg% and 160 mg%, and 18.4% more drivers with a BAC higher than 160 mg%.

On the other hand, the most noteworthy improvement was among drivers aged 25-34. There were 3.4% fewer fatally injured drivers in this age group with a BAC between 81 mg% and 160 mg%, and 20.7% fewer with a BAC higher than 160 mg%. There was also some improvement among drivers aged 35-44 and 65-74 years.

Table 9 shows the percentage change between the baseline and 2003-2005 in the number of fatally injured drinking drivers who were legally impaired across all age groups.

Table 9  
**Percent Change in Number of Fatally Injured Legally Impaired Drivers  
 Between 1996-2001 and 2003-2005**

Age Group	Driver BAC	
	81 to 160 mg%	161+ mg%
16-19 years	0.0%	-6.3%
20-24 years	8.7%	5.5%
25-34 years	-3.4%	-20.7%
35-44 years	-16.4%	-3.3%
45-54 years	10.8%	17.9%
55-64 years	3.4%	18.4%
65-74 years	-9.1%	-20.0%
75+ years	50.0%	50.0%
<b>All age groups</b>	-0.9%	-3.1%

Considering crashes where a fatally injured driver tested positive for any amount of alcohol, the total number of fatalities from such crashes (including the driver and any other victims) dropped by 4.9% between the baseline period and 2003-2005. The percentage drop was found to be the same for cases where the fatally injured drinking driver had a BAC over the legal limit.

## Legally Impaired Drinking Drivers and Average Age

The average age of a drinking driver who was fatally injured was 35.4 years in 2003-2005. For fatally injured drivers who were legally impaired, the average age was 35.0 years, up from 34.7 years in 1996-2001.

Looking at jurisdictions, Newfoundland and Labrador had the lowest average age for fatally injured drinking drivers (32.4 years) and legally impaired and fatally injured drivers (28.7 years). The highest average ages for these types of drivers was found in Quebec.

Table 10 summarizes the average ages of legally impaired drivers by jurisdiction for 1996-2001 and 2003-2005, ranked from low to high age of legally impaired drivers in 2003-2005.

Table 10  
Average Age of Legally Impaired Drivers Killed in Crashes by Jurisdiction,  
1996-2001 and 2003-2005

Jurisdiction	Fatally injured drinking drivers with BAC higher than 80 %mg		
	Average age in years		Difference in years
	1996-2001	2003-2005	
NF	36.1	28.7	-7.5
PE	40.2	31.1	-9.1
SK	36.4	32.3	-4.1
YK	32.8	32.9	0.1
AB	34.0	33.9	-0.1
MB	34.0	34.3	0.3
ON	34.6	34.7	0.1
CA	34.7	35.0	0.3
BC	33.4	35.3	1.9
NB	36.1	35.3	-0.8
NS	35.4	36.6	1.2
NT	31.4	37.0	5.6
QU	35.6	37.2	1.6

## Behaviour of Drinking Drivers

Drinking drivers often exhibit other dangerous driving behaviours such as speeding and failing to wear seat belts.

### Drinking Drivers and Speeding

During 2003-2005, 30.0% of drinking drivers involved in fatal crashes were speeding or driving too fast for conditions, up slightly from 28.2% in 1996-2001. In comparison, 8.2% non-drinking drivers in fatal crashes had been speeding.

The worst offenders when it comes to alcohol use and speed were young adults. About 36% of drinking drivers aged 16-24 years who got into a fatal crash had been speeding.

### Fatally Injured Drinking Drivers, BAC, and Speeding

The percentage of speeders among fatally injured drinking drivers was about the same percentage as for all drinking drivers (regardless of injury) who were involved in fatal crashes. 29.7% of fatally injured drinking drivers with a known BAC were speeding at the time of the crash. This was virtually unchanged from 1996-2001. The cohort of fatally injured drinking drivers who were most often speeding was the group with a BAC between 81 mg% and 160 mg%.

Table 11 shows the distribution of fatally injured drinking drivers by BAC and speeding behaviour, compared to non-drinking fatally injured drivers.

