



CCMTA Road Safety Research Report Series

The Alcohol and Drug-Crash Problem in Canada 2014 Report

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© Canadian Council of Motor Transport Administrators

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ABSTRACT

This report describes the magnitude and characteristics of the alcohol-crash and drug-crash problems in Canada during 2014, trends in these problems, and comparisons between jurisdictions.

Information contained in this report was drawn from two national databases compiled and maintained by the Traffic Injury Research Foundation (TIRF) and funded jointly by the Public Health Agency of Canada and State Farm. One database contains information on persons fatally injured in motor vehicle crashes; the other has information on persons seriously injured in motor vehicle crashes.

This report is prepared on behalf of the Canadian Council of Motor Transport Administrators (CCMTA). It examines: data on alcohol in fatally injured drivers and pedestrians; the number and percent of people who died in alcohol-related crashes; alcohol involvement in those crashes in which someone was seriously injured but not killed; and data on drugs in fatally injured drivers.

Thus, in the report, various indicators are used to estimate the magnitude and extent of the alcohol-crash problem and drug-crash problem in Canada during 2014 as well as changes in these problems over the past few years. The indicators include:

- > the number and percent of people who were killed in crashes that involved alcohol;
- > the number and percent of fatally injured drivers who had been drinking;
- > the number and percent of fatally injured pedestrians who had been drinking;
- > the number and percent of drivers in serious injury crashes that involved alcohol; and,
- > the number and percent of fatally injured drivers who tested positive for drugs.

As well, these indicators are presented separately for each province and territory.

Finally, this report also examines the degree to which there has been a change in: (1) fatalities and serious injuries in collisions involving a drinking driver; and (2) the presence of drugs among fatally injured drivers. Analysis is provided for Canada and each province/territory. An average of data from 2011-2014 is compared to data from the 2006-2010 baseline period.

The opinions expressed in this report are those of the authors and do not necessarily represent the views or opinions of the reviewers, jurisdictions or CCMTA, who commissioned this report.

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1.0 INTRODUCTION

This report describes the magnitude and characteristics of the alcohol-crash and drug-crash problems in Canada during 2014 as well as trends in these problems. It includes data on alcohol in fatally injured drivers and pedestrians as well as data on drugs in fatally injured drivers derived from the *Fatality Database*. For the past two and a half decades, the *Fatality Database*, developed and maintained by the Traffic Injury Research Foundation (TIRF), has provided objective data on alcohol use among persons fatally injured in motor vehicle crashes. Each year, TIRF compiles information from coroners' and medical examiners' files on the results of toxicological tests for alcohol and drugs in the blood of fatally injured drivers and pedestrians. Given a high testing rate for alcohol in all jurisdictions, particularly among fatally injured drivers, the *Fatality Database* has proven a valid and reliable source of descriptive data on the magnitude and characteristics of the alcohol-fatal crash problem, a means for monitoring changes/trends in the problem as well as a valuable tool for research on alcohol-impaired driving. Previously, funding for the maintenance of the *Fatality Database* and the publication of a related report, *The Alcohol-Crash Problem in Canada*, was co-funded by Transport Canada and the Canadian Council of Motor Transport Administrators (CCMTA). Presently, the data collection component of the *Fatality Database* is co-funded by the Public Health Agency of Canada and State Farm. Publication of this report is sponsored by the Canadian Council of Motor Transport Administrators (CCMTA).

This report also uses supplemental data obtained from police collision reports and coroner files to examine the number and percent of people who died in alcohol-related crashes and the number and percent of drivers testing positive for drugs in Canada. Thus, it extends the focus beyond fatally injured drivers to include all persons killed in road crashes, to provide a better indication of the magnitude and nature of the alcohol-crash problem and drug-crash problem.

This report also examines alcohol involvement in those crashes in which someone was seriously injured but not killed. For this purpose, relevant information is derived from a *Serious Injury Database* that is constructed and maintained by TIRF. Funding for the construction of the *Serious Injury Database* was initially provided by Transport Canada and CCMTA as part of a previous project. The continued support of the *Serious Injury Database* is provided by the Public Health Agency of Canada and State Farm. Since few drivers involved in serious injury crashes are tested for alcohol, a surrogate or indirect measure is used to assess the incidence of alcohol involvement in these crashes.

The report is divided into the following fifteen sections:

Section 2.0 briefly describes the sources of the data – the *Fatality Database* and *Serious Injury Database* – and the various indicators of the alcohol-crash problem and drug-crash problem used in this report.

Section 3.0 provides descriptive data on the incidence of alcohol involvement in fatal and serious injury crashes and drug involvement in fatal crashes in Canada during 2014, trends in these problems, and comparisons of the problems between jurisdictions.

In subsequent sections (4.0 through 16.0), descriptive data on alcohol involvement in fatal and serious injury crashes and drug use by fatally injured drivers in each province and territory are summarized. Trends in the problem and comparisons between the 2011-2014 period and the 2006-2010 baseline period are also examined. Caution should be exercised in interpreting some of the numbers and percentages in Sections 4.0 through 16.0 as some of the subgroups examined are small in number.

2.0 DATA SOURCES AND INDICATORS OF THE ALCOHOL-CRASH PROBLEM

Information contained in this report was drawn from two national databases compiled and maintained by TIRF and funded jointly by the Public Health Agency of Canada and State Farm. One database contains information on persons fatally injured in motor vehicle crashes; the other has information on persons seriously injured in motor vehicle crashes. These two sources of information are described in this section of the report.

The section also describes the various indicators that are used to estimate the magnitude and extent of the alcohol-fatal, alcohol-serious injury and drug-fatal crash problems in Canada during 2014 as well as changes in the problem over the past few years. The indicators include:

- > the number and percent of people who were killed in crashes that involved alcohol;
- > the number and percent of fatally injured drivers who had been drinking;
- > the number and percent of fatally injured pedestrians who had been drinking;
- > the number and percent of drivers in serious injury crashes that involved alcohol; and,
- > the number and percent of fatally injured drivers who tested positive for drugs.

2.1 Sources of the data

Two national databases were used to generate the statistics for this report – the *Fatality Database* and the *Serious Injury Database*. The *Fatality Database* was initially developed in the early 1970s to provide a comprehensive source of objective data on alcohol use among persons fatally injured in motor vehicle crashes occurring on and off public highways in Canada. It is historically intact from 1973 to 2011, inclusive, for seven provinces – British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, and Prince Edward Island. Beginning with 1987, data are available from all jurisdictions in Canada.

The *Serious Injury Database* was initially constructed in the mid-1990s to examine the incidence of alcohol in crashes that involve a serious injury – i.e., a crash that resulted in a person being admitted to a hospital. It was originally used as a means to assess the extent to which the federal-provincial/territorial *Strategy to Reduce Impaired Driving* initiatives (*STRID 2001*, *STRID 2010* and now *STRID 2015*) achieved a reduction in alcohol-related serious injury crashes. Since 1995, relevant information on crashes that involve serious injury has been assembled from all jurisdictions in Canada.

2.1.1 The Fatality Database. The *Fatality Database* consists of case files (records) of persons fatally injured in motor vehicle crashes. Two sources of information provide data for most case files: (1) police

reports on fatal motor vehicle collisions and (2) coroners and medical examiners reports. In general, both sources must be accessed to obtain complete data on victims, crashes, vehicles, and toxicology.

Police-reported data include characteristics of the victim (age and sex, position in the vehicle – driver, passenger) and details of the crash (type of vehicle(s) and collision, time, date). Objective, toxicological data on alcohol and drug use among victims are obtained from files in coroners' and medical examiners' offices. The alcohol and drug data are the results of chemical tests, performed on body fluid samples (typically blood) by recognized forensic laboratories or other facilities. Rigorous testing procedures in each jurisdiction ensure reliable and accurate data on the prior use of alcohol and drugs by victims of motor vehicle collisions. As will be discussed in a subsequent section, there is a high rate of testing for alcohol in most jurisdictions, especially among drivers fatally injured in motor vehicle collisions.

Details of the method used to access and collect relevant police-reported and coroner/medical examiner data on persons fatally injured in motor vehicle collisions as well as the approach used to create case files for the *Fatality Database* are contained in previous annual reports in this series (e.g., see Mayhew et al. 1999). The sections below provide a definition of a motor vehicle fatality, describe the number and type of victim contained in the *Fatality Database*, and discuss the testing rates for alcohol and drugs overall in Canada as well as in each jurisdiction.

Motor vehicle fatality. A motor vehicle fatality is defined in the data capture procedures, and in this report, as any person dying within 30 days as a result of injuries sustained in a collision on a public roadway involving at least one highway vehicle. Public roadways include provincial highways and municipal roads but exclude private property, Crown land, military bases, and roads administered by First Nations. Automobiles, light trucks, vans, heavy trucks, tractor-trailers, buses, emergency vehicles, and motorhomes are considered to be highway vehicles. Even if a fatal collision takes place on a public roadway, the fatality is not included in this year's report unless at least one highway vehicle is involved. Thus, if the fatality results from a single-vehicle collision on a public roadway that involves a snowmobile, all-terrain vehicle or dirtbike, it is not included in this report.

In previous years, this report included as fatalities those persons who died within 12 months of a collision that occurred either on or off public roadways. Fatalities included persons killed in collisions involving either highway vehicles or off-road vehicles (e.g., snowmobiles, all-terrain vehicles, farm tractors, dirtbikes, and construction equipment).

It should be noted that out of 1,870 persons who died within 12 months due to injuries sustained in a collision in Canada. Four out of five of these persons died in a collision that occurred on a public roadway that involved at least one highway vehicle, 1,558 (or 83.3%) died within 30 days of the collision. The fatality data for 2014 as well as the historical data reported in Sections 2 thru 16 include

those persons dying within 30 days of the collision on a public roadway involving at least one highway vehicle.

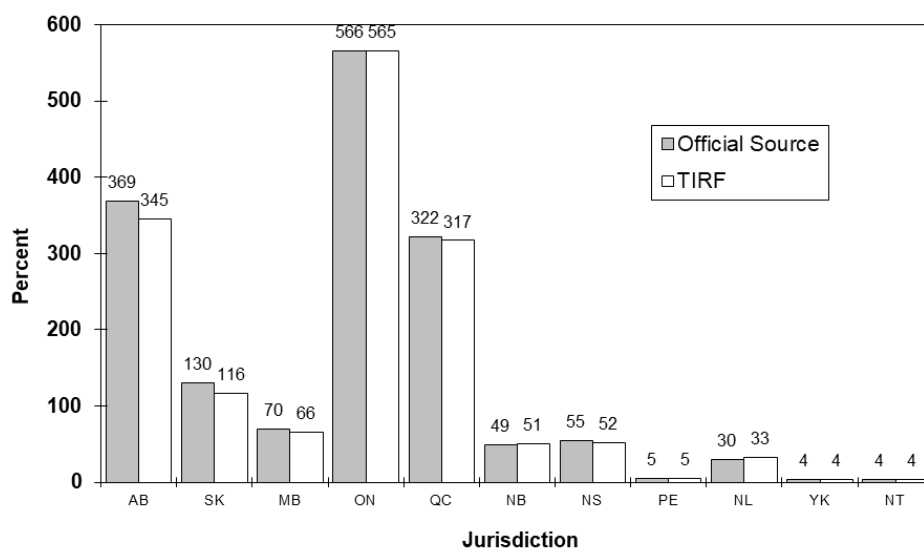
Number of fatalities: Official sources compared to the Fatality Database. The *Fatality Database* contains information on 1,558 persons fatally injured in motor vehicle collisions in Canada during 2014 (excluding British Columbia). In previous reports, TIRF included fatality data for persons dying within 12 months (365 days) of the collision. In order to facilitate comparisons between fatality data that TIRF collects for the *Fatality Database* with those data which are reported by transportation agencies, this report analyses fatality data for those persons who died within 30 days of collisions which occur on public roadways that involve at least one principal highway vehicle.

Nonetheless, some differences may persist in the number of cases reported in the *Fatality Database* as opposed to those reported by the transportation agencies. Fatalities that may not be captured by transportation agencies yet found in the *Fatality Database* include the following:

- > Victims involved in a collision in one jurisdiction that die in another jurisdiction;
- > Victims involved in a collision in one year that die in the subsequent year (e.g., collide in 2013, die in 2014), provided that the date of death is within 30 days of the collision; and,
- > Victims identified by the coroner/medical examiner that were coded as an injury or omitted from transportation agency databases (procedures for data collection available to coroners and medical examiners can be more robust and conducive to avoiding the underreporting of crashes).

Figure 2-1 provides a comparison of the number of traffic fatalities reported by transportation agencies with the number of motor vehicle fatalities occurring within 30 days on public roadways that are included in the *Fatality Database* for 2014. For most of the jurisdictions, the number of cases in the TIRF database closely corresponds with those officially reported by transportation agencies. *Data shown exclude British Columbia, whose 2014 fatality data were not available at the time of the publication of this report.*

Figure 2-1
Number of Fatalities Reported by Official
Sources and TIRF Fatality Database: 2014



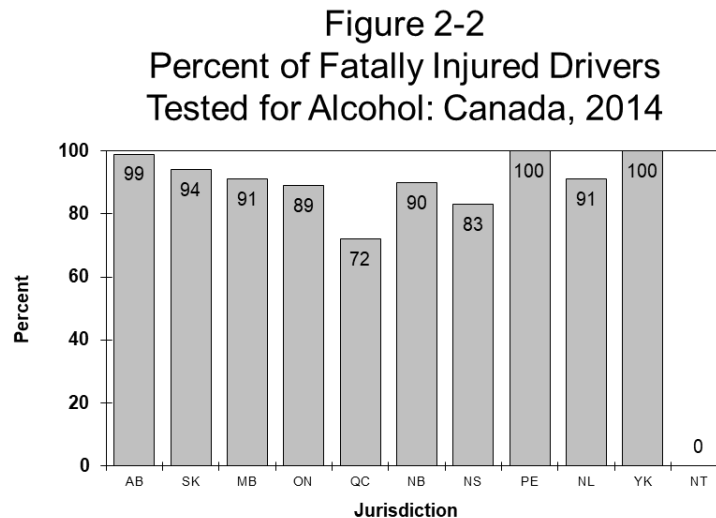
Type of victim. The *Fatality Database* contains information on three types of victims fatally injured in motor vehicle crashes – drivers/riders, passengers, and pedestrians who died within 30 days of a collision on public roadways. Drivers include operators of all types of highway vehicles. Similarly, passengers include occupants of highway vehicles who were not operating these vehicles. And, finally, pedestrians are those individuals travelling on foot that were struck and fatally injured by a highway vehicle.

In Canada during 2014, almost 2 out of every 3 fatalities were operators of motor vehicles (66.4%); 18.5% were passengers; and 14.8% were pedestrians. From this perspective, vehicle occupants, particularly drivers, remain the major road-user group of concern.

Testing rates for alcohol. The inclusion of objective data on the presence of alcohol among traffic victims represents an important feature of the *Fatality Database*. The value of this information depends greatly on the frequency with which tests for the presence of alcohol are performed on the body fluids of victims.

Among fatally injured victims who died within 30 days of the crash on public roadways in Canada during 2014, fatally injured drivers were tested most frequently (87.1%), followed by pedestrians (71.3%) and passengers (28.4%). The testing rate among fatally injured pedestrians and passengers increases slightly if victims under the age of 16, who are less often tested, are excluded (71.6% and 29.4%, respectively).

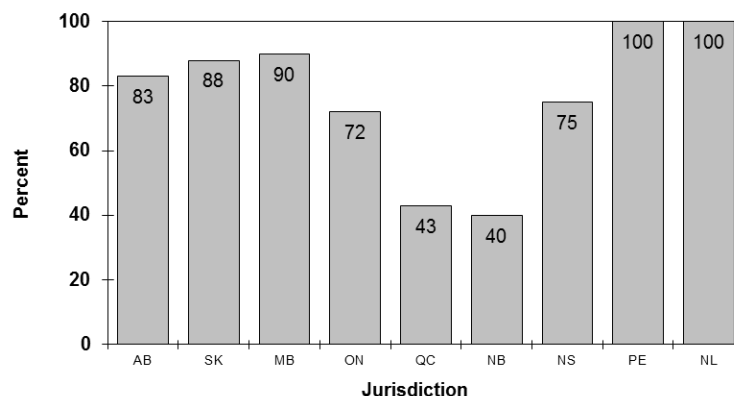
The rate of testing for alcohol varies not only as a function of the type of victim but by jurisdiction as well. This is illustrated graphically in Figure 2-2, which shows the rate of testing for alcohol among fatally injured drivers of highway vehicles who died within 30 days of the crash in the various jurisdictions.



Most jurisdictions test over 80.0% of the driver fatalities. In some jurisdictions, there is clearly room for improvement – the testing rates need to be increased to enhance the reliability and utility of the information. In those jurisdictions with a high rate of testing for fatally injured drivers, there are various reasons why tests are not done on some drivers. This occurs, for example, when the victim survived the initial crash and died much later – the alcohol results at that time would be of little value. Or, if extensive transfusions were given to the victim prior to death, there is little point in taking a blood sample for an alcohol test. And, if the victim were incinerated in a vehicle fire, or massive injuries resulted in exsanguination (i.e., excessive loss of blood), body fluids may not be available for testing.

Figure 2-3 shows the rate of testing for alcohol among fatally injured pedestrians in the various jurisdictions. As can be seen, there is considerable variation in the rate of testing – from 40.0% in New Brunswick to 100.0% in Prince Edward Island and Newfoundland and Labrador.

Figure 2-3
Percent of Fatally Injured Pedestrians
Tested for Alcohol: Canada, 2014



2.1.2 The Serious Injury Database. The Serious Injury Database contains information on persons seriously injured in crashes and on all drivers involved in these crashes, whether the driver was injured or not. The data come from motor vehicle crash reports completed by investigating police officers. The information compiled for each seriously injured person and crash-involved driver includes: personal characteristics (age and sex); factors contributing to the crash, including police-reported alcohol involvement; type of vehicle driven/occupied (e.g., automobile, truck/van, motorcycle) and the details of the crash (time, date, type of collision – multiple vehicle/single vehicle).

To construct the database, annual motor vehicle collision data are obtained from each jurisdiction in Canada. These data are either provided to TIRF by the relevant agency in the jurisdiction or, in some cases, provided to TIRF by Transport Canada who received the collision data from the jurisdiction. Relevant information on collisions in which someone was seriously injured is extracted from the provincial/territorial data files and then aggregated into the national *Serious Injury Database*.

The Serious Injury Database provides data from 1996 to 2014 for most jurisdictions. Only since 1998 in the Yukon and 2005 in British Columbia have investigating officers been able to record on the police report form whether the crash involved a serious injury or, at the person level, the severity of the injury a person sustained in the crash. Accordingly, it was not possible to identify persons who sustained a serious injury or drivers involved in serious injury crashes in those jurisdictions prior to the dates indicated. For this reason, the Canadian trend data presented in Section 3.6.4 include only data from 2005 to 2014. However, for other jurisdictions, trend data are available since 1996.

In the case of British Columbia (21.0%) and the Northwest Territories (11.2%), some injury severities are recorded as “unspecified”, so the number of drivers in serious injury crashes used in this report for these two jurisdictions might be underestimated.

The sections below provide a definition of a serious injury crash, describe the number and type of cases contained in the *Serious Injury Database*, and discuss the use of a surrogate or indirect measure to assess alcohol involvement in these crashes.

Serious injury. A serious injury crash is one that resulted in at least one person being admitted to a hospital. The serious injury may have been sustained by a driver, passenger or pedestrian involved in the crash (i.e., the driver involved in a serious injury crash may not have been the person seriously injured).

Number of cases. In Canada during 2014, 10,138 persons were seriously injured in motor vehicle crashes; 12,133 drivers were involved in these crashes. Table 2-1 shows the number of drivers involved in serious injury crashes for each province and territory. Alberta accounts for the largest number of the drivers involved in serious injury crashes (3,603 drivers or 29.7% of the “national” total); Nunavut accounts for the lowest number of drivers in such crashes, 0 drivers (or 0.0% of all drivers).

Table 2-1
Number and Percent of Drivers Involved in Serious Injury Crashes in Each Jurisdiction: Canada, 2014

Jurisdiction	Number of Drivers	% of Total
British Columbia	1,941	16.0
Alberta	3,603	29.7
Saskatchewan	381	3.1
Manitoba	398	3.3
Ontario	2,975	24.5
Quebec	2,074	17.1
New Brunswick	222	1.8
Nova Scotia	308	2.5
Prince Edward Island	48	0.4
Newfoundland and Labrador	149	1.2
Yukon Territory	27	0.2
Northwest Territories	7	0.1
Nunavut	0	0.0
TOTAL	12,133	100.0

Type of cases. The *Serious Injury Database* includes information on persons who sustained a serious injury in a motor vehicle crash and information on all drivers involved in these crashes. Drivers include operators of all types of highway vehicles. It should be noted that analysis of the vehicle occupied by drivers in Canada involved in serious injury crashes in 2014 excludes Quebec. Since March 2010, Quebec has regrouped automobiles and light trucks into a single category in its collision data. Of all the drivers involved in serious injury crashes: almost half were automobile drivers (47.9%); 37.6% were truck/van drivers; 8.9% were motorcycle riders; 4.4% were tractor-trailer drivers; and 1.2% were drivers of other types of highway vehicles (e.g., buses, emergency vehicles).

A surrogate measure of alcohol involvement. Drivers in serious injury crashes are seldom tested for alcohol. The investigating police officer may, however, indicate the condition of each of the drivers involved in the crash (e.g., whether or not they had been drinking), or in the case of Quebec, if alcohol was “a probable cause” in the crash. Unfortunately, a judgement by police about the drivers’ use of alcohol is not always made. In addition, the investigating police officer may determine that some other factor – e.g., driver fatigue, medical or physical defect – would more accurately describe the condition of the driver. Thus, relying exclusively on police-reported alcohol involvement may underestimate the magnitude of the alcohol-related serious injury crash problem.

To overcome this data limitation, a surrogate or indirect measure of alcohol involvement is used in this report. A description of this surrogate measure is provided in the next section.

2.2 Indicators of the problem

The indicators used to describe the magnitude and nature of the alcohol-related fatal and serious injury crash problem include:

- > the number and percent of people who are killed in alcohol-related crashes;
- > the number and percent of fatally injured drivers who had been drinking or were legally impaired;
- > the number and percent of pedestrians who had been drinking; and,
- > the number and percent of drivers in serious injury crashes that involved alcohol.

In addition, the following indicator is used to describe the magnitude and nature of the drug-crash problem:

- > the number and percent of fatally injured drivers who tested positive for drugs.

Each of these indicators of the problem is described briefly below.

2.2.1 The number and percent of people killed in alcohol-related crashes. This report traditionally includes two different indicators that measure alcohol involvement among persons fatally injured in motor vehicle collisions. The first indicator (see Table 3-1) considers a motor vehicle fatality to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash. The second indicator (see Table 3-8) considers a motor vehicle fatality as alcohol involved if there was at least one drinking driver in the fatal crash. In this second indicator a fatally injured pedestrian’s condition does not determine alcohol involvement; the only criteria used are the condition of the surviving driver. The first indicator has typically been used for the most recent data year whereas the second indicator has been used to compare trends on alcohol involvement.

To determine if alcohol was involved in the fatal crash, information on the BAC of fatally injured drivers and pedestrians from the *Fatality Database* was supplemented with any other evidence of alcohol in

the fatal crash identified from either the coroner's report or from the police collision report – e.g., the police reported that a driver or pedestrian in the fatal crash had consumed alcohol. The review of coroner files and police reports provided information on the presence of alcohol among drivers who died but were not chemically tested for alcohol; drivers who survived (virtually all of whom are not tested), and pedestrians who were not tested.

For Canada and each of its jurisdictions, this report describes characteristics and trends in the number of deaths in crashes involving a drinking driver. This particular indicator only considers a fatality to be alcohol-related if at least one driver (either killed or surviving) had been drinking. In addition, only fatalities occurring on public roadways are included. Furthermore, at least one of the vehicles involved must be a highway vehicle (e.g., automobile, truck, van, motorcycle, tractor-trailer, etc.). Sport utility vehicles (SUVs) are included with light trucks in tables dealing with fatally or seriously injured drivers or occupants.

Among the people who died in motor vehicles crashes on public roadways within 30 days of the collision that involved at least one highway vehicle, it was possible to determine if a drinking driver had been involved in 93.9% of the cases.

2.2.2 The number and percent of fatally injured drivers who had been drinking. The magnitude of the alcohol-fatal crash problem is usually stated in terms of the number and percent of fatally injured drivers who tested positive for alcohol. As mentioned previously, this indicator of the problem is useful because of its validity and because the requisite data have been routinely compiled each year as part of the *Fatality Database* project.

The indicator is a highly valid and reliable measure of the problem because a high percentage of drivers of highway vehicles who are killed in crashes are tested for the presence of alcohol. Similar to previous years, there was a high testing rate in Canada during 2014, with 87.7% of fatally injured drivers of highway vehicles who die within 30 days of the crash being tested for alcohol.

In previous versions of this report, some trend tables and figures dealing with alcohol use among fatally injured drivers of highway vehicles included data on drivers dying within 12 months of the collision or those who died within six hours of the collision. In addition, some of the drivers included in these analyses may have been involved in collisions which did not occur on public roadways (Brown et al. 2015). However, in this report, data on alcohol use among fatally injured drivers is limited to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways. Highway vehicles include automobiles, vans, light trucks, motorcycles, heavy trucks, tractor-trailers, buses, and emergency vehicles.

2.2.3 The number and percent of fatally injured pedestrians who had been drinking. Drinking pedestrians not just drinking drivers contribute to the overall magnitude of the alcohol-fatal crash problem each year in Canada. This occurs because walking on or beside the highways after drinking is

extremely risky. Accordingly, this report uses information from the *Fatality Database* to examine the number and percent of fatally injured drinking pedestrians. This is possible because testing for alcohol, especially among those over 16 years of age is reasonably high – 71.3% overall, which increases to 71.6% if victims under the age of 16 are excluded.

Descriptive data on fatally injured drinking pedestrians are provided in the Canada section (3.0) but not in the provincial/territorial sections (4.0 through 16.0) of the report. The number of fatally injured pedestrians in most jurisdictions is relatively small, so detailed results for these jurisdictions would not be reliable. Jurisdictional results are also not reported to protect privacy. However, data on the overall incidence of fatally injured drinking pedestrians in each jurisdiction are presented in the Canada section of the report (3.3).

2.2.4 The number and percent of drivers in serious injury crashes that involved alcohol. The extent to which alcohol is involved in serious injury crashes is not well documented and, consequently, poorly understood for two primary reasons. First, drivers involved in such crashes are seldom tested for the presence of alcohol. Second, investigating police officers do not always report the presence of alcohol in these crashes – see Mayhew et al. (1997) for a discussion of the limitations of information on alcohol involvement contained in police collision reports.

For these reasons, a surrogate or indirect measure of the alcohol-related serious injury crash problem has been used. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night, from 9:00 pm to 6:00 am (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash.

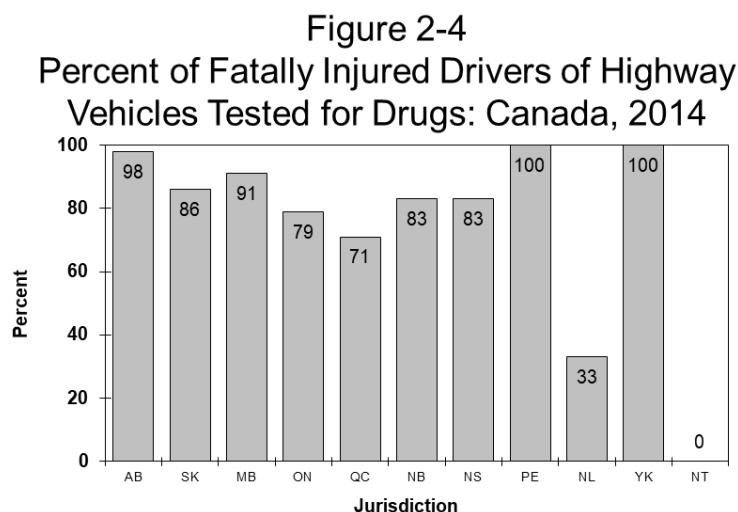
Surrogate measures have been shown to correlate strongly with more direct measures of the alcohol-crash problem – e.g., the number of drinking driver fatalities as determined by chemical tests in blood – and provide a reasonably reliable estimate of trends in alcohol-related serious injury crashes. Such measures, however, have limited validity – i.e., not all drinking drivers are identified – so this measure likely provides a “conservative” estimate of the magnitude of the problem (see Mayhew et al. 1997).

2.2.5 The number and percent of fatally injured drivers who tested positive for drugs. The magnitude of the drug-fatal crash problem is usually stated in terms of the number and percent of fatally injured drivers who tested positive for drugs. Although data from the coroners and medical examiners are the best source of data for drug impaired driving among fatally injured drivers, there is more variability in testing rates and reporting practices than there is for alcohol use. For example, these agencies have, at times, tested different proportions of fatally injured drivers and/or tested for different numbers of drugs. Caution should be exercised when comparing drug use among fatally injured drivers across different years or jurisdictions as well as interpreting national results. However, this indicator of the problem has become more valid as more historical data on drug use have been compiled in TIRF’s

Fatality Database. It should also be noted that as early as 2000, Transport Canada requested that TIRF collect data for fatally injured drivers in motor vehicle crashes.

Data on drug use among fatally injured drivers is limited to drivers of highway vehicles who died within 30 days of collisions which occurred on public roadways. The indicator is a relatively reliable measure of the problem as a growing percentage of drivers who are killed in crashes are tested for the presence of drugs – i.e., similar to previous years, there was a high testing rate in Canada during 2014, with 81.9% of fatally injured drivers of highway vehicles being tested for drugs.

The rate of testing for drugs varies by jurisdiction. Figure 2-4 shows the rate of testing for drugs among fatally injured drivers in the various jurisdictions. Testing rates vary from 33.3% in Newfoundland and Labrador to 100.0% in Prince Edward Island and the Yukon.



Not only does the Fatality Database capture information on whether or not a driver tests positive for drugs. Data are also collected to indicate the type of drug or drugs that are found in the blood sample of a fatally injured driver. These drugs can include illicit, prescription, and over-the-counter drugs as many different types of drugs adversely affect driving performance.

Drug Evaluation Classification (DEC) programs, used by police services throughout North America categorize drugs into the various groups on the basis of common signs and symptoms exhibited by persons using these drugs (Jonah, 2012). This report uses these categories which are:

- > Cannabis;
- > Central nervous system depressants (e.g., benzodiazepines and antihistamines);
- > Central nervous system stimulants such as cocaine, amphetamine, methamphetamine, and ecstasy (MDMA);
- > Hallucinogens (e.g., LSD, magic mushrooms);

- > Dissociative anesthetics such as ketamine and phencyclidine (PCP);
- > Narcotic analgesics (e.g., morphine, heroin, methadone, codeine, oxycodone); and,
- > Inhalants (e.g., toluene, gasoline, cleaning solvents).

In Section 3.5 and corresponding sections for each jurisdiction, tables are provided to show how many fatally injured drivers of highway vehicles who died on public roadways within 30 days of the collision tested positive for each of the afore-mentioned drug categories.

3.0 CANADA

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in Canada. It describes data on:

- > people who were killed in alcohol-related crashes (Section 3.1);
- > alcohol use among fatally injured drivers (Section 3.2);
- > alcohol use among fatally injured pedestrians (Section 3.3);
- > drivers involved in alcohol-related serious injury crashes (Section 3.4);
- > drug use among fatally injured drivers (Section 3.5); and,
- > trends in the alcohol-crash and drug-crash problems (Section 3.6).

3.1 Deaths in alcohol-related crashes

Table 3-1 presents information on people who died in alcohol-related crashes in Canada during 2014 for persons dying within 30 days of the collision. *At the time this report was being prepared, 2014 coroner data from British Columbia were not available. For this reason, 2014 data reported in this section excludes this jurisdiction. This report will be updated when these data become available.* Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities where sufficient information was available to determine if alcohol was involved. *A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.*

For example, it can be seen that 123 people aged 16-19 were killed in motor vehicle crashes in Canada during 2014. And, in 114 cases (92.7%) it was possible to determine if alcohol was a factor in the crash. The next column shows the number of people killed in crashes that were known to be alcohol-involved. For example, 37 people aged 16-19 died in alcohol-related crashes in Canada during 2014. The next column expresses this as a percentage – i.e., 32.5% of the 16-19 year olds who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among 16-19 year olds represent 8.5% of all the people killed in alcohol-related crashes in Canada during 2014.