Table 11  
Distribution of Fatally Injured Drinking Drivers by BAC and Fatally Injured Non-drinking Drivers  
According to Driver Speeding, 2003-2005

Speeding behaviour	Percent of tested fatally injured drinking drivers					Percent of non-drinking fatally injured drivers
	1 to 49 mg%	50 to 80 mg%	81 to 160 mg%	161+ mg%	All BAC	
<b>Speeding</b>	22.5%	22.9%	30.9%	31.0%	29.8%	17.8%
<b>Not speeding</b>	77.5%	77.1%	69.1%	69.0%	70.2%	82.2%
<b>Total</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

### Drinking Drivers and Seat Belt Use

Drinking drivers who become involved in fatal crashes were much more likely to not wear seat belts than non-drinking drivers in fatal crashes. During 2003-2005, 55.3% of drinking drivers in fatal crashes were not using seat belts (a small improvement over the baseline figure of 57.6%). However, only 13.6% of non-drinking drivers in fatal crashes had failed to buckle up.

## Fatally Injured Drinking Drivers, BAC, and Seat Belt Use

Fatally injured drinking drivers were even worse about using seatbelts. 60.4% were not using seat belts at the time of the crash. In comparison, 26.8% of fatally injured non-drinking drivers were unbelted at the time of the crash.

Fatally injured drinking drivers with a BAC higher than 160 mg% were more likely to be unbelted than other fatally injured drinking drivers. For example, 67.5% were unbelted, compared to 42.5% of drivers with a BAC lower than 50 mg%.

Table 12 shows the distribution of fatally injured drinking drivers by BAC according to seat belt use, compared to non-drinking fatally injured drivers.

Table 12  
Distribution of Fatally Injured Drinking Drivers by BAC and Fatally Injured Non-drinking Drivers  
According to Seat Belt Usage, 2003-2005

Seat belt usage	Percent of tested fatally injured drinking drivers					Percent of non-drinking fatally injured drivers
	1 to 49 mg%	50 to 80 mg%	81 to 160 mg%	161+ mg%	All BAC	
Used	57.5%	62.5%	39.8%	32.5%	38.3%	73.2%
Not used	42.5%	37.5%	60.2%	67.5%	61.7%	26.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

## Drinking Drivers, Speed, and Seat Belt Use

During 2003-2005, 15.1% of drinking drivers in fatal crashes were also speeding and not using seat belts. This was marginally higher than the baseline figure of 14.9%.

## Fatally Injured Drinking Drivers, Speed, and Seat Belt Use

The percentage of fatally injured drinking drivers exhibiting the combination of alcohol, speed, and non-use of seat belts was higher than for all drinking drivers (regardless of injury) in fatal crashes. Almost one in five (19.4%) fatally injured drinking drivers had also been speeding and not wearing a seat belt.

Table 13 shows the percentage of fatally injured drinking drivers according to speeding and seat belt use.

Table 13  
**Percent of Fatally Injured Drinking Drivers**  
**According to Speeding Behaviour and Restraint Use**  
**2003-2005**

Speeding behaviour	Safety Restraint Use		Total
	Unrestrained	Restrained	
<b>Speeding</b>	19.4%	10.5%	29.8%
<b>Not speeding</b>	42.4%	27.8%	70.2%
<b>Total</b>	61.7%	38.3%	100.0%

A look at fatally injured drinking drivers on various types of roads showed that urban roads (defined here as those with speed limits up to 70 km/h) had a higher percentage of drivers exhibiting multiple offences than rural roads or motorways. 31.1% of fatally injured drinking drivers were also speeding and not using seat belts.

## **Circumstances of Alcohol-related Crashes**

### **Single-vehicle and Multi-vehicle Crashes**

#### Overview

The majority (62.9%) of alcohol-related fatalities during 2003-2005 resulted from single-vehicle crashes, an increase over 59.5% during 1996-2001.

The number of persons killed annually in single-vehicle alcohol-related crashes decreased by 4.4% between 1996-2001 and 2003-2005. In comparison, fatalities resulting from multi-vehicle alcohol-related crashes dropped by 17.1%.

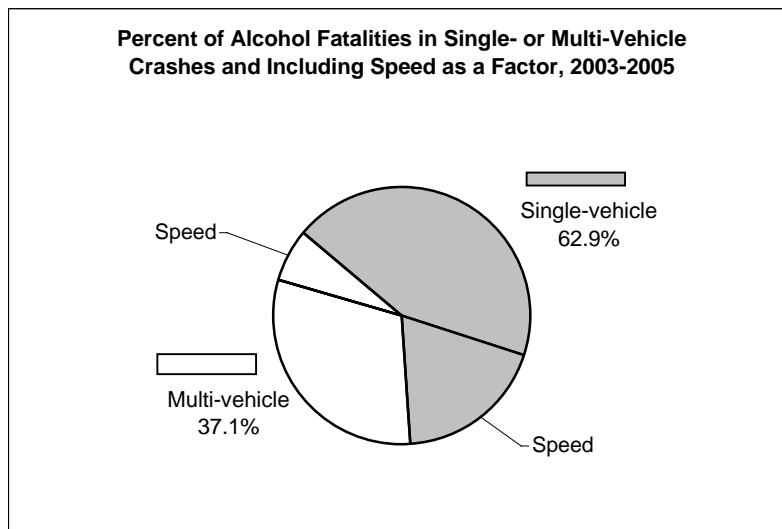
#### Speeding in Single- and Multi-vehicle Crashes