The totals at the bottom of the table provide a summary. As can be seen, 1,558 persons died within 30 days of a motor vehicle crash in Canada during 2014. In 1,472 (94.5%) of these cases, it was possible to determine if alcohol was a factor. Of these known cases, 436 (29.6%) involved alcohol. Extrapolating this figure to the total number of motor vehicle fatalities (1,558 x .296) it can be estimated that *in Canada (excluding British Columbia) during 2014, 461 persons died in alcohol-related crashes within 30 days of the collision.*

Table 3-1
Deaths in Alcohol-Related Crashes: Canada, 2014

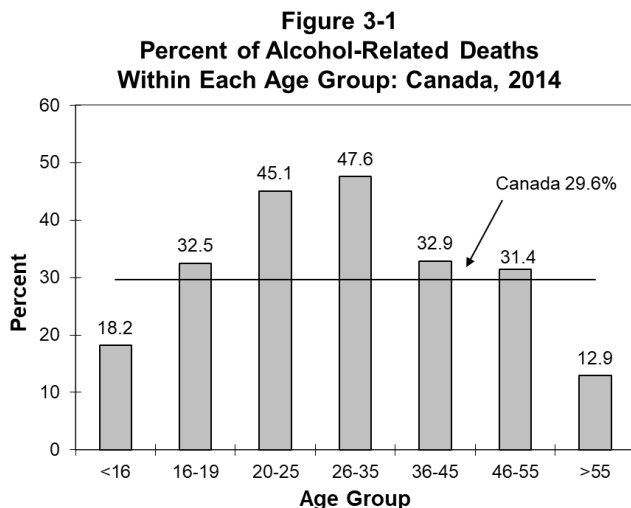
Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARDs
<u>Age Group</u>						
<16	35	33	94.3	6	18.2	1.4
16-19	123	114	92.7	37	32.5	8.5
20-25	210	204	97.1	92	45.1	21.1
26-35	239	229	95.8	109	47.6	25.0
36-45	167	161	96.4	53	32.9	12.2
46-55	256	242	94.5	76	31.4	17.4
>55	528	489	92.6	63	12.9	14.4
<u>Gender</u>						
Male	1112	1050	94.4	349	33.2	80.0
Female	446	422	94.6	87	20.6	20.0
<u>Victim Type</u>						
Driver/ Operator	1035	986	95.3	282	28.6	64.7
Passenger	289	276	95.5	83	30.1	19.0
Pedestrian	230	207	90.0	68	32.9	15.6
Unknown	4	3	75.0	3	100.0	0.7
<u>Vehicle Occupied</u>						
Automobiles	665	634	95.3	179	28.2	41.1
Trucks/Vans	425	403	94.8	141	35.0	32.3
Motorcycles	154	148	96.1	32	21.6	7.3
Other Hwy Vehicles	32	32	100.0	4	12.5	0.9
Off-road Vehicles	52	48	92.3	12	25.0	2.8
(Pedestrians)	230	207	90.0	68	32.9	15.6
TOTAL	1558	1472	94.5	436	29.6	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

3.1.1 Victim age. Of all the people who died in alcohol-related crashes (see last column), 25.0% were aged 26-35; 21.1% were aged 20-25; 17.4% were aged 46-55; 14.4% were over 55; 12.2% were aged 36-45; and 8.5% were aged 16-19. The youngest (<16) group accounted for only 1.4% of all people who died in alcohol-related crashes.

Figure 3-1 shows the percent of alcohol-related deaths within each age group. The highest incidence of alcohol involvement occurred in the crashes in which persons aged 26-35 and 20-25 died (47.6% and 45.1%, respectively). The lowest incidence of alcohol involvement was found among the youngest and oldest fatalities as only 18.2% of persons under 16 and 12.9% of persons over 55 years of age died in crashes involving alcohol.

3.1.2 Gender. Of all the people who died in alcohol-related crashes, 80.0% were males. The incidence of alcohol in crashes in which a male died (33.2%) was greater than the incidence of alcohol in crashes in which a female died (20.6%).



3.1.3 Victim type. Of all the people who died in alcohol-related crashes, 64.7% were drivers/operators of a vehicle; 19.0% were passengers; and 15.6% were pedestrians. Within each of these victim types, there are some differences in alcohol involvement. Among the principal victim types, the highest incidence of alcohol involvement (32.9%) occurred in the crashes in which a pedestrian died. Alcohol was involved in 30.1% of the crashes in which a passenger died and 28.6% of those in which a driver/operator died.

3.1.4 Type of vehicle occupied. Of all the people who died in alcohol-related crashes, two-fifths (41.1%) were in an automobile; 32.3% were in a truck/van; 7.3% were on a motorcycle; 2.8% were on an off-road vehicle (e.g., bicycle, snowmobile, all-terrain vehicle); and 0.9% were occupants of other highway vehicles (e.g., bus, tractor-trailer, emergency vehicle).

The incidence of alcohol involvement in which a truck/van occupant died was greater than the incidence of alcohol in crashes in which an automobile occupant died (35.0% versus 28.2%). The incidence of alcohol involvement in which a motorcycle occupant died was 21.6%.

3.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in Canada during 2014. *At the time this report was being prepared, 2014 coroner data from British Columbia were not available. For this reason, 2014 data reported in this section excludes this jurisdiction.* Table 3-2 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next two columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests – this includes the percent of those tested who were positive for alcohol in each of five blood alcohol concentration (BAC) levels.

To illustrate, among 20-25 year olds there were 137 drivers killed during 2014; 127 of these fatally injured drivers (92.7%) were tested for alcohol. Of those who were tested, 58.3% showed no evidence of alcohol, 7.9% had BACs below 50 mg%, 2.4% had BACs from 50 to 80 mg%, 8.7% had BACs from 81 to 160 mg%, and 22.8% had BACs over 160 mg%.

Table 3-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles: Canada,
2014 (excluding British Columbia)

Category of Driver	Number of Drivers*	Drivers Tested		Zero	Percent of Tested Drivers with BACs of:			
		Number	% of total		1-49	50-80	81-160	>160
<u>Age</u>								
<16	1	1	100.0	100.0	0.0	0.0	0.0	0.0
16-19	64	61	95.3	78.7	1.6	1.6	9.8	8.2
20-25	137	127	92.7	58.3	7.9	2.4	8.7	22.8
26-35	156	152	97.4	58.6	3.9	0.7	12.5	24.3
36-45	127	116	91.3	67.2	1.7	0.0	6.9	24.1
46-55	180	161	89.4	68.9	2.5	1.9	8.1	18.6
>55	320	246	76.9	88.2	2.8	1.2	2.4	5.3
<u>Gender</u>								
Male	784	695	88.6	69.1	3.0	1.3	8.2	18.4
Female	201	169	84.1	81.7	5.3	1.2	3.6	8.3
<u>Vehicle Type</u>								
Automobile	505	433	85.7	72.3	3.7	1.4	6.2	16.4
Motorcycle	143	129	90.2	76.0	4.7	2.3	10.9	6.2
Tractor Trailer	26	24	92.3	91.7	8.3	0.0	0.0	0.0
Heavy Truck ¹	12	10	83.3	80.0	0.0	0.0	10.0	10.0
Van	90	81	90.0	70.4	2.5	2.5	4.9	19.8
Light Truck ²	207	186	89.9	64.0	2.2	0.0	9.1	24.7
Other Truck ³	2	1	50.0	100.0	0.0	0.0	0.0	0.0
<u>Collision Type</u>								
Single-Vehicle	409	360	88.0	50.8	3.3	2.5	13.1	30.3
Multiple-Vehicle	576	504	87.5	86.3	3.6	0.4	3.2	6.5
TOTAL	985	864	87.7	71.5	3.5	1.3	7.3	16.4

* Drivers dying within 30 days in crashes on public roadways.

¹ Trucks over 4500 kg.

² e.g., pickup trucks.

³ Motorhomes, utility vehicles, plows and trucks of unknown type.

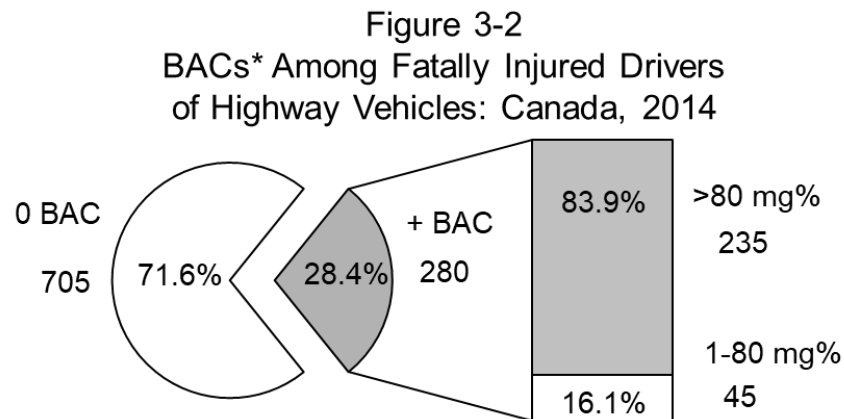
Note: The vehicle types that appear in the shaded area correspond to the truck/van category used in the jurisdictional sections of this report.

The main findings are shown by the totals at the bottom of the table. As can be seen, there were 985 drivers fatally injured in traffic crashes in Canada during 2014. The overall rate of testing for alcohol in drivers was 87.7%, slightly higher than the rate in 2013 (87.2%). Among tested drivers in Canada:

- > 71.5% showed no evidence of alcohol as 28.4% had been drinking;
- > 3.5% had BACs from 1-49 mg%;
- > 1.3% had BACs from 50-80 mg%
- > 7.3% had BACs from 81 to 160 mg%; and,
- > 16.4% had BACs over 160 mg%.

Thus, 28.5% of fatally injured drivers in Canada had been drinking and 83.3% of fatally injured drinking drivers had BACs over 80 mg%.

In Figure 3-2, the BAC distribution for tested fatally injured drivers is extrapolated to reflect the BAC distribution for all fatally injured drivers. In this figure, 280 of 985 drivers (28.4%) have a positive BAC. And among fatally injured drinking drivers, 235 (83.9%) have BACs over 80 mg%.



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

3.2.1 Age differences. Figures 3-3 and 3-4 summarize the data from Table 3-2 for the various age groups. Figure 3-3 shows the percent of all drinking drivers accounted for by each age group. The bar on the left shows the percent of all fatally injured drivers with any evidence of alcohol accounted for by each age group. On the right is shown the percent of “legally impaired drivers” – BACs over 80 mg% – accounted for by each age group. Drivers under 16 are not included because very few of them had been drinking.

Of all the fatally injured drinking drivers, 25.6% were aged 26-35; 21.5% were aged 20-25; 20.3% were aged 46-55; 15.4% were aged 36-45; and 11.8% were over 55. Those aged 16-19 accounted for only 5.3% of the fatally injured drinking drivers.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 27.3% were aged 26-35; 21.0% were aged 46-55; 19.5% were aged 20-25; 17.6% were aged 36-45; and 9.3% were over 55. Those aged 16-19 accounted for only 5.4% of fatally injured drivers who were over the legal limit.

Figure 3-3
Percent of All Fatally Injured Drinking and Legally Impaired Drivers Accounted for by Each Age Group: Canada, 2014

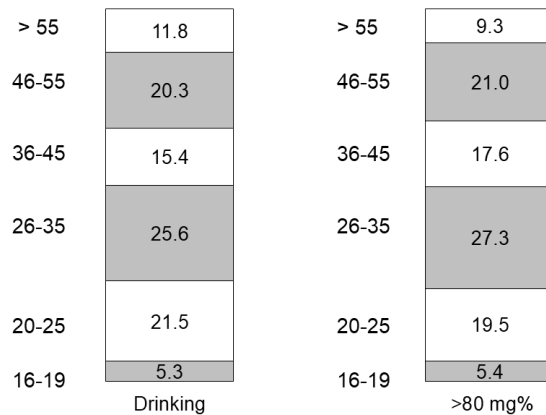
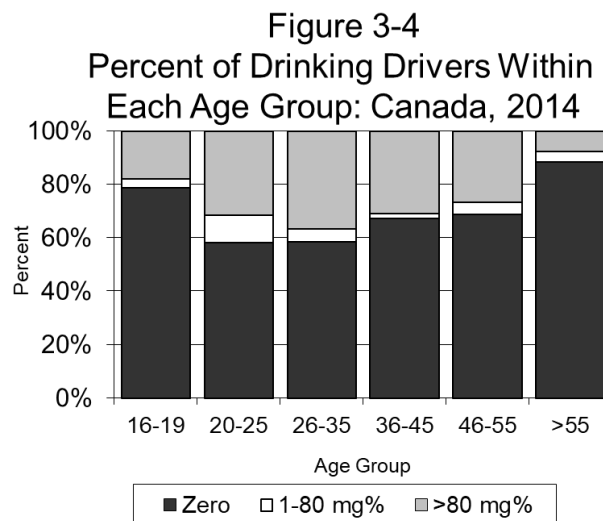


Figure 3-4 presents the information in a slightly different manner. For each age group, the percentage of drivers who were sober (zero BAC) is shown by the lower, black portion of the bar; the percent who tested positive for alcohol but whose BAC was below the legal limit (1-80 mg%) is shown by the white section in the middle, and the percent with BACs over the legal limit (>80 mg%) is shown by the upper, grey part of the bar.

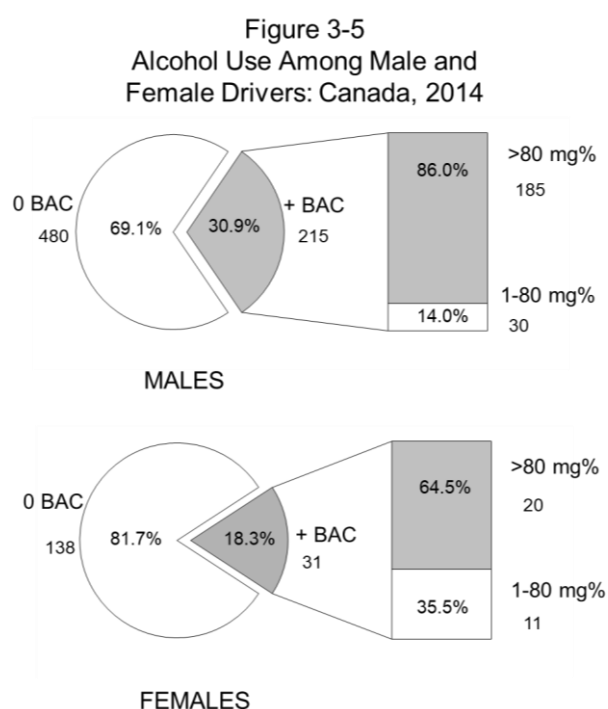


Fatally injured drivers age 20-25 were the most likely to have been drinking – 41.7% of drivers in this age group had been drinking. By contrast, only 11.8% of tested drivers over age 55 had been drinking.

3.2.2 Gender differences. Males dominate the picture – they account for 87.4% of all the fatally injured drivers who had been drinking and 90.2% of all of the fatally injured drivers who were legally impaired. Males dominate the picture largely because they account for 79.6% of the drivers who are killed (784 of the 985 fatalities are males).

A comparison in the prevalence of alcohol use among male and female fatally injured drivers is shown in Figure 3-5. The pie chart shows within each gender, the percent who were sober (i.e., 0 BAC) and positive for alcohol (+ BAC). The bar to the right of the pie chart shows the distribution of alcohol levels found among those who were drinking – the percent who had alcohol levels above and below the legal limit. Percentages are given inside the figures; the absolute number of cases is shown adjacent to the figure.

Fatally injured male drivers were more likely to have been drinking than female drivers (30.9% and 18.3%, respectively). And, most of the male and female drivers who were drinking had BACs over the legal limit (86.0% and 64.5%, respectively).



3.2.3 Vehicle differences. Table 3-3 shows the number and percent of drinking and legally impaired drivers accounted for by drivers of different types of highway vehicles. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 48.8% were automobile drivers; 27.2% were light truck drivers; 12.6% were motorcycle riders; 9.8% were van drivers; and 0.8% each were tractor-trailer drivers and drivers of heavy trucks.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 47.8% were automobile drivers; 30.7% were light truck drivers; 10.7% were motorcycle riders; 9.8% were van drivers; and 1.0% were drivers of heavy trucks.

Table 3-3
Number and Percent of Fatally Injured Drinking and Legally Impaired Drivers
Accounted for by Drivers* of Different Vehicle Types: Canada, 2014

Vehicle Type	Number of Drinking Drivers	% of All Drinking Drivers	Number of Legally Impaired Drivers	% of All Legally Impaired Drivers
Automobile	120	48.8	98	47.8
Motorcycle	31	12.6	22	10.7
Tractor-Trailer	2	0.8	0	0.0
Heavy Truck ¹	2	0.8	2	1.0
Van	24	9.8	20	9.8
Light Truck ²	67	27.2	63	30.7
TOTAL	246	100.0	205	100.0

* Excludes operators of bicycles, snowmobiles, farm tractors and other non-highway vehicles.

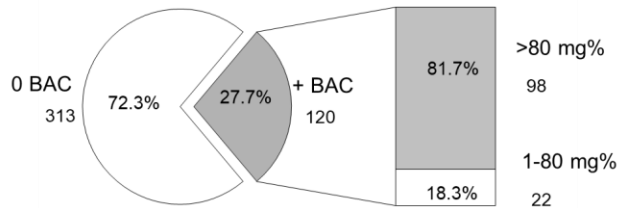
¹ Trucks over 4500 kg.