Drinking drivers frequently drive too fast, and this deadly combination is seen in many single-vehicle crashes. Speed was cited as an additional contributing factor in 29.9% of fatalities from alcohol-related single-vehicle crashes during 2003-2005, down marginally from 31% in 1996-2001.

Speeding is less often a factor in multi-vehicle alcohol crashes than in single-vehicle alcohol crashes. Still, speed was cited as an additional contributing factor for 18.2% of fatalities from such crashes. This was a slight increase from 16.1% in 1996-2001.

Figure 6 compares the percentage of alcohol-involved fatalities from single and multi-vehicle crashes including those where speed was a factor.

Figure 6



### Victim Age in Single- and Multi-vehicle Crashes

Young people make up the largest percentage of fatally injured victims in alcohol-related single-vehicle crashes. During 2003-2005, 36.7% of persons killed in such crashes were aged 16-24 years. This was basically unchanged from 36.2% during 1996-2001.

However, some progress was seen for young people in alcohol-related single-vehicle crashes. Fatalities of 16- to 19-year-olds dropped by 20.3% between 1996-2001 and 2003-2005. On the other hand, the number of fatalities of persons 20-24 years increased by 8.7% during the same time.

Fatalities from single-vehicle alcohol crashes decreased significantly for persons aged 25-34 years (12.7%). Fatalities among children under 16 also decreased, but this age group accounts for only a small number of deaths from alcohol-related single-vehicle crashes.

Persons aged 55-64 years accounted for only 5.8% of fatalities from single-vehicle alcohol crashes. But the number of fatalities increased by 21.2% between the baseline period and 2003-2005.

Table 14 shows the percentage of fatalities from single-vehicle alcohol-related crashes by age group and the percentage change in number between 1996-2001 and 2003-2005.

Table 14  
**Percent of Single-vehicle Alcohol-related Fatalities and  
 Change in Number of Fatalities According to Age Group,  
 1996-2001 and 2003-2005**

<b>Age Group</b>	<b>1996-2001</b>	<b>2003-2005</b>	<b>% change in number of fatalities</b>
<b>0-15 years</b>	2.2%	1.4%	-39.7%
<b>16-19 years</b>	14.8%	12.4%	-20.3%
<b>20-24 years</b>	21.4%	24.3%	8.7%
<b>25-34 years</b>	24.5%	22.3%	-12.7%
<b>35-44 years</b>	18.4%	19.1%	-0.6%
<b>45-54 years</b>	10.8%	11.1%	-1.0%
<b>55-64 years</b>	4.6%	5.8%	21.2%
<b>65+ years</b>	3.4%	3.6%	2.0%
<b>Total</b>	100.0%	100.0%	-4.4%

Young people aged 16-24 years figure less prominently as victims in multi-vehicle alcohol crashes, compared to single-vehicle alcohol crashes. However, this age group still accounts for the highest percentage of fatalities.

During 2003-2005, 25.1% of persons killed in alcohol-related multi-vehicle crashes were aged 16-24 years, down from 26.9% in 1996-2001. What's more noteworthy is that the number of persons in this age group who were killed dropped by 22.9%.

Fatalities in multi-vehicle alcohol crashes declined to some extent for all age groups except persons 65 years or older. The smallest decrease (2.7%) was for persons aged 45-54 years.

Table 15 shows the percentage of multi-vehicle alcohol-related fatalities by age group.