² e.g., pickup trucks.

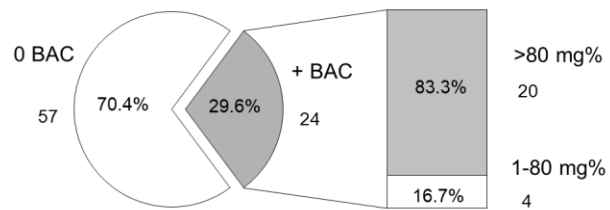
Figures 3-6a, 3-6b and 3-6c summarize the results of alcohol tests for drivers fatally injured in 2014 according to the type of vehicle being operated: automobile drivers and drivers of vans (Figure 3-6a); motorcycle riders and drivers of light trucks (Figure 3-6b); and drivers of heavy trucks and tractor-trailers (Figure 3-6c). A common format is used in all cases. The pie chart shows the number and percent of drivers who were sober as well as the number and percent of drivers who had been drinking. The bar chart displays the BAC distribution among those who tested positive for alcohol.

Among fatally injured automobile drivers, 27.7% had been drinking. Of those who were drinking, the vast majority (81.7%) had alcohol levels in excess of the legal limit. Among fatally injured van drivers, 29.6% had been drinking and most (83.3%) of these had BACs over the legal limit. Among motorcycle riders, 24.0% had been drinking and 71.0% of these had BACs over the legal limit. The highest incidence of drinking was found among drivers of light trucks – 36.0% had been drinking and 94.0% of these had illegal BACs. Heavy truck and tractor-trailer drivers have a much lower frequency of alcohol involvement. Indeed, 20.0% of heavy truck drivers and 8.3% of tractor-trailer drivers had been drinking. Among those fatally injured drivers who had been drinking, 100.0% of drivers of heavy trucks and 0.0% of tractor-trailer drivers had BACs over the legal limit. Given that the number of fatally injured drivers of heavy trucks and tractor-trailers is small, BAC results should be treated with caution.

Figure 3-6a
Alcohol Use Among Drivers of Different
Vehicle Types: Canada, 2014

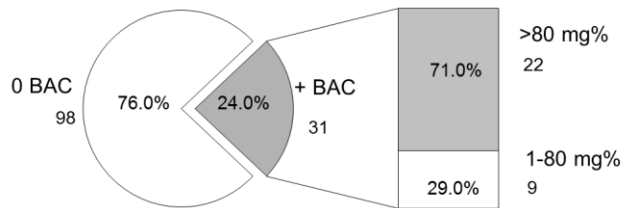


AUTOMOBILE DRIVERS

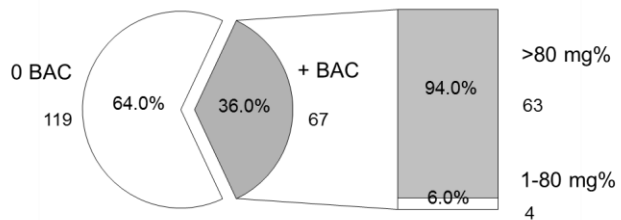


VAN DRIVERS

Figure 3-6b
Alcohol Use Among Drivers of Different
Vehicle Types: Canada, 2014

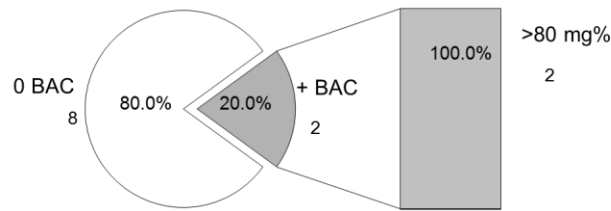


MOTORCYCLISTS

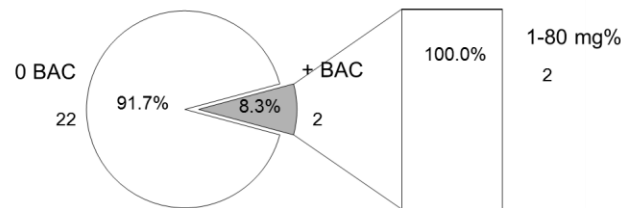


LIGHT TRUCK DRIVERS

Figure 3-6c
Alcohol Use Among Drivers of Different
Vehicle Types: Canada, 2014



HEAVY TRUCK DRIVERS

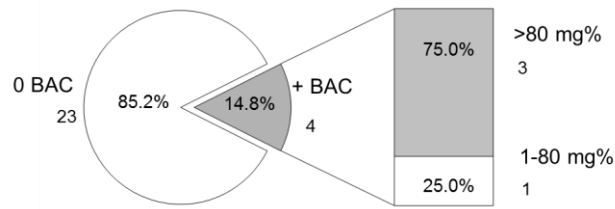


TRACTOR-TRAILER DRIVERS

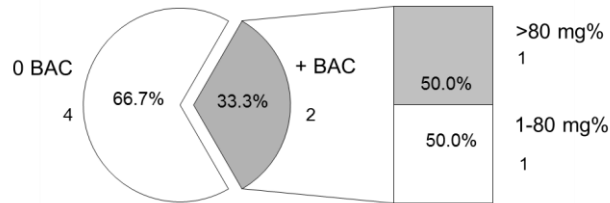
Figures 3-6d and 3-6e present similar information on the incidence of drinking among drivers operating recreational vehicles who died within 30 days in collisions which occurred on public roadways (results for these vehicle types are not included in Tables 3-2 or 3-3). Given that there are relatively few operators of recreational vehicles who were fatally injured in collisions on public roadways (most notably snowmobilers and off-road vehicle operators, the following figures should be treated with caution.

As can be seen, the lowest incidence of drinking was found among bicyclists as only 14.6% of fatally injured bicyclists had been drinking at the time of the collision. Among those bicyclists who had been drinking, 75.0% had BACs over the legal limit. Among snowmobile drivers, 33.3% had been drinking and 50.0% had BACs over the legal limit. Operators of off-road vehicles (ATVs, dirt bikes, etc.) were more likely than snowmobile drivers to have been drinking (66.7%) and 33.3% of these drinking drivers had BACs over the legal limit.

Figure 3-6d
Alcohol Use Among Drivers of Different
Vehicle Types: Canada, 2014

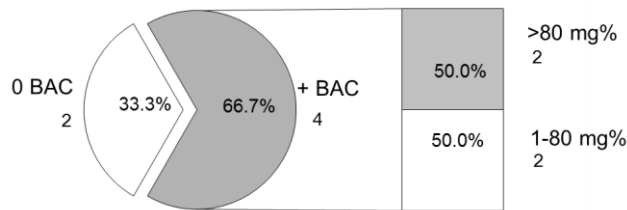


CYCLISTS



SNOWMOBILE OPERATORS

Figure 3-6e
Alcohol Use Among Drivers of Different
Vehicle Types: Canada, 2014

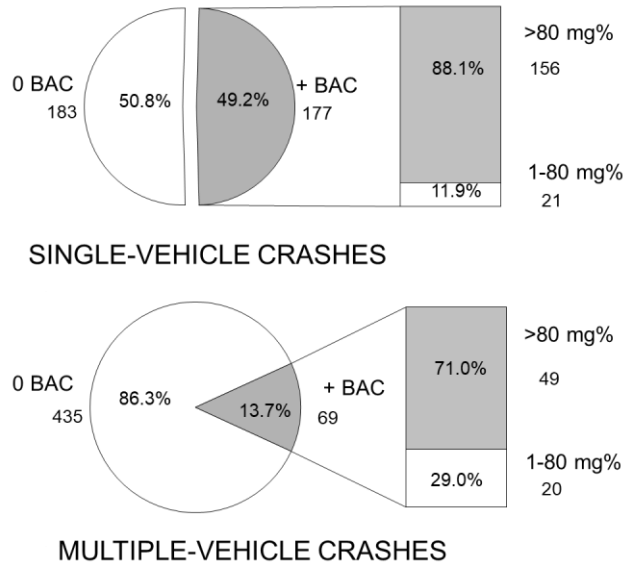


OFF-ROAD VEHICLE OPERATORS

3.2.4 Collision differences. Less than half of all drivers killed (409 out of 985, or 41.5%) were involved in single-vehicle collisions but these crashes accounted for approximately three-quarters of the drivers who had been drinking or were legally impaired (72.0% and 76.1%, respectively).

The reason for this apparent disparity is because alcohol is overrepresented in single-vehicle crashes. As shown in Figure 3-7, almost half of the drivers involved in single-vehicle crashes (49.2%) tested positive for alcohol, compared to only 13.7% of those involved in multiple-vehicle collisions. Most drinking drivers in single-vehicle crashes had BACs over the legal limit (88.1%). Among drinking drivers in multiple-vehicle crashes, 71.0% had BACs over the legal limit.

Figure 3-7
Alcohol Use Among Drivers by
Type of Collision: Canada, 2014



3.3 Alcohol in fatally injured pedestrians

This section presents information on the presence of alcohol among pedestrians fatally injured as a result of being hit by a motor vehicle in Canada during 2014. *At the time this report was being prepared, 2014 coroner data from British Columbia were not available. For this reason, 2014 data reported in this section excludes this jurisdiction.* Table 3-4 shows the information by age group, gender and jurisdiction. The first column in the table shows the number of pedestrians killed. The next two columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests – this includes the percent of those tested who were positive for alcohol in each of five BAC levels.

During 2014, as shown by the totals at the bottom of the table, there were 230 pedestrians fatally injured; 164 (71.3%) of these pedestrians were tested for the presence of alcohol. Among tested pedestrians:

- > 68.9% showed no evidence of alcohol as 31.1% had been drinking;
- > 1.2% had BACs below 50 mg%;
- > 2.4% had BACs from 50 to 80 mg%;
- > 5.5% had BACs from 81 to 160%; and
- > 22.0% had BACs over 160 mg%.

Thus, 31.1% of fatally injured pedestrians had been drinking and most of these had BACs over 80 mg%.

Table 3-4
Alcohol Use Among Fatally Injured Pedestrians: Canada, 2014*

Category of Pedestrian	Number of Pedestrians	Pedestrians Tested		Percent of Tested Pedestrians with BACs of:				
		Number	% of total	Zero	1-49	50-80	81-160	>160
<u>Age</u>								
<16	5	3	60.0	66.7	0.0	0.0	0.0	33.3
16-19	21	17	81.0	58.8	5.9	0.0	11.8	23.5
20-25	20	19	95.0	47.4	0.0	0.0	10.5	42.1
26-35	34	27	79.4	44.4	0.0	3.7	14.8	37.0
36-45	18	16	88.9	56.3	0.0	0.0	6.3	37.5
46-55	26	19	73.1	68.4	0.0	5.3	0.0	26.3
>55	106	63	59.4	92.1	1.6	3.2	0.0	3.2
<u>Gender</u>								
Male	139	100	71.9	59.0	2.0	3.0	8.0	28.0
Female	91	64	70.3	84.4	0.0	1.6	1.6	12.5
<u>Jurisdiction**</u>								
Alberta	40	33	82.5	54.5	0.0	3.0	6.1	36.4
Saskatchewan	17	15	88.2	40.0	0.0	0.0	13.3	46.7
Manitoba	10	9	90.0	55.6	0.0	0.0	11.1	33.3
Ontario	110	79	71.8	77.2	2.5	1.3	5.1	13.9
Quebec	37	16	43.2	87.5	0.0	0.0	0.0	12.5
New Brunswick	5	2	40.0	50.0	0.0	50.0	0.0	0.0
Nova Scotia	4	3	75.0	66.7	0.0	33.3	0.0	0.0
Prince Edward Island	1	1	100.0	100.0	0.0	0.0	0.0	0.0
Newfoundland/Labrador	4	4	100.0	100.0	0.0	0.0	0.0	0.0
TOTAL	230	164	71.3	68.9	1.2	2.4	5.5	22.0

* Excluding British Columbia.

** Data from the territories (Yukon, Northwest Territories, Nunavut) have been excluded due to the small combined number of cases from these jurisdictions.

3.3.1 Age difference. Of all the fatally injured pedestrians, almost half (46.1%) were over 55 years of age (106 of the 230 pedestrian fatalities). The oldest pedestrians, however, accounted for a much smaller portion of the drinking pedestrians and those with BACs over 80 mg%. This is illustrated in Figure 3-8. The figure shows the percent of all drinking pedestrians accounted for by each age group. The bar on the left shows the percent of all fatally injured pedestrians with any evidence of alcohol accounted for by each age group. On the right is shown the percent of pedestrians with BACs over 80 mg% accounted for by each age group. Of all the fatally injured drinking pedestrians, 30.0% were aged 26-35; 20.0% were aged 20-25; 14.0% were aged 16-19 or 36-45; 12.0% were aged 46-55; and 10.0% were over 55.

Of all the fatally injured pedestrians with BACs over 80 mg%, 31.8% were aged 26-35; 22.7% were aged 20-25; 15.9% were aged 36-45; 13.6% were aged 16-19; 11.4% were aged 46-55; and 4.5% were over 55.

Figure 3-8
Percent of All Fatally Injured Drinking and Legally Impaired
Pedestrians Accounted for by Each Age Group: Canada, 2014

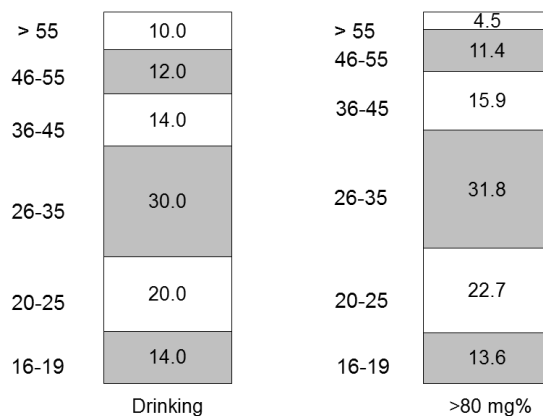
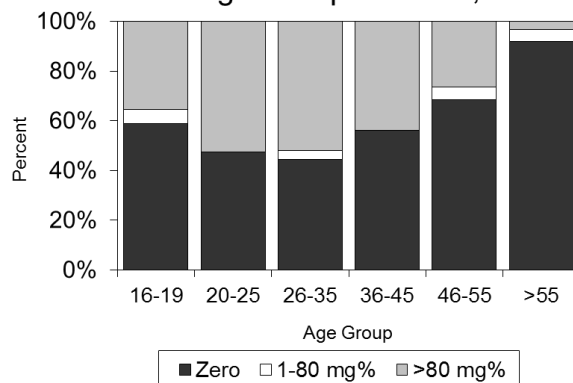


Figure 3-9 presents the information in a slightly different manner. For each age group, the percent of pedestrians who were sober (zero BAC) is shown by the lower, dark portion of the bar; the percent who tested positive for alcohol but whose BAC was less than or equal to 80 mg% is shown by the white section in the middle, and the percent with BACs over 80 mg% is shown by the upper, grey part of the bar.

Fatally injured pedestrians age 26-35 were the most likely to have been drinking – 55.6% of pedestrians in this age group had been drinking. By contrast, only 7.9% of tested pedestrians over age 55 had been drinking.

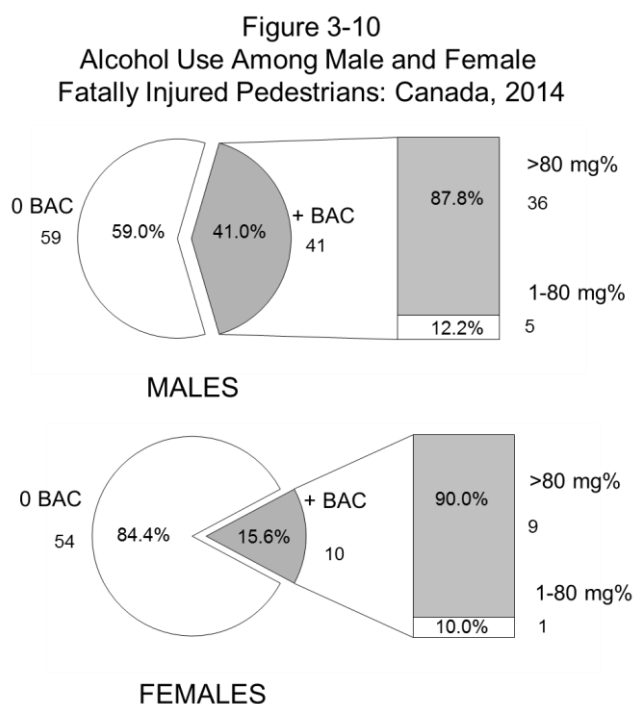
Figure 3-9
Percent of Drinking Pedestrians Within
Each Age Group: Canada, 2014



3.3.2 Gender differences. Males account for 80.4% of all the fatally injured pedestrians who had been drinking, and 80.0% of all of the fatally injured pedestrians who had BACs over 80 mg%. Males dominate the picture because they account for 60.4% of the pedestrians who are killed (139 of the 230 fatalities are male).