Table 15  
**Percent of Multi-vehicle Alcohol-related Fatalities and  
 Change in Number of Fatalities According to Age Group,  
 1996-2001 and 2003-2005**

Age Group	1996-2001	2003-2005	% change in number
<b>0-15 years</b>	3.9%	1.8%	-61.0%
<b>16-19 years</b>	10.7%	8.2%	-36.5%
<b>20-24 years</b>	16.3%	16.9%	-14.0%
<b>25-34 years</b>	22.8%	23.0%	-16.1%
<b>35-44 years</b>	18.8%	18.2%	-19.5%
<b>45-54 years</b>	13.4%	15.7%	-2.7%
<b>55-64 years</b>	8.0%	8.0%	-17.7%
<b>65+ years</b>	6.0%	8.2%	13.6%
<b>Total</b>	100.0%	100.0%	-17.1%

### Driver BAC in Single- and Multi-vehicle Crashes

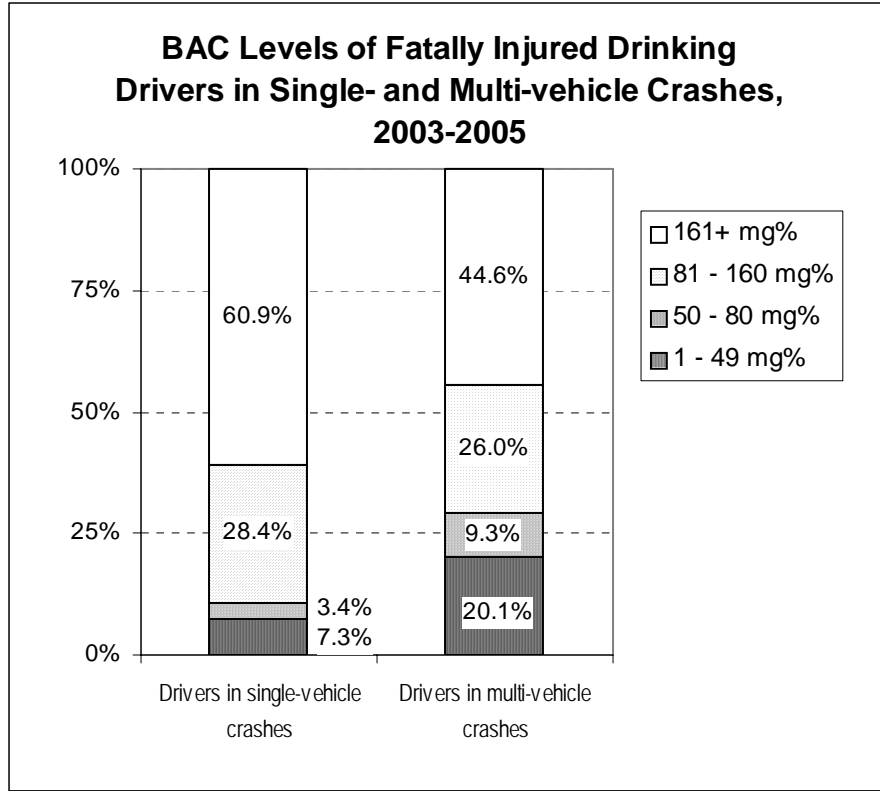
Single-vehicle alcohol crashes involved more speeding and a higher percentage of younger victims than multi-vehicle alcohol crashes. In addition, fatally injured drivers in single-vehicle crashes had a generally higher degree of impairment, as a look at the blood alcohol concentration of drivers showed.

Based on fatally injured drivers who tested positive for alcohol use, 89.3% of those in a single-vehicle crash were legally impaired (BAC higher than 80 mg%). Out of this group, 60.9% had a BAC higher than 160 mg%. In comparison, 70.6% of fatally injured drinking drivers in a multi-vehicle crash were legally impaired, while 44.6% had a BAC higher than 160 mg%.

When it came to fatally injured drivers who tested positive for alcohol but were not legally impaired, 7.3% of those in single-vehicle crashes had a BAC lower than 50 mg%. This compares to 20.1% of those in multi-vehicle crashes.

Figure 7 shows the distribution of BAC readings for fatally injured drinking drivers in single- and multi-vehicle crashes.

Figure 7



### Drinking Drivers, BAC, and Crash Location

For alcohol crashes in general, the level of impairment among fatally injured drinking drivers showed some variation based on the location of the crash.

There was some progress for crashes on rural roads (defined here as undivided roads with a speed limit of 80 km/h or higher). The percentage of fatally injured drivers in crashes who were legally impaired declined from 83.2% in the baseline years to 81.9% in 2003-2005. The percentage with a BAC higher than 160 mg% decreased even more, going from 61.5% to 54.8%.

For other types of roads, the changes were not so positive. On urban roads (defined here as roads with a speed limit of 70 km/h or less), the percentage of fatally injured drivers in crashes who were legally impaired increased from 83.9% to 86.6% between the baseline and 2003-2005. However, the percentage with a BAC higher than 160 mg% dipped slightly from 55.3% to 54.7%.

On motorways (defined here as divided roads with a speed limit of 100 km/h or higher), the percentage of fatally injured drinking drivers in crashes who were legally impaired remained almost identical (81.6% in 1996-2001 versus 81.5% in 2003-2005). Unfortunately, the percentage of dead drivers with a BAC higher than 160 mg% rose from 50.4% to 53.1%.

Table 16 summarizes the BAC levels of fatally injured drivers according to crash location.

Table 16  
**Distribution of Fatally Injured Drinking Drivers by BAC  
 According to Crash Location, 1996-2001 and 2003-2005**

<b>1996-2001</b>					
<b>Road type</b>	Percent of tested fatally injured drinking drivers				
	<b>1 to 49 mg%</b>	<b>50 to 80 mg%</b>	<b>81 to 160 mg%</b>	<b>161+ mg%</b>	<b>Legally impaired</b>
<b>Urban</b>	10.5%	5.6%	28.7%	55.3%	83.9%
<b>Rural</b>	11.5%	5.4%	21.7%	61.5%	83.2%
<b>Motorway</b>	12.0%	6.4%	31.2%	50.4%	81.6%
<b>2003-2005</b>					
<b>Road type</b>	Percent of tested fatally injured drinking drivers				
	<b>1 to 49 mg%</b>	<b>50 to 80 mg%</b>	<b>81 to 160 mg%</b>	<b>161+ mg%</b>	<b>Legally impaired</b>
<b>Urban</b>	7.9%	5.4%	31.9%	54.7%	86.6%
<b>Rural</b>	12.8%	5.3%	27.1%	54.8%	81.9%
<b>Motorway</b>	13.6%	4.9%	28.4%	53.1%	81.5%

Looking only at single-vehicle crashes, the percentage of fatally injured drinking drivers who were legally impaired was higher for all types of roads. The highest degree of impairment was seen on urban roads in particular. 92.6% of fatally injured drivers were legally impaired, up from 90.1% during the baseline period.

Table 17 summarizes the BAC levels of fatally injured drivers in single-vehicle crashes by crash location.

Table 17  
**Distribution of Fatally Injured Drinking Drivers in Single-vehicle Crashes by BAC**  
**According to Location, 1996-2001 and 2003-2005**

<b>1996-2001</b>					
Road type	Percent of tested fatally injured drinking drivers				
	1 to 49 mg%	50 to 80 mg%	81 to 160 mg%	161+ mg%	Legally impaired
<b>Urban</b>	4.8%	5.0%	30.2%	60.0%	90.1%
<b>Rural</b>	6.4%	5.3%	21.1%	67.2%	88.3%
<b>Motorway</b>	11.6%	5.8%	33.3%	49.3%	82.6%
<b>2003-2005</b>					
Road type	Percent of tested fatally injured drinking drivers				
	1 to 49 mg%	50 to 80 mg%	81 to 160 mg%	161+ mg%	Legally impaired
<b>Urban</b>	4.8%	2.6%	31.3%	61.4%	92.6%
<b>Rural</b>	7.3%	3.0%	29.4%	60.4%	89.8%
<b>Motorway</b>	9.3%	3.7%	31.5%	55.6%	87.0%

## **Drinking Drivers and Time of Crash**

### Fatal Crashes

As might be expected, nighttime is a high-risk period for alcohol crashes. 42.8% of drinking drivers in a fatal crash had the crash between 9 p.m. and 3 a.m. However, nights are becoming a little safer from the risk of drinking drivers and daytime is becoming more dangerous. For example, comparing 2003-2005 to 1996-2001, 14% fewer drinking drivers had their fatal crash between midnight and 3 a.m. and 12.9% fewer had the crash between 9 p.m. and midnight.

On the other hand, more drinking drivers became involved in fatal crashes during the day. For the combined hours between 6 a.m. and 3 p.m., driver numbers grew by 8.8%. The hours between 6 a.m. and 9 a.m. alone saw 13.7% more drinking drivers get into fatal crashes.

Table 18 shows the percentage of drinking drivers in fatal crashes by time of the crash.