Figure 3-10 summarizes the findings for alcohol use among fatally injured male and female pedestrians. The pie chart shows the proportion of those pedestrians who were sober (0 BAC) and those positive for alcohol (+ BAC). The bar to the right of the pie chart shows the distribution of alcohol levels found among those who had been drinking; the percent who had BACs above and below 80 mg%. Percentages are given inside the figures; the absolute number of cases is shown adjacent to the figure.

Among fatally injured male pedestrians, 41.0% had been drinking and 87.8% of these pedestrians had BACs over 80 mg%. Among fatally injured female pedestrians, 15.6% had been drinking and 90.0% had BACs over 80 mg%.



3.3.3 Jurisdictional differences. Given that there was a very small combined number of fatally injured pedestrians in the territories in 2014, data on fatally injured pedestrians in the Yukon, the Northwest Territories, and Nunavut have not been included in this analysis. Of all the fatally injured pedestrians, 47.8% were killed in Ontario, 17.4% were killed in Alberta, and 16.1% were killed in Quebec. Ontario accounted for 35.3%, Alberta accounted for 29.4%, and Saskatchewan accounted for 17.6% of the fatally injured drinking pedestrians. Among fatally injured pedestrians with BACs over 80 mg%, 33.3% were from Ontario, 31.1% were from Alberta, and 20.0% were from Saskatchewan. It should be noted

that the figures for pedestrians in Quebec who are drinking or have BACs over 80 mg% are underestimated because they are based on tested pedestrians and the rate of testing for alcohol is low in this jurisdiction – e.g., only 43.2% of pedestrians fatally injured in Quebec were tested, compared to 100.0% in Prince Edward Island and Newfoundland and Labrador, 90.0% in Manitoba, and 88.2% in Saskatchewan.

As shown in Table 3-4, the highest incidence of alcohol in fatally injured pedestrians, however, was in Saskatchewan (60.0%) and New Brunswick (50.0%). The lowest incidence of alcohol in fatally injured pedestrians was in Prince Edward Island and Newfoundland and Labrador (0.0%) and Quebec (12.5%).

3.4 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in Canada. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle, at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., they noted that at least one drinking driver was involved in the crash (see Section 2.2.4).

Table 3-5
Drivers of Highway Vehicles in Alcohol-Related Serious
Injury Crashes: Canada, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
<16	19	3	15.8	0.2
16-19	813	189	23.2	9.7
20-25	1629	408	25.0	21.0
26-35	2333	466	20.0	24.0
36-45	1932	287	14.9	14.8
46-55	2032	293	14.4	15.1
>55	2793	219	7.8	11.3
unknown	582	78	13.4	4.0
<u>Gender</u>				
Male	8234	1458	17.7	75.0
Female	3617	437	12.1	22.5
unknown	282	48	17.0	2.5
<u>Vehicle Type*</u>				
Auto	4815	786	16.3	47.8
Truck/Van	3785	705	18.6	42.9
Motorcycle	896	88	9.8	5.3
Tractor Trailer	447	52	11.6	3.2
Other Hwy. Vehicle	116	14	12.1	0.9
<u>Collision Type</u>				
Single-Vehicle	3887	1337	34.4	68.8
Multiple-Vehicle	8246	606	7.3	31.2
TOTAL	12133	1943	16.0	100.0

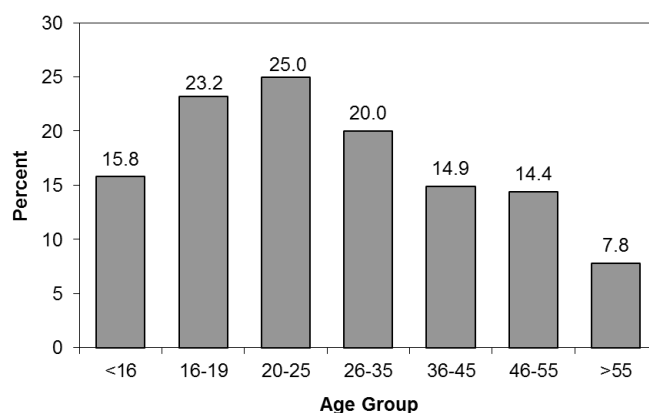
* Vehicle type section excludes Quebec since this jurisdiction has grouped automobiles and light trucks together in its collision data since March 2010.

The results are shown in Table 3-5 for drivers grouped in terms of age, gender, type of vehicle driven, and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 12,133 drivers were involved in crashes in which someone was seriously injured. Among these, 16.0% were alcohol-related crashes.

3.4.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 24.0% were aged 26-35; 21.0% were aged 20-25; and 15.1% were aged 46-55. Drivers under the age of 16 accounted for only 0.2% of all those involved in alcohol-related crashes. Figure 3-11 shows for each age group the percent of drivers who were in a serious injury crash that involved alcohol. The highest incidence of alcohol involvement was found for drivers aged 20-25 (25.0%). The lowest incidence of involvement in alcohol-related crashes was found for the oldest age groups of drivers as 14.4% of drivers aged 46-55 and 7.8% of drivers over 55 were in a serious injury crash that involved alcohol.

Figure 3-11
Percent of Drivers Within Each Age Group in Serious Injury Crashes that Involved Alcohol: Canada, 2014



3.4.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 75.0% were males. The incidence of involvement in alcohol-related serious injury crashes was also greater for males than for females (17.7% and 12.1%, respectively).

3.4.3 Type of vehicle driven. The numbers and percentages in the vehicle type section exclude Quebec since this jurisdiction has grouped automobiles and light trucks together in its collision data since March 2010. Of all the drivers involved in alcohol-related serious injury crashes, 47.8% were automobile drivers and 42.9% were truck/van drivers.

Almost one out of five serious injury crashes involving truck/van drivers were alcohol related (18.6%). The percentage of involvement in alcohol-related serious injury crashes was 16.3% for automobile drivers, 12.1% for drivers of other highway vehicles, 11.6% for tractor-trailer drivers, and 9.8% for motorcycle riders.

3.4.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 68.8% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in single-vehicle crashes (34.4%) compared to only 7.3% for drivers involved in multiple-vehicle crashes.

3.5 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in Canada during 2014. *At the time this report was being prepared, 2014 coroner data from British Columbia were not available. For this reason, 2014 data reported in this section excludes this jurisdiction.* A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 3-6 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple). The data are presented for drivers of the highway vehicles (i.e.,

automobiles, trucks, vans, motorcycles, tractor-trailers) who died within 30 days in collisions which occurred on public roadways.

The first column in the table shows the number of drivers killed. The next two columns show the number and percent of these victims who were tested for drugs. The remaining columns provide information on the results of the drug tests – this includes the number and percent of those tested who were positive for drugs.

Table 3-6
Drug Use Among Fatally Injured Drivers of Highway Vehicles:
Canada, 2014 (Excluding British Columbia)

Category of Driver	Number of Drivers*	Drivers Tested		Positive for Drugs	
		Number	% of total	Number	% of total
<u>Age</u>					
<16	1	1	100.0	0	0.0
16-19	64	58	90.6	21	36.2
20-25	137	121	88.3	52	43.0
26-35	156	149	95.5	71	47.7
36-45	127	104	81.9	42	40.4
46-55	180	152	84.4	66	43.4
>55	320	222	69.4	90	40.5
<u>Gender</u>					
Male	784	647	82.5	286	44.2
Female	201	160	79.6	56	35.0
<u>Vehicle Type</u>					
Automobile	505	402	79.6	181	45.0
Motorcycle	143	120	83.9	50	41.7
Tractor Trailer	26	24	92.3	8	33.3
Heavy Truck ¹	12	10	83.3	2	20.0
Van	90	74	82.2	30	40.5
Light Truck ²	207	176	85.0	71	40.3
Other Truck ³	2	1	50.0	0	0.0
<u>Collision Type</u>					
Single-Vehicle	409	332	81.2	162	48.8
Multiple-Vehicle	576	475	82.5	180	37.9
TOTAL	985	807	81.9	342	42.4

* Drivers dying within 30 days in crashes on public roadways.

¹ Trucks over 4500 kg.

² e.g., pickup trucks.

³ Motorhomes, utility vehicles, plows and trucks of unknown type.

Note: The vehicle types that appear in the shaded area correspond to the truck/van category used in the jurisdictional sections of this report.

As can be seen, in 2014, 81.9% of fatally injured drivers in Canada were tested for drug use. Among fatally injured tested drivers, 342 out of 807 (42.4%) were positive for drugs.

3.5.1 Age differences. Fatally injured drivers aged 26-35 were the most likely to have been positive for drugs – 47.7% of drivers in this age group tested positive for drugs. By contrast, 36.2% of drivers aged 16-19 tested positive for drugs.

3.5.2 Gender differences. Males dominate the picture as they account for 83.6% of all the fatally injured drivers who tested positive for drugs. Males dominate the picture largely because they account for 79.6% of the drivers who are killed (784 of the 985 fatalities are males). Fatally injured male drivers were more likely to have been positive for drugs than female drivers (44.2% and 35.0%, respectively).

3.5.3 Vehicle differences. Within each of the vehicle types, 45.0% of fatally injured automobile drivers, 41.7% of motorcyclists, 40.5% of van drivers, 40.3% of light truck drivers, and 33.3% of tractor-trailer drivers tested positive for drugs. The lowest percentage of drivers testing positive for drugs were other truck drivers (0.0%) and drivers of heavy trucks (20.0%).

3.5.4 Collision differences. Almost half of the drivers who were killed in single-vehicle collisions (48.8%) tested positive for drugs compared to 37.9% of those involved in multiple vehicle crashes.

3.5.5 Categories of drugs detected. In Table 3-7, the categories of drugs found among fatally injured drivers testing positive for drugs is shown. A brief description of the different drug categories is provided in Section 2.2.5. Among the 342 fatally injured drivers who tested positive for drugs, 44.7% tested positive for cannabis. Other categories of drugs found in fatally injured drivers testing positive for drugs were CNS depressants (41.2%), CNS stimulants (24.9%), narcotic analgesics (24.0%), and dissociative anesthetics (1.8%).

Table 3-7
Drug Use Among Fatally Injured Drivers of Highway
Vehicles: Canada, 2014

Prevalence of Drug Use				
Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
985	807	(81.9)	342	(42.4)

Categories of Drugs Found Among Drivers Testing Positive		
Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive*
Cannabis	153	(44.7)
CNS Depressants	141	(41.2)
CNS Stimulants	85	(24.9)
Narcotic Analgesics	82	(24.0)
Dissociative Anesthetics	6	(1.8)
Hallucinogens	0	(0.0)
Inhalants	0	(0.0)

* Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

3.6 Trends in alcohol and drug-impaired driving

The previous sections examined four indicators of the alcohol-crash problem: the number and percent of people who died in crashes that involved alcohol; the number and percent of fatally injured drivers

who had been drinking; the number and percent of fatally injured pedestrians who had been drinking; and the number and percent of drivers in serious injury crashes that involved alcohol. The drug use among fatally injured drivers indicator was also examined. This section examines changes in these four indicators of the alcohol-crash problem and one indicator of the drug-crash problem. Findings for these indicators of the alcohol-crash problem and drug-crash problem in the 2011-2014 period are compared with those taken from the 2006-2010 baseline period.

3.6.1 Deaths involving drinking drivers: 1996-2014. As mentioned earlier in Section 3.1, at the time this report was being prepared, 2014 coroner data from British Columbia were not available. *For this reason, trend data reported in this section excludes this jurisdiction.* Table 3-8 and Figure 3-12 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2014. These results differ slightly from those in Section 3.1. In this section, deaths that occur in crashes that involve a drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

As shown in the table and figure, the number of deaths in crashes that involved a drinking driver generally dropped from 875 in 1996 to 549 in 2011, rose slightly to 562 in 2012, and dropped to a low of 421 in 2014. The percentage of alcohol-related fatalities generally decreased from 34.5% in 1996 to 28.9% in 2005, eventually rose to 34.0% in 2010, and decreased to a low of 27.0% in 2014.

As shown at the bottom of the table, during the 2006-2010 baseline period there was an average of 664 fatalities involving a drinking driver and they accounted for 33.0% of all fatalities. This means that the percent of fatalities involving a drinking driver decreased by 11.5% from 33.0% in the baseline period (2006-2010) to 29.2% in the 2011-2014 period. And in terms of the number of persons killed in crashes involving a drinking driver, there has been a 24.4% decrease from an average of 664 in the baseline period (2006-2010) for Road Safety Strategy 2015 to 502 in the 2011-2014 period, a decrease of 24.4%.

Table 3-8
Number* and Percent of Motor Vehicle Deaths Involving**
a Drinking Driver: Canada, 1996-2014***

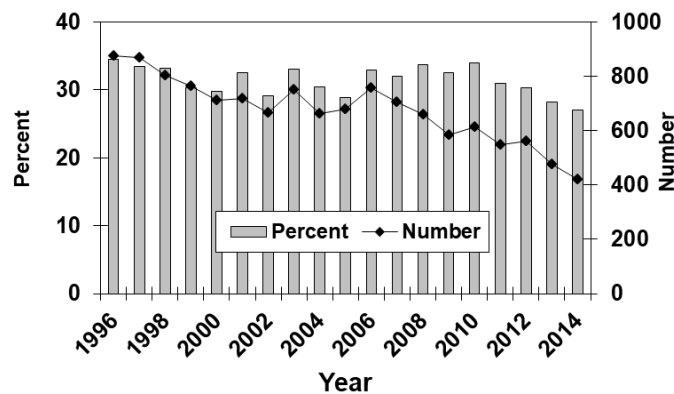
Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	2539	875	34.5
1997	2602	871	33.5
1998	2413	803	33.3
1999	2522	764	30.3
2000	2386	712	29.8
2001	2211	718	32.5
2002	2297	668	29.1
2003	2270	751	33.1
2004	2178	662	30.4
2005	2353	680	28.9
2006	2304	757	32.9
2007	2205	706	32.0
2008	1955	659	33.7
2009	1790	584	32.6
2010	1804	613	34.0
2011	1771	549	31.0
2012	1856	562	30.3
2013	1690	476	28.2
2014	1558	421	27.0
2006-2010 baseline	2012	664	33.0
2011-2014 period	1719	502	29.2

* Numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** Persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

*** Excludes British Columbia.

Figure 3-12
Number and Percent of Deaths Involving
a Drinking Driver: Canada, 1996-2014



3.6.2 Alcohol use among fatally injured drivers: 1996-2014. As mentioned earlier in Section 3.2, at the time this report was being prepared, coroner data from 2011 to 2014 for British Columbia were not available. For this reason, trend data reported in this section excludes this jurisdiction. Data on alcohol

use among fatally injured drivers of highway vehicles over the 19-year period from 1996 to 2014 are shown in Table 3-9. Trends are illustrated in Figure 3-13 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol – represented by the white area; (2) had BACs below the legal limit – shown by the light grey area; and (3) had BACs over the legal limit – the dark grey area.

The number of fatally injured drivers with BACs over the legal limit (> 80 mg%) generally declined from 387 to 310 between 1996 and 2004, rose to 356 in 2005, and eventually fell to a low of 205 in 2014. The percent of fatally injured drivers with BACs over the legal limit generally decreased from 33.2% to 27.0% between 1996 and 2002, eventually rose to 31.9% in 2009, and decreased to a low of 23.7% in 2014.

By contrast, the number of fatally injured drivers with zero BACs has fluctuated over this 19-year period, from 592 in 2010 to a high of 846 in 1999. In 2014, there were 618 fatally injured drivers with zero BACs. The percent of fatally injured drivers with zero BACs generally increased from 59.9% to 67.9% between 1996 and 1999, remained stable until 2007, decreased to 62.3% in 2008, and eventually peaked at 71.5% in 2014.

The number of fatally injured drivers with BACs between 1-80 mg% generally declined from 80 to 66 between 1996 and 2001, rose to 82 in 2006, and eventually decreased to 41 in 2014. The percent of fatally injured drivers with BACs between 1 and 80 mg% generally decreased from 6.9% in 1996 to 5.6% in 2005, peaked in 2013 (7.4%), and decreased again in 2014 (4.7%).

When compared to the 2006-2010 baseline period shown at the bottom of Table 3-9, the percentage of fatally injured drivers with zero BACs in the 2011-2014 period increased by 8.6% (from 62.9% to 68.3%). Among drivers with BACs from 1-80 mg%, there was a 10.9% decrease (from 6.4% to 5.7%). And among those with BACs over 80 mg%, there was a 15.3% decrease (from 30.7% to 26.0%).