Table 18  
**Percent of Drinking Drivers in Fatal Crashes and Change in  
 Number of Drinking Drivers in Fatal Crashes According to Time of Crash,  
 1996-2001 and 2003-2005**

Time of Crash	1996-2001	2003-2005	% change in number
12 am - 3 am	25.0%	23.3%	-14.0%
3 am - 6 am	16.3%	16.3%	-7.8%
6 am - 9 am	5.4%	6.7%	13.7%
9 am - 12 pm	3.0%	3.4%	4.8%
12 pm - 3 pm	4.3%	4.9%	5.6%
3 pm - 6 pm	10.0%	9.8%	-8.9%
6 pm - 9 pm	15.3%	15.9%	-4.2%
9 pm - 12 am	20.7%	19.5%	-12.9%
All	100.0%	100.0%	-8.3%

### Serious Injury Crashes

The number of drinking drivers getting into serious injury crashes decreased across all time periods. However, the decrease for the 9 a.m. to 12 p.m. interval (3.3%) was much smaller than other decreases, which ranged from about twenty to thirty-two percent.

Table 19 shows the percentage of drinking drivers in serious injury crashes by time of the crash.

Table 19  
**Percent of Drinking Drivers in Serious Injury Crashes and Change in  
 Number of Drinking Drivers in Serious Injury Crashes According to Time of Crash,  
 1996-2001 and 2003-2005**

Time of Crash	1996-2001	2003-2005	% change in number
12 am - 3 am	26.2%	26.8%	-22.1%
3 am - 6 am	15.3%	13.6%	-32.1%
6 am - 9 am	4.9%	5.0%	-21.7%
9 am - 12 pm	2.5%	3.2%	-3.3%
12 pm - 3 pm	3.7%	3.9%	-20.1%
3 pm - 6 pm	9.6%	8.5%	-32.3%
6 pm - 9 pm	16.6%	17.2%	-20.7%
9 pm - 12 am	21.2%	21.8%	-21.6%
All	100.0%	100.0%	-23.7%

## Drinking Drivers, BAC, and Time of Crash

Across all time periods, 83.2% of fatally injured drinking drivers with a known BAC were legally impaired.

But when the hours between midnight and 3 a.m. were considered, that percentage jumped to 89.5%. This is a small improvement from 1996-2001 when 90.1% of drinking drivers killed in crashes between midnight and 3 a.m. were legally impaired.

Drinking drivers who were killed in night time crashes were more likely to be legally impaired than those killed in daytime crashes. Those killed during the day were more likely to have a BAC less than 50 mg% than those killed at night.

Table 20 shows the distribution of fatally injured drinking drivers by BAC and time of the crash for 2003-2005.

Table 20  
Distribution of Fatally Injured Drinking Drivers by BAC According to Time of Crash, 2003-2005

Time of crash	Percent of tested fatally injured drinking drivers				Legally impaired
	1 to 49 mg%	50 to 80 mg%	81 to 160 mg%	161+ mg%	
12 a.m. - 3 a.m.	5.8%	4.6%	32.6%	56.9%	89.5%
3 a.m. - 6 a.m.	6.8%	3.8%	32.3%	57.0%	89.4%
6 a.m. - 9 a.m.	14.0%	7.0%	27.0%	52.0%	79.0%
9 a.m. - 12 p.m.	20.4%	7.4%	25.9%	46.3%	72.2%
12 p.m. - 3 p.m.	33.3%	5.8%	15.9%	44.9%	60.9%
3 p.m. - 6 p.m.	21.2%	7.5%	23.3%	47.9%	71.2%
6 p.m. - 9 p.m.	11.8%	5.9%	22.7%	59.5%	82.3%
9 p.m. - 12 a.m.	9.1%	4.2%	26.0%	60.8%	86.8%
All drivers	11.5%	5.3%	27.6%	55.6%	83.2%

## Victims and Drinking Driver BAC

75.8% of victims killed in an alcohol-related crash were involved in a crash where the driver BAC was known. Within this group, most alcohol fatalities (82%) resulted from a crash where a driver had not only been drinking but was found to be legally impaired. More than half of the fatalities were connected to a driver who had a BAC higher than 160 mg%, twice the legal limit. Of course, many of the victims killed were the drinking drivers themselves.

## **Victims and Intersections**

The majority of fatal alcohol-related crashes occurred in non-intersection locations. Only 24.1% of victims killed in alcohol-related crashes were killed at or near an intersection. In comparison, 32.7% of victims killed in non-alcohol-related crashes were at or near an intersection.

Between 1996-2001 and 2003-2005, the number of persons killed in alcohol-related crashes dropped for both intersection and non-intersection locations. But the improvement was less for intersections: a 5.5% decline in fatally injured victims, compared to 7.4% at non-intersection locations.