Table 3-9
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Canada, 1996-2014*

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	1394	1166	83.6	699	59.9	80	6.9	387	33.2
1997	1459	1203	82.5	755	62.8	88	7.3	360	29.9
1998	1383	1163	84.1	715	61.5	71	6.1	377	32.4
1999	1475	1246	84.5	846	67.9	71	5.7	329	26.4
2000	1391	1179	84.8	769	65.2	75	6.4	335	28.4
2001	1322	1137	86.0	718	63.1	66	5.8	353	31.0
2002	1367	1183	86.5	792	66.9	71	6.0	320	27.0
2003	1366	1185	86.7	732	61.8	70	5.9	383	32.3
2004	1291	1112	86.1	732	65.8	70	6.3	310	27.9
2005	1426	1213	85.1	789	65.0	68	5.6	356	29.3
2006	1403	1194	85.1	764	64.0	82	6.9	348	29.1
2007	1346	1148	85.3	725	63.2	81	7.1	342	29.8
2008	1241	1092	88.0	680	62.3	67	6.1	345	31.6
2009	1129	950	84.1	594	62.5	53	5.6	303	31.9
2010	1104	948	85.9	592	62.4	60	6.3	296	31.2
2011	1082	906	83.7	603	66.6	53	5.8	250	27.6
2012	1134	966	85.2	648	67.1	46	4.8	272	28.2
2013	1039	906	87.2	620	68.4	67	7.4	219	24.2
2014	985	864	87.7	618	71.5	41	4.7	205	23.7
2006-2010 baseline	1245	1066	(85.6)	671	(62.9)	68	(6.4)	327	(30.7)
2011-2014 period	1060	911	(85.9)	622	(68.3)	52	(5.7)	237	(26.0)

* Excludes British Columbia.

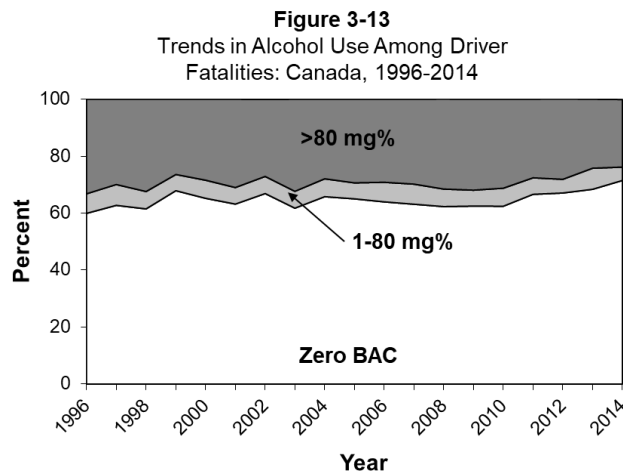


Table 3-10 and Figure 3-14 also show data on alcohol use among fatally injured drivers from 1996 to 2014. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC

distribution of drivers tested for alcohol (see Figure 3-2). Second, drivers are grouped in only two BAC categories: zero and positive.

As can be seen at the bottom of Table 3-10, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 37.1%. In the 2011-2014 period, 31.7% of fatally injured drivers tested positive for alcohol, a 14.6% decrease from the baseline period.

Table 3-10
Alcohol Use* Among Fatally Injured Drivers** of Highway Vehicles:
Canada, 1996-2014***

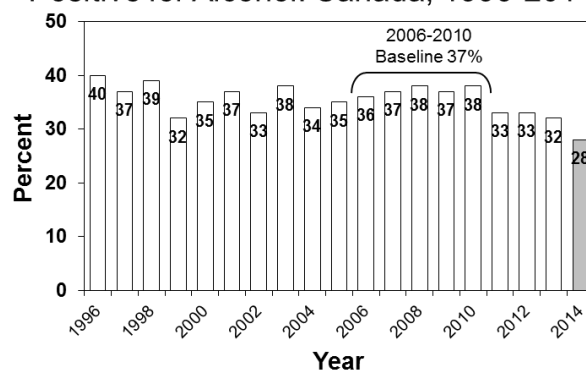
Year	Number of Drivers	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	1394	836	(60.0)	558	(40.0)
1997	1459	916	(62.8)	543	(37.2)
1998	1383	850	(61.5)	533	(38.5)
1999	1475	1001	(67.9)	474	(32.1)
2000	1391	907	(65.2)	484	(34.8)
2001	1322	835	(63.2)	487	(36.8)
2002	1367	915	(66.9)	452	(33.1)
2003	1366	844	(61.8)	522	(38.2)
2004	1291	850	(65.8)	441	(34.2)
2005	1426	928	(65.1)	498	(34.9)
2006	1403	898	(64.0)	505	(36.0)
2007	1346	850	(63.2)	496	(36.8)
2008	1241	773	(62.3)	468	(37.7)
2009	1129	706	(62.5)	423	(37.5)
2010	1104	689	(62.4)	415	(37.6)
2011	1082	720	(66.5)	362	(33.5)
2012	1134	761	(67.1)	373	(32.9)
2013	1039	711	(68.4)	328	(31.6)
2014	985	705	(71.6)	280	(28.4)
2006-2010 baseline	1245	783	(62.9)	462	(37.1)
2011-2014 period	1060	724	(68.3)	336	(31.7)

* Numbers are estimates based on the BAC distribution of drivers tested for alcohol.

** Dying within 30 days in collisions which occurred on public roadways.

*** Excludes British Columbia.

Figure 3-14
Percent of Fatally Injured Drivers
Positive for Alcohol: Canada, 1996-2014



3.6.3 Fatally injured pedestrians: 1996-2014. As mentioned earlier in Section 3.3, at the time this report was being prepared, coroner data from 2011 to 2014 for British Columbia were not available. *For this reason, trend data reported in this section excludes this jurisdiction.* Data on alcohol use among fatally injured pedestrians over the 19-year period from 1996 to 2014 are shown in Table 3-11. Trends are illustrated in Figure 3-15 which shows changes in the percent of fatally injured pedestrians who: (1) showed no evidence of alcohol – represented by the white area; (2) had BACs below the legal limit – shown by the light grey area; and (3) had BACs over 80 mg% – the dark grey area.

The number of fatally injured pedestrians with a BAC over 80 mg% generally declined from a high of 75 in 1996 to a low of 41 in 2008, gradually rose to 62 in 2012, and decreased again to 45 in 2014. The percent of fatally injured pedestrians with a BAC over 80 mg% generally rose from 33.8% in 1996 to 38.3% in 2001, decreased to 28.6% in 2002, peaked at 40.0% in 2009, and decreased to a low of 27.4% in 2014.

The number of fatally injured pedestrians with no evidence of alcohol generally decreased from 140 to 75 between 1996 and 2009, rose to 110 in 2012, decreased to 90 in 2013, and rose again to 113 in 2014. The percent of fatally injured pedestrians with zero BACs has ranged from about 50% to 60% over this 19-year period. In 1997, 55.4% of fatally injured pedestrians showed no evidence of alcohol compared to a high of 68.9% in 2014.

Table 3-11
Alcohol Use Among Fatally Injured Pedestrians*:
Canada, 1996-2014**

Year	Number of Pedestrians	Pedestrians Tested		Pedestrians Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	375	222	59.2	140	63.1	7	3.2	75	33.8
1997	342	204	59.6	113	55.4	16	7.8	75	36.8
1998	322	193	59.9	114	59.1	11	5.7	68	35.2
1999	317	183	57.7	114	62.3	8	4.4	61	33.3
2000	294	173	58.8	107	61.8	7	4.0	59	34.1
2001	264	167	63.3	97	58.1	6	3.6	64	38.3
2002	284	182	64.1	121	66.5	9	4.9	52	28.6
2003	295	180	61.0	112	62.2	9	5.0	59	32.8
2004	257	184	71.6	110	59.8	6	3.3	68	37.0
2005	262	173	66.0	103	59.5	4	2.3	66	38.2
2006	280	176	62.9	98	55.7	11	6.3	67	38.1
2007	258	166	64.3	96	57.8	12	7.2	58	34.9
2008	221	129	58.4	80	62.0	8	6.2	41	31.8
2009	235	145	61.7	75	51.7	12	8.3	58	40.0
2010	222	144	64.9	83	57.6	4	2.8	57	39.6
2011	261	158	60.5	90	57.0	13	8.2	55	34.8
2012	251	178	70.9	110	61.8	6	3.4	62	34.8
2013	241	143	59.3	92	64.3	4	2.8	47	32.9
2014	230	164	71.3	113	68.9	6	3.7	45	27.4
2006-2010 baseline	243	152	(62.6)	86	(56.6)	10	(6.6)	56	(36.8)
2011-2014 period	246	161	(65.4)	101	(62.7)	7	(4.3)	53	(32.9)

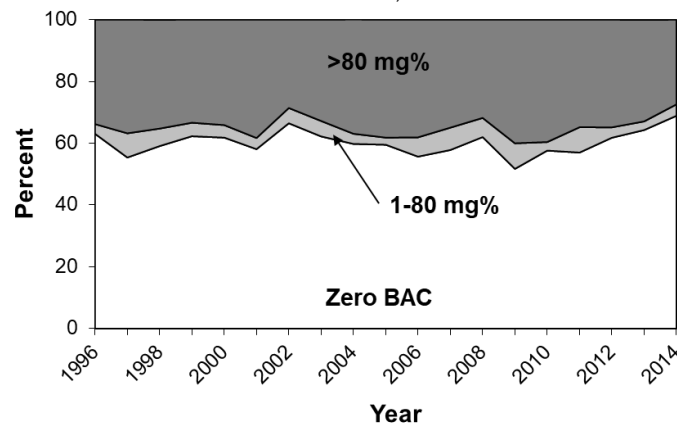
* Dying within 30 days in collisions which occurred on public roadways.

** Excludes British Columbia

The number of fatally injured pedestrians with BACs between 1-80 mg% fluctuated over this 19-year period from 16 in 1997 to four in 2010, rose to 13 in 2011, decreased to four in 2013, and rose again to six in 2014. The percent of fatally injured drivers with BACs between 1-80 mg% also fluctuated between 2.3% in 2005 and 8.3% in 2009, declined to 2.8% in 2013, and rose again in 2014 (3.7%).

When compared to the 2006-2010 baseline period shown at the bottom of Table 3-11, the percentage of fatally injured pedestrians with zero BACs in the 2011-2014 period increased by 10.8% (from 56.6% to 62.7%). Among pedestrians with BACs from 1-80 mg%, there was a 34.8% decrease (from 6.6% to 4.3%). And among those with BACs over 80 mg%, there was a 10.6% decrease (from 36.8% to 32.9%).

Figure 3-15
Trends in Alcohol Use Among Pedestrian
Fatalities: Canada, 1996-2014



3.6.4 Drivers in serious injury crashes: 2005-2014. Table 3-12 and Figure 3-16 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. For most jurisdictions, serious injury collision data are available as early as 1996. However, these data were not available for British Columbia until 2005 and the Yukon until 1998. Thus, in order to provide data for the greatest number of cases, the data shown in this table cover the 2005-2014 period. However, there are still some jurisdictions that did not have serious injury collision data available at the time this report was being prepared. These jurisdictions include New Brunswick (2013), Newfoundland and Labrador (2009-2011), and Nunavut (2011). Thus Table 3-12 and Figure 3-16 exclude these three jurisdictions.

As can be seen, the incidence of alcohol-involvement in serious crashes has generally declined. Between 2005 and 2006 the number of drivers of highway vehicles in serious injury crashes that involved alcohol rose from 3,387 to 3,508. This number gradually decreased to 2,081 in 2011, rose slightly to 2,100 in 2012, and decreased again to 1,879 in 2014. The percentage of drivers of highway vehicles in serious injury crashes involving alcohol rose from 19.4% in 2005 to 20.7% in 2007, generally decreased to 15.9% in 2013, and rose slightly in 2014 (16.0%). In the baseline period (2006-2010), an average of 20.1% of drivers in serious injury crashes were in alcohol-involved crashes. In the 2011-2014 period, the incidence of drivers in alcohol-involved crashes was 16.6%, a 17.4% decrease.

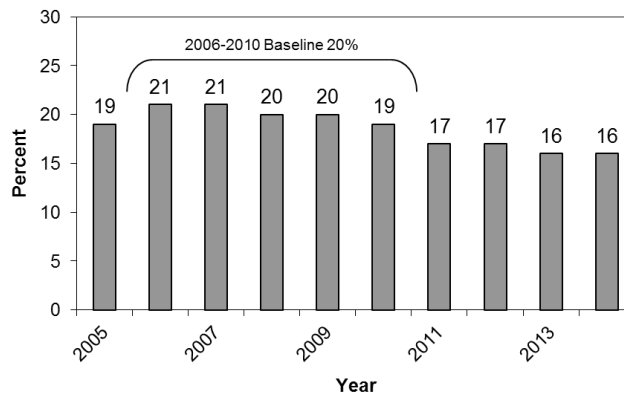
Table 3-12
Number and Percent of All Drivers in Serious Injury Crashes*
that Involved Alcohol: Canada, 2005-2014**

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
2005	17439	3387	(19.4)
2006	17073	3508	(20.5)
2007	15659	3236	(20.7)
2008	14420	2871	(19.9)
2009	13185	2663	(20.2)
2010	13058	2452	(18.8)
2011	11940	2081	(17.4)
2012	12230	2100	(17.2)
2013	12107	1920	(15.9)
2014	11762	1879	(16.0)
2006-2010 baseline	14679	2946	(20.1)
2011-2014 period	12010	1995	(16.6)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

** Excludes data from New Brunswick, Newfoundland and Labrador and Nunavut.

Figure 3-16
Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Canada, 2005-2014



3.6.5 Drug use among fatally injured drivers: 2000-2014. As mentioned earlier in Section 3.5, at the time this report was being prepared, coroner data from 2011 to 2014 for British Columbia were not available. *For this reason, trend data reported in this section excludes this jurisdiction.* Data on drug use among fatally injured drivers of highway vehicles over the 15-year period from 2000 to 2014 are shown in Table 3-13. Trends are illustrated in Figure 3-17 which shows changes in the percent of fatally injured drivers who tested positive for drugs.

Unlike trends in the number of fatally injured drivers testing positive for alcohol, the corresponding trends in the number of drivers testing positive for drugs is more difficult to analyse since testing rates

for drugs are less consistent than those for alcohol. For example, in 2000, only 37.0% of fatally injured drivers were tested for drugs compared to 81.9% in 2014.

The percent of fatally injured drivers testing positive for drugs rose from 34.4% in 2000 to 41.4% in 2002, stabilized at 36.8% in 2010, peaked in 2013 (44.7%), and decreased again in 2014 (42.5%).

During the baseline period (2006-2010), an average of 36.3% of fatally injured drivers tested positive for drugs. In the 2011-2014 period, the incidence of fatally injured drivers testing positive for drugs rose to 41.9%, a 15.4% increase.

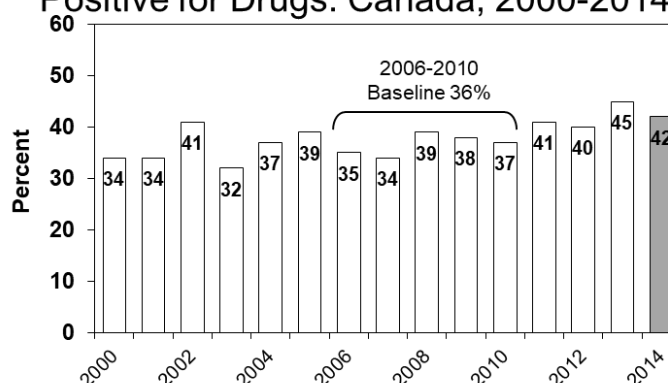
Table 3-13
Drug Use Among Fatally Injured Drivers* of Highway Vehicles:
Canada**, 2000-2014

YEAR	Number of Drivers	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	1391	515	37.0	338	65.6	177	34.4
2001	1322	556	42.1	365	65.6	191	34.4
2002	1367	618	45.2	362	58.6	256	41.4
2003	1366	621	45.5	424	68.3	197	31.7
2004	1291	500	38.7	316	63.2	184	36.8
2005	1426	633	44.4	385	60.8	248	39.2
2006	1403	823	58.7	535	65.0	288	35.0
2007	1346	836	62.1	553	66.1	283	33.9
2008	1241	712	57.4	438	61.5	274	38.5
2009	1129	605	53.6	376	62.1	229	37.9
2010	1104	623	56.4	394	63.2	229	36.8
2011	1082	800	73.9	474	59.3	326	40.8
2012	1134	886	78.1	535	60.4	351	39.6
2013	1039	860	82.8	476	55.3	384	44.7
2014	985	806	81.8	464	57.6	342	42.4
2006-2010 baseline	1245	720	57.8	459	63.8	261	36.3
2011-2014 period	1060	838	79.1	487	58.1	351	41.9

* Dying within 30 days in collisions which occurred on public roadways.

** Excludes British Columbia.

Figure 3-17
Percent of Fatally Injured Drivers
Positive for Drugs: Canada, 2000-2014



Data on cannabis use among fatally injured drivers of highway vehicles over the 15-year period from 2000 to 2014 are shown in Table 3-14. Trends are illustrated in Figure 3-18 which shows changes in the percent of fatally injured drivers who tested positive for cannabis.

Similar to trends in the number of fatally injured drivers testing positive for drugs, the trends in the number of drivers testing positive for cannabis is difficult to analyse since testing rates for cannabis are less consistent than those for alcohol. For example, in 2000, only 37.0% of fatally injured drivers were tested for cannabis compared to 81.9% in 2014.

The percent of fatally injured drivers testing positive for cannabis generally rose from 15.9% in 2000 to 18.2% in 2004, remained stable until 2012, peaked in 2013 (22.0%), and decreased again in 2014 (19.0%).

During the baseline period (2006-2010), an average of 16.4% of fatally injured drivers tested positive for cannabis. In the 2011-2014 period, the incidence of fatally injured drivers testing positive for cannabis rose to 19.0%, a 15.9% increase.

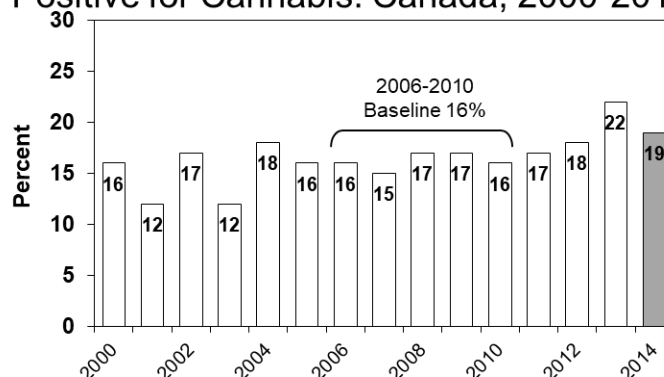
Table 3-14
Cannabis Use Among Fatally Injured Drivers* of Highway Vehicles:
Canada**, 2000-2014

YEAR	Number of Drivers	Drivers Tested	(% Total)	Drivers Tested for Cannabis			
				Negative	(% Tested)	Positive	(% Tested)
2000	1391	515	37.0	433	84.1	82	15.9
2001	1322	556	42.1	490	88.1	66	11.9
2002	1367	618	45.2	511	82.7	107	17.3
2003	1366	621	45.5	548	88.2	73	11.8
2004	1291	500	38.7	409	81.8	91	18.2
2005	1426	633	44.4	535	84.5	98	15.5
2006	1403	823	58.7	690	83.8	133	16.2
2007	1346	836	62.1	707	84.6	129	15.4
2008	1241	712	57.4	589	82.7	123	17.3
2009	1129	605	53.6	501	82.8	104	17.2
2010	1104	623	56.4	524	84.1	99	15.9
2011	1082	800	73.9	666	83.3	134	16.8
2012	1134	886	78.1	725	81.8	161	18.2
2013	1039	860	82.8	671	78.0	189	22.0
2014	985	807	81.9	654	81.0	153	19.0
2006-2010 baseline	1245	720	57.8	602	83.6	118	16.4
2011-2014 period	1060	838	79.1	679	81.0	159	19.0

* Dying within 30 days in collisions which occurred on public roadways.

** Excludes British Columbia.

Figure 3-18
Percent of Fatally Injured Drivers
Positive for Cannabis: Canada, 2000-2014



3.7 Comparisons of Alcohol and Drug Indicators Between Jurisdictions

This section provides a comparison between jurisdictions of the prevalence of alcohol and drug use among fatally injured drivers and alcohol involvement among drivers in serious injury collisions. Analyses in this section differ from that earlier in Section 3 in that it not only presents data for Canada as a whole, but data for each of the jurisdictions. This enables one to compare data between jurisdictions or to compare an individual jurisdiction's data with the national average. This section includes analysis of:

- > Alcohol and drug use among fatally injured drivers in 2014; and,
- > Trends in alcohol and drug use.

Please note that, similar to the rest of Section 3, fatality data for Canada do not include British Columbia since 2011 to 2014 coroner data were not available at the time of publication. Thus, Canadian fatality data excludes British Columbia.

3.7.1 Alcohol and drug use among fatally injured drivers in 2014. Alcohol and drug use among fatally injured drivers is shown separately, and together, for Canada and each of its jurisdictions for 2014 in Table 3-15 and Figure 3-19. The table presents data on the number and percent of fatally injured drivers of highway vehicles that tested positive for alcohol and drugs. In addition, Table 3-15 shows the number and percentage of drivers who tested positive for both alcohol and drugs. These data are similar to those used to create Table 3-2 and 3-7. Data for less populous jurisdictions should be treated with caution since the number of fatally injured drivers is substantially smaller than those for other jurisdictions.

In Canada in 2014, 87.7% of fatally injured drivers were tested for alcohol. Among these drivers, 28.5% had positive BACs. The testing rate for drug use among fatally injured drivers was somewhat lower (81.9%). And among these drivers, 42.6% tested positive for drugs. In Canada in 2014, 804 fatally

injured drivers were tested for both alcohol and drugs. Among these drivers, 125 (15.5%) tested positive for both alcohol and drugs. The highest percentage of fatally injured drivers who tested positive for both alcohol and drugs was in Newfoundland and Labrador (28.6%).

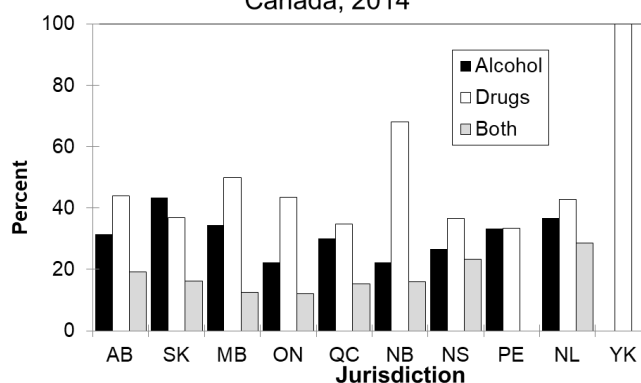
Table 3-15
Alcohol and Drug Use Among Fatally Injured Drivers of Highway Vehicles:
Canada, 2014

Juris	Drivers Killed*	Tested for Alcohol			Tested for Drugs			Tested for Both	
		Drivers Tested**	Zero BAC	Positive BAC	Drivers Tested**	Negative	Positive	Drivers Tested	Positive for Both
AB	229	226 (98.7)	155 (68.6)	71 (31.4)	225 (98.3)	126 (56.0)	99 (44.0)	225	43 (19.1)
SK	66	62 (93.9)	35 (56.5)	27 (43.5)	57 (86.4)	36 (63.2)	21 (36.8)	56	9 (16.1)
MB	35	32 (91.4)	21 (65.6)	11 (34.4)	32 (91.4)	16 (50.0)	16 (50.0)	32	4 (12.5)
ON	349	311 (89.1)	242 (77.8)	69 (22.2)	275 (78.8)	155 (56.4)	120 (43.6)	275	33 (12.0)
QC	213	153 (71.8)	107 (69.9)	46 (30.1)	152 (71.4)	99 (65.1)	53 (34.9)	150	23 (15.3)
NB	30	27 (90.0)	21 (77.8)	6 (22.2)	25 (83.3)	8 (32.0)	17 (68.0)	25	4 (16.0)
NS	36	30 (83.3)	22 (73.3)	8 (26.7)	30 (83.3)	19 (63.3)	11 (36.7)	30	7 (23.3)
PE	3	3 (100.0)	2 (66.7)	1 (33.3)	3 (100.0)	2 (66.7)	1 (33.3)	3	0 (0.0)
NL	21	19 (90.5)	12 (63.2)	7 (36.8)	7 (33.3)	4 (57.1)	3 (42.9)	7	2 (28.6)
YK	1	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1	0 (0.0)
NT	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0	0 (0.0)
NU	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0	0 (0.0)
CAN	985	864 (87.7)	618 (71.5)	246 (28.5)	807 (81.9)	465 (57.6)	342 (42.4)	804	125 (15.5)

* Drivers dying within 30 days in crashes on public roadways.

** Represents number and percent tested of all drivers killed.

Figure 3-19
Percentage of Fatally Injured Drivers Testing Positive for
Alcohol, Drugs, and Both Substances by Jurisdiction:
Canada, 2014



3.7.2 Trends in alcohol and drug use. Comparisons for different indicators between the 2006-2010 baseline period and the most recent years of data collection (2011-2014) were made for Canada and each of its jurisdictions. Similar to fatality data in Section 3.7.1, fatality data for British Columbia are not available for 2011 to 2014. Thus, nationwide data exclude this jurisdiction for both the baseline period and the most recent years of data collection. The following indicators are reviewed:

- > Alcohol-related fatalities;
- > Alcohol use among fatally injured drivers;
- > Drivers in alcohol-related serious injury collisions; and,
- > Drug use among fatally injured drivers.

Table 3-16 shows the percentage of persons that died in alcohol-related collisions. Data for less populous jurisdictions should be treated with caution since the number of drivers involved in serious injury collisions is substantially smaller than those for other jurisdictions. More detailed data can be found in Section 3.6.1.

During the 2006-2010 baseline period, an average of 33.0% of fatalities in Canada were alcohol-related, ranging from 0.0% in Nunavut to 50.0% in Prince Edward Island and the Northwest Territories. During the 2011-2014 period, an average of 29.2% of fatalities in Canada were alcohol-related. Nunavut did not report any alcohol-related fatalities during this four-year period. On the other hand, 50.0% of fatalities in Prince Edward Island, the Yukon, and the Northwest Territories were alcohol-related from 2011 to 2014.

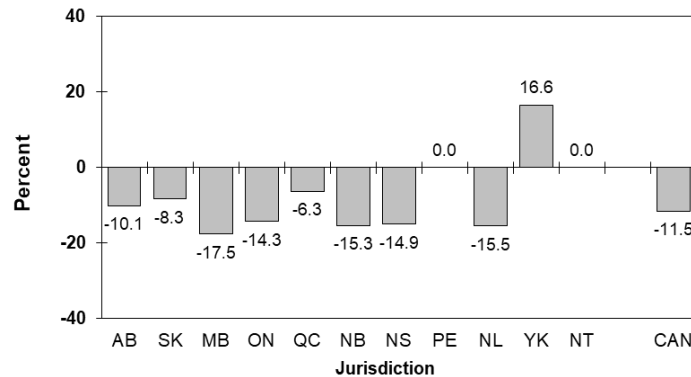
Table 3-16
Percent of Alcohol-Related Fatalities
Trends (2011/2014) vs. Baseline (2006-2010)

Juris	2006-2010 Baseline Average	2011	2012	2013	2014	2011 to 2014 Average	Percent Differences		
							2014 vs. 2013	2014 vs. 2006-2010 Baseline	2011-2014 Avg. vs. 2006- 2010 Baseline
BC	34.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AB	39.6	35.2	37.0	37.9	32.5	35.6	-14.2	-17.9	-10.1
SK	43.3	42.8	34.9	40.2	42.2	39.7	5.0	-2.5	-8.3
MB	41.7	38.2	40.2	26.4	28.8	34.4	9.1	-30.9	-17.5
ON	28.7	24.9	26.3	23.5	23.2	24.6	-1.3	-19.2	-14.3
QC	26.8	28.6	25.0	22.4	23.0	25.1	2.7	-14.2	-6.3
NB	36.0	34.8	36.5	29.6	15.7	30.5	-47.0	-56.4	-15.3
NS	31.6	28.8	29.1	23.6	26.9	26.9	14.0	-14.9	-14.9
PE	50.0	55.6	72.7	28.6	20.0	50.0	-30.1	-60.0	0.0
NL	39.4	39.5	25.8	38.9	30.3	33.3	-22.1	-23.1	-15.5
YK	42.9	33.3	50.0	25.0	50.0	50.0	100.0	16.6	16.6
NT	50.0	-	50.0	0.0	25.0	50.0	-	-50.0	0.0
NU	0.0	0.0	0.0	-	-	0.0	-	-	0.0
CAN*	33.0	31.0	30.3	28.2	27.0	29.2	-4.3	-18.2	-11.5

* Canada totals exclude BC.

Figure 3-20 shows the changes in the percentage of fatalities that were alcohol-related in the 2011-2014 period compared to the 2006-2010 baseline period. In Canada, there was an 11.5% decrease in the percentage of fatalities that were alcohol-related between the 2011-2014 period (29.2%) and the 2006-2010 baseline period (33.0%). In eight of the jurisdictions that were reviewed, there was a decrease in the percentage of persons who died in alcohol-related collisions. The most pronounced decrease in the 2011-2014 period compared to the 2006-2010 baseline period occurred in Manitoba (17.5%). The only jurisdiction where there was an increase in the percentage of fatalities that were alcohol-related was the Yukon (16.6%).

Figure 3-20
Change in the Percentage of Alcohol-Related
Fatalities Between 2011-2014 and 2006-2010



The percentage of fatally injured drivers who tested positive for alcohol for Canada and its jurisdictions is shown in Table 3-17. Data for less populous jurisdictions should be treated with caution since the number of fatally injured drivers of highway vehicles is quite small when compared to corresponding numbers from other jurisdictions. And in Nunavut, there were no fatally injured drivers of highway vehicles during neither the 2006-2010 baseline period nor the 2011-2014 period. More detailed data on alcohol use among fatally injured drivers can be found in Section 3.6.2.

An average of 37.1% of fatally injured drivers tested positive for alcohol during the 2006-2010 baseline period, ranging from 30.7% in Ontario to 77.2% in the Northwest Territories. During the 2011-2014 period, 31.7% of fatally injured drivers in Canada tested positive for alcohol, ranging from 0.0% in the Northwest Territories to 57.1% in Prince Edward Island.

There was a 14.6% decrease in the percentage of fatally injured drivers who tested positive for alcohol in the 2011-2014 period (31.7%) when compared to the 2006-2010 baseline period (37.1%). Figure 3-21 shows that Prince Edward Island was the only jurisdiction where there was an increase (28.6%) in the percentage of fatally injured drivers who tested positive for alcohol in the 2011-2014 period (57.1%) compared to the 2006-2010 baseline period (44.4%). In the remaining jurisdictions, there were decreases in the percentage of fatally injured drivers testing positive for alcohol in 2011-2014 compared to the 2006-2010 baseline period.

Table 3-17
Percent of Fatally Injured Drivers Positive for Alcohol
Trends (2011/2014) vs. Baseline (2006-2010)

Juris	2006-2010 Baseline Average	2011	2012	2013	2014	2011 to 2014 Average	Percent Differences		
							2014 vs. 2013	2014 vs. 2006-2010 Baseline	2011-2014 Avg. vs. 2006- 2010 Baseline
BC	39.4	N/A	N/A	N/A	N/A	N/A	-	-	-
AB	39.9	31.8	33.0	36.7	31.4	33.0	-14.4	-21.3	-17.3
SK	42.2	44.3	31.5	33.8	43.5	38.2	28.7	3.1	-9.5
MB	45.3	28.1	49.0	28.3	34.4	34.8	21.6	-24.1	-23.2
ON	30.7	28.4	30.8	28.4	22.2	27.5	-21.8	-27.7	-10.4
QC	38.4	38.3	33.7	32.5	30.1	34.1	-7.4	-21.6	-11.2
NB	42.9	32.5	33.3	29.0	22.2	32.4	-23.4	-48.3	-24.5
NS	34.1	38.2	25.9	20.9	26.7	27.5	27.8	-21.7	-19.4
PE	44.4	63.6	83.3	33.3	33.3	57.1	0.0	-25.0	28.6
NL	47.4	20.0	30.4	40.9	36.8	31.8	-10.0	-22.4	-32.9
YK	50.0	40.0	0.0	0.0	0.0	25.0	#DIV/0!	-100.0	-50.0
NT	77.2	-	-	0.0	-	0.0	-	-	-
NU	-	-	-	-	-	-	-	-	-
CAN*	37.1	33.4	32.9	31.6	28.5	31.7	-9.8	-23.2	-14.6

* Canada totals exclude BC.