## **Victims and Crash Configuration**

Alcohol use by drivers is associated with run off the road crashes. Run off the road crashes resulted in 35.9% of all alcohol-related fatalities during 2003-2005, up from 30.2% during 1996-2001. In single-vehicle crashes, the percentage was even higher. 56.2% of single-vehicle alcohol fatalities were the result of run off the road crashes, up from 49.9%.

The total number of deaths from run off the road crashes was also on the rise, increasing by 7.9% between the baseline and 2003-2005. Crashes involving a single vehicle running off to the left accounted for virtually all of the increase.

Head-on crashes caused a large percentage of alcohol-related fatalities as well, though the incidence was on the decline. This type of crash accounted for 17.9% of fatalities, down from 20.3% during 1996-2001. The average annual number of fatalities from alcohol-related head-on crashes decreased by 19.9% between the baseline period and 2003-2005.

## **Drinking Drivers and Vehicle Type**

### **Fatal Crashes**

Automobile drivers accounted for 57.5% of drinking drivers in fatal crashes during 2003-2005. Drivers of pickups accounted for 18.5% and drivers of other types of light vehicles such as vans or utility vehicles accounted for 16.2%. Motorcyclists accounted for 5.6% of drinking drivers involved in fatal crashes, down slightly from 6% during 1996-2001. Only 2% of drinking drivers in fatal crashes were operating a heavy truck or tractor trailer.

Table 21 shows the percentage of drinking drivers in fatal crashes by the type of vehicle operated.

Table 21  
**Percent of Drinking Drivers in Fatal Crashes and Change in Number  
of Drinking Drivers in Fatal Crashes According to Vehicle Type Operated,  
1996-2001 and 2003-2005**

<b>Vehicle type</b>	<b>1996-2001</b>	<b>2003-2005</b>	<b>% change in number of drivers</b>
<b>Automobiles</b>	59.8%	57.5%	-11.8%
<b>Light trucks</b>	32.7%	34.8%	-2.4%
<b>Heavy trucks</b>	1.5%	2.0%	20.0%
<b>Motorcycles</b>	6.0%	5.6%	-13.3%
<b>Other</b>	0.0%	0.1%	100.0%

One point of interest is that the number of drinking motorcyclists involved in fatal crashes decreased by 13.3% between the baseline and 2003-2005. But the number of reported non-drinking motorcyclists involved in fatal crashes increased by 44.8% during the same time. Furthermore, 19.6% of motorcyclists involved in a fatal crash during 2003-2005 were reportedly drinking, compared to 28.9% during the baseline period.

In other words, more motorcyclists were getting into fatal crashes but substantially fewer of those crashes were the result of drinking and riding.

Operators of heavy trucks make up a very small segment of drinking drivers in fatal crashes. Even so, the fatal crash involvement of drinking drivers operating heavy trucks increased much faster than the involvement of non-drinking drivers, a 20% increase compared to a 2.5% increase from the baseline to 2003-2005.

Among provinces and territories, Yukon and Manitoba had the highest percentages of drinking drivers in fatal crashes who were operating a heavy truck. The highest percentages of light truck drivers who had used alcohol were found in the Northwest Territories and Saskatchewan. The highest incidence of drinking motorcyclists being involved in fatal crashes was found in British Columbia, Quebec, Ontario, and New Brunswick.

Table 22 shows the distribution of vehicle types operated by drinking drivers in fatal crashes for individual jurisdictions.

Table 22  
**Distribution of Drinking Drivers in Fatal Crashes by Vehicle Type Operated  
 According to Jurisdiction, 2003-2005**

Jurisdiction	Percentage of Drinking Drivers				
	Automobile	Light truck	Heavy truck	Motorcycle	Other
NF	63.3%	30.0%	3.3%	3.3%	0.0%
PE	56.3%	37.5%	0.0%	6.3%	0.0%
NS	58.2%	34.3%	1.5%	6.0%	0.0%
NB	61.3%	32.0%	0.0%	6.7%	0.0%
QU	73.8%	16.7%	1.3%	8.2%	0.0%
ON	66.9%	25.3%	1.0%	6.7%	0.2%
MB	45.1%	42.9%	8.8%	3.3%	0.0%
SK	41.7%	53.8%	2.3%	2.3%	0.0%
AB	42.4%	53.4%	3.9%	0.3%	0.0%
BC	52.0%	38.2%	0.8%	8.7%	0.3%
NT	0.0%	100.0%	0.0%	0.0%	0.0%
YK	44.4%	44.4%	11.1%	0.0%	0.0%
Canada	57.5%	34.8%	2.0%	5.6%	0.1%

### Serious Injury Crashes

As was the case for fatal crashes, the percentage of drinking drivers in serious injury crashes who were operating an automobile or motorcycle decreased between 1996-2001 and 2003-2005. At the same time, drinking drivers of light trucks and heavy trucks had increased involvement in serious injury crashes. The actual number of involved heavy truck drivers was small, but the large percentage increase in their number contrasted sharply with the large decreases seen for other vehicle types.

Table 23 shows the percentage of drinking drivers in serious injury crashes by the type of vehicle operated and the change in number between 1996-2001 and 2003-2005.

Table 23  
**Percent of Drinking Drivers in Serious Injury Crashes and Change in Number of Drinking Drivers  
 in Serious Injury Crashes According to Vehicle Type Operated, 1996-2001 and 2003-2005**

Vehicle type	1996-2001	2003-2005	% change in number of drivers
Automobiles	59.2%	57.3%	-26.2%
Light trucks	36.0%	38.3%	-18.9%
Heavy trucks	1.0%	1.7%	25.6%
Motorcycles	3.7%	2.6%	-46.6%
Other	0.0%	0.1%	100.0%

## Drinking Drivers, BAC, and Vehicle Type

During 2003-2005, a higher percentage of fatally injured drinking drivers of light trucks and heavy trucks were legally impaired compared to the baseline years. On the other hand, the level of impairment among automobile drivers went down slightly. Most notably, the percentage of fatally injured motorcyclists who were legally impaired decreased from 74.5% to 66.3%.

Table 24 summarizes the distribution of fatally injured drinking drivers by BAC and vehicle type for 1996-2001 and 2003-2005.

Table 24  
Distribution of Fatally Injured Drinking and Legally Impaired Drivers by BAC  
According to Vehicle Type, 1996-2001 and 2003-2005

1996-2001					
Vehicle type	Percent of tested fatally injured drinking drivers				
	1 to 49 mg%	50 to 80 mg%	81 to 160 mg%	161+ mg%	Legally impaired
Automobile	10.9%	5.9%	29.4%	53.7%	83.1%
Light truck	9.7%	4.4%	21.4%	64.5%	85.9%
Heavy truck	25.6%	5.1%	15.4%	53.8%	69.2%
Motorcycle	17.7%	7.8%	34.6%	39.8%	74.5%
Other	0.0%	0.0%	0.0%	100.0%	100.0%
2003-2005					
Vehicle type	Percent of tested fatally injured drinking drivers				
	1 to 49 mg%	50 to 80 mg%	81 to 160 mg%	161+ mg%	Legally impaired
Automobile	12.1%	5.4%	29.2%	53.2%	82.4%
Light truck	5.9%	5.3%	23.8%	65.0%	88.8%
Heavy truck	20.7%	6.9%	20.7%	51.7%	72.4%
Motorcycle	29.7%	4.0%	34.7%	31.7%	66.3%
Other	0.0%	0.0%	0.0%	100.0%	100.0%

## Conclusion

Road safety experts agree that reducing drinking and driving is an ongoing challenge. Currently almost one in three traffic fatalities is alcohol-related. The target defined in the Road Safety Vision 2010 initiative is to reduce this figure to less than one in five.

There has been a modest but measurable overall improvement in the alcohol crash situation. Alcohol-related fatalities were down by almost ten percent from the baseline period of 1996-2001. Certain jurisdictions have seen more progress than others.

Motor vehicle passengers experienced a substantial drop in alcohol-related fatalities, although all types of road users saw some reduction in victims killed.

Fewer 16- to 19-year-olds became victims of alcohol crashes, and fewer drinking drivers of this age got into fatal crashes. Graduated licensing, educational programs through schools, and restrictions on alcohol use by new drivers may have contributed to the drop in teenage drinking drivers and victims.

Drivers aged 20-24 continue to be overrepresented as drinking drivers in fatal crashes. In addition, middle-aged drinking drivers are becoming more of a problem.

Drinking and driving is associated with single-vehicle crashes, speeding, and non-use of seat belts. Urban roads had the highest proportion of drinking drivers who were speeding and failing to buckle up, making such locations an important target for policing activities.

Public education, legislative, and enforcement activities undertaken by provinces and territories to reduce drinking and driving have yielded positive results, as the data clearly show. This success should encourage and justify continued effort to prevent alcohol-related deaths and injuries.