Figure 3-21
Change in the Percentage of Fatally Injured Drivers Testing
Positive for Alcohol Between 2011-2014 and 2006-2010

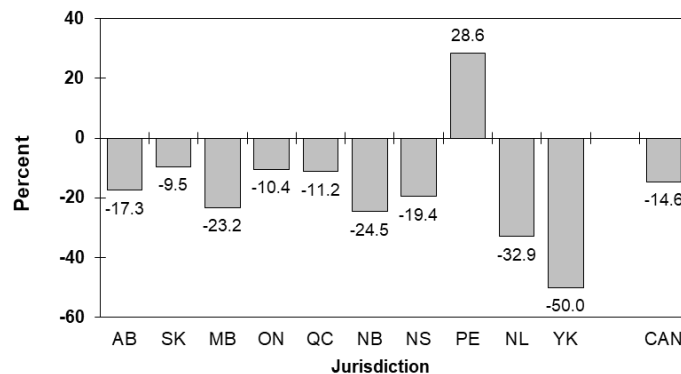


Table 3-18 shows the percentage of drivers that were involved in alcohol-related serious injury collisions. Totals for Canada exclude New Brunswick, Newfoundland and Labrador, and Nunavut since serious injury collision data for all four years between 2011 and 2014 were not available at the time of publication for these jurisdictions. Data for less populous jurisdictions should be treated with caution since the number of drivers involved in serious injury collisions is substantially smaller than those for other jurisdictions. Section 3.6.4 provides more detailed data on these drivers.

During the 2006-2010 baseline period, an average of 20.1% of drivers in Canada were involved in alcohol-related serious injury collisions, ranging from 17.8% in Quebec to 33.3% in the Northwest Territories and the Yukon. During the 2011-2014 period, an average of 16.6% of drivers in Canada were involved in alcohol-related serious injury collisions. In Manitoba, 12.7% of the drivers involved in serious injury collisions were in a crash that involved alcohol during this four-year period. On the other hand, 27.1% of drivers in Saskatchewan were involved in this type of crash from 2011 to 2014.

Table 3-18
Percent of Drivers in Alcohol-Related Serious Injury Collisions
Trends (2011/2014) vs. Baseline (2006-2010)

Juris	2006-2010 Baseline Average	2011	2012	2013	2014	2011 to 2014 Average	Percent Differences		
							2014 vs. 2013	2014 vs. 2006-2010 Baseline	2011-2014 Avg. vs. 2006- 2010 Baseline
BC	26.5	19.8	20.4	19.6	19.6	19.9	0.0	-26.0	-24.9
AB	19.7	16.7	15.7	14.3	16.7	15.8	16.8	-15.2	-19.8
SK	29.5	27.8	28.6	28.4	22.8	27.1	-19.7	-22.7	-8.1
MB	18.4	15.6	10.7	13.1	11.8	12.7	-9.9	-35.9	-31.0
ON	16.8	15.3	15.0	13.6	13.3	14.3	-2.2	-20.8	-14.9
QC	17.8	17.4	17.9	15.6	14.4	16.4	-7.7	-19.1	-7.9
NB	25.6	27.4	24.8	N/A	23.9	31.4	-	-6.6	-
NS	23.7	17.1	18.6	15.8	16.6	17.1	5.1	-30.0	-27.8
PE	23.0	24.2	25.8	24.5	25.0	25.0	2.0	8.7	8.7
NL	-	N/A	18.6	17.9	7.4	-	-58.7	-	-
YK	29.6	34.6	15.8	26.1	25.9	25.0	-0.8	-12.5	-15.5
NT	33.3	0.0	0.0	37.5	0.0	22.2	-100.0	-100.0	-33.3
NU	0.0	N/A	0.0	0.0	-	0.0	-	-	-
CAN*	20.1	17.4	17.2	15.9	16.0	16.6	0.6	-20.4	-17.4

* Canada totals exclude New Brunswick, Newfoundland and Labrador and Nunavut.

There was a 17.4% decrease in the percentage of drivers who were involved in alcohol-related serious injury collisions in the 2011-2014 period (16.6%) when compared to the 2006-2010 baseline period (20.1%). Figure 3-22 shows that in nine of the ten jurisdictions that were reviewed, there was a decrease in the percentage of drivers who were involved in alcohol-related serious injury collisions. The most pronounced decreases in the 2011-2014 period compared to the 2006-2010 baseline period occurred in the Northwest Territories (33.3%), Manitoba (31.0%), and Nova Scotia (27.8%). The only jurisdiction where there was an increase in the percentage of drivers involved in alcohol-related serious injury collisions was Prince Edward Island (8.7%).

Figure 3-22
Change in the Percentage of Drivers in Alcohol-Related Serious Injury Collisions Between 2011-2014 and 2006-2010

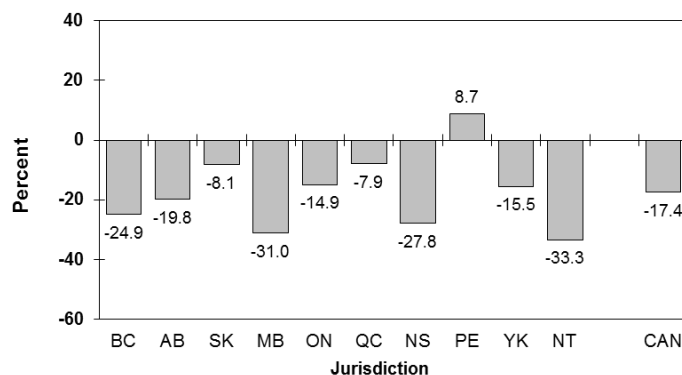


Table 3-19 shows the percentage of fatally injured drivers who tested positive for drugs, for Canada as a whole, and by jurisdiction. Data for less populous jurisdictions should be treated with caution since the number of fatally injured drivers of highway vehicles is quite small when compared to corresponding numbers from other jurisdictions. And in Nunavut, there were no fatally injured drivers of highway vehicles who were tested for drugs between 2006 and 2014. Similar to Table 3-17, data for fatally injured drivers in British Columbia are not available from 2011 to 2014. In Section 3.6.5, more detailed data are available on drug use among fatally injured drivers.

As can be seen, during the 2006-2010 baseline period, an average of 36.3% of fatally injured tested drivers had positive results for drugs. This percentage was 28.6% in both Prince Edward Island and Newfoundland and Labrador. On the other hand, 50.0% of drivers in the Northwest Territories and 40.9% of fatally injured drivers in Ontario tested positive for drugs during the 2006-2010 baseline period. During the 2011-2014 period, 41.9% of fatally injured drivers in Canada tested positive for drugs, ranging from 0.0% in the Northwest Territories to 50.0% in Prince Edward Island and the Yukon.

There was a 15.4% increase in the percentage of fatally injured drivers who tested positive for drugs in the 2011-2014 period (41.9%) when compared to the 2006-2010 baseline period (36.3%). In Figure 3-23, it can be seen that in each of the jurisdictions, there was an increase in the percentage of fatally injured drivers who tested positive for drugs. The most pronounced increase was in Prince Edward Island, where there was a 74.8% increase from those drivers who tested positive for drugs in 2011-2014 (50.0%) compared to the 2006-2010 baseline period (28.6%).

Table 3-19
Percent of Fatally Injured Drivers Positive for Drugs
Trends (2011/2014) vs. Baseline (2006-2010)

Juris	2006-2010 Baseline Average	2011	2012	2013	2014	2011 to 2014 Average	Percent Differences		
							2014 vs. 2013	2014 vs. 2006-2010 Baseline	2011-2014 Avg. vs. 2006- 2010 Baseline
BC	46.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AB	39.3	35.3	40.6	55.2	44.0	44.2	-20.3	12.0	12.5
SK	36.7	42.5	37.3	41.7	36.8	39.4	-11.8	0.3	7.4
MB	37.3	32.1	44.9	39.1	50.0	41.3	27.9	34.0	10.7
ON	40.9	41.6	47.3	48.5	43.6	45.5	-10.1	6.6	11.2
QC	30.2	44.6	30.5	35.5	34.9	36.3	-1.7	15.6	20.2
NB	37.0	38.2	28.1	35.5	68.0	41.9	91.5	83.8	13.2
NS	39.0	45.5	37.7	37.2	36.7	40.0	-1.3	-5.9	2.6
PE	28.6	72.7	16.7	20.0	33.3	50.0	66.5	16.4	74.8
NL	28.6	37.5	50.0	12.5	42.9	33.3	243.2	50.0	16.4
YK	33.3	33.3	0.0	100.0	100.0	50.0	0.0	200.3	50.2
NT	50.0	-	-	0.0	-	0.0	-	-	-
NU	-	-	-	-	-	-	-	-	-
CAN*	36.3	40.8	39.6	44.7	42.4	41.9	-5.1	16.8	15.4

* Canada totals exclude BC.

Figure 3-23
Change in the Percentage of Fatally Injured Drivers Testing
Positive for Drugs Between 2011-2014 and 2006-2010

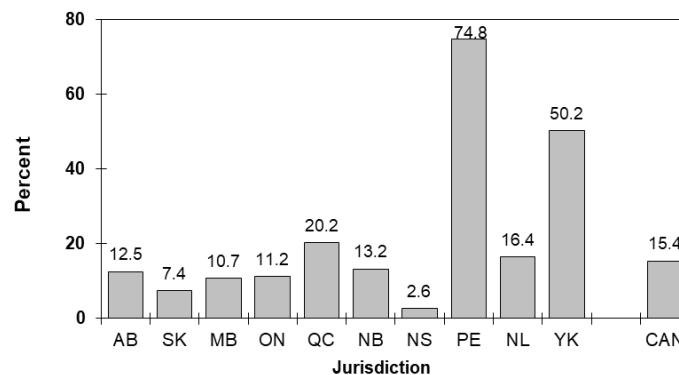


Table 3-20 shows the percentage of fatally injured drivers who tested positive for cannabis, for Canada as a whole, and by jurisdiction. Data for less populous jurisdictions should be treated with caution since the number of fatally injured drivers of highway vehicles is quite small when compared to corresponding numbers from other jurisdictions. Similar to Table 3-17, data for fatally injured drivers in British Columbia are not available from 2011 to 2014.

As can be seen, during the 2006-2010 baseline period, an average of 16.3% of fatally injured tested drivers had positive results for cannabis. This percentage was 0.0% in the Yukon and 11.3% in Manitoba. However, 25.0% of fatally injured tested drivers in the Northwest Territories tested positive for cannabis during the 2006-2010 baseline period. During the 2011-2014 period, 19.0% of fatally

injured drivers in Canada tested positive for cannabis, ranging from 0.0% in the Northwest Territories to 28.6% in Newfoundland and Labrador.

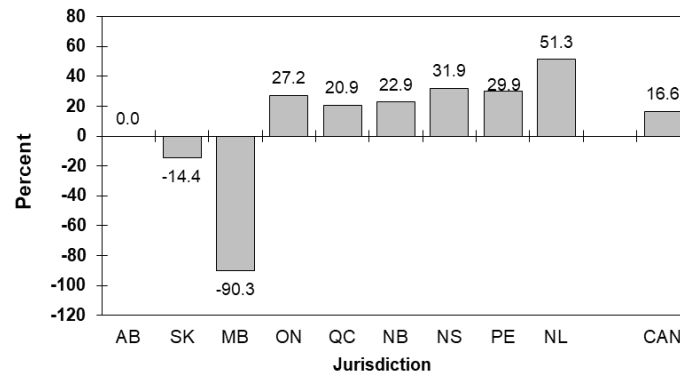
There was a 16.6% increase in the percentage of fatally injured drivers who tested positive for cannabis in the 2011-2014 period (19.0%) when compared to the 2006-2010 baseline period (16.3%). In Figure 3-24, it can be seen that in most jurisdictions, there was an increase in the percentage of fatally injured drivers who tested positive for cannabis. The most pronounced increase was in Newfoundland and Labrador, where there was a 51.3% increase from those drivers who tested positive for drugs in 2011-2014 (28.6%) compared to the 2006-2010 baseline period (18.9%). Conversely, there was a 90.3% decrease in the percentage of fatally injured tested drivers in Manitoba who were positive for cannabis in 2011-2014 (1.1%) compared to the 2006-2010 baseline period. In Alberta, there was no change in the percentage of drivers testing positive between the 206-2010 baseline period and the 2011-2014 period.

Table 3-20
Percent of Fatally Injured Drivers Positive for Cannabis
Trends (2011/2014) vs. Baseline (2006-2010)

Juris	2006-2010 Baseline Average	2011	2012	2013	2014	2011 to 2014 Average	Percent Differences		
							2014 vs. 2013	2014 vs. 2006-2010 Baseline	2011-2014 Avg. vs. 2006- 2010 Baseline
BC	14.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AB	19.1	12.4	18.3	25.1	19.6	19.1	-21.9	2.6	0.0
SK	13.9	15.1	12.0	9.7	10.5	11.9	8.2	-24.5	-14.4
MB	11.3	3.6	0.0	0.0	0.0	1.1	0.0	-100.0	-90.3
ON	19.1	20.8	27.1	28.8	20.4	24.3	-29.2	6.8	27.2
QC	13.4	14.5	13.7	17.7	19.7	16.2	11.3	47.0	20.9
NB	17.9	26.5	12.1	22.6	28.0	22.0	23.9	56.4	22.9
NS	19.1	27.3	20.8	30.2	23.3	25.2	-22.8	22.0	31.9
PE	15.4	36.4	0.0	20.0	0.0	20.0	-100.0	-100.0	29.9
NL	18.9	37.5	25.0	12.5	42.9	28.6	243.2	127.0	51.3
YK	0.0	33.3	0.0	0.0	0.0	16.7	-	-	-
NT	25.0	-	-	0.0	-	0.0	-	-	-
NU	-	-	-	-	-	-	-	-	-
CAN*	16.3	16.8	18.2	22.0	19.0	19.0	-13.6	16.6	16.6

* Canada totals exclude BC.

Figure 3-24
Change in the Percentage of Fatally Injured Drivers Testing
Positive for Cannabis Between 2011-2014 and 2006-2010



4.0 BRITISH COLUMBIA

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in British Columbia. It describes data on:

- > people who were killed in alcohol-related crashes (Section 4.1);
- > alcohol use among fatally injured drivers (Section 4.2);
- > drivers involved in alcohol-related serious injury crashes (Section 4.3);
- > drug use among fatally injured drivers (Section 4.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 4.5).

4.1 Deaths in alcohol-related crashes

Table 4-1 presents information on people who died in alcohol-related crashes in British Columbia during 2010 for persons dying within 30 days of the collision. *At the time this report was being prepared, coroner data from 2011 to 2014 for British Columbia were not available. For this reason, 2010 data will be reported in this section.* This table specifically reports upon persons who died within 30 days of a collision which occurred on a public roadway that involved at least one highway vehicle. Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities in which sufficient information was available to determine if alcohol was involved. *A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.*

For example, 24 people aged 16-19 were killed in motor vehicle crashes in British Columbia during 2010. And, in 23 cases (95.8%) it was possible to determine if alcohol was a factor in the crash.

The next column shows the number of people killed in crashes that were known to be alcohol-involved. For example, 14 people aged 16-19 died in alcohol-related crashes in British Columbia during 2010. The next column expresses this as a percentage – i.e., 60.9% of the 16-19 year olds who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among 16-19 year olds represent 10.9% of all the people killed in alcohol-related crashes in British Columbia during 2010.

The totals at the bottom of the table provide a summary. As can be seen, 356 persons died within 30 days of a motor vehicle crash in British Columbia during 2010. In 336 (94.4%) of these cases, it was possible to determine if alcohol was a factor. Of these known cases, 129 (38.4%) involved alcohol. Extrapolating this figure to the total number of motor vehicle fatalities (356 x .384) it can be estimated that *in British Columbia during 2010, 137 persons died in alcohol-related crashes within 30 days of the collision.*

Table 4-1
Deaths in Alcohol-Related Crashes: British Columbia, 2010

Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARD
<u>Age Group</u>						
<16	16	14	87.5	1	7.1	0.8
16-19	24	23	95.8	14	60.9	10.9
20-25	35	34	97.1	19	55.9	14.7
26-35	51	50	98.0	31	62.0	24.0
36-45	48	48	100.0	22	45.8	17.1
46-55	71	69	97.2	28	40.6	21.7
>55	111	98	88.3	14	14.3	10.9
<u>Gender</u>						
Male	232	221	95.3	91	41.2	70.5
Female	124	115	92.7	38	33.0	29.5
<u>Victim Type</u>						
Driver/ Operator	209	198	94.7	70	35.4	54.3
Passenger	92	86	93.5	37	43.0	28.7
Pedestrian	55	52	94.5	22	42.3	17.1
<u>Vehicle Occupied</u>						
Automobiles	152	142	93.4	59	41.5	45.7
Trucks/Vans	96	92	95.8	35	38.0	27.1
Motorcycles	36	35	97.2	11	31.4	8.5
Other Hwy Vehicles	10	10	100.0	1	10.0	0.8
Off-road Vehicles	7	5	71.4	1	20.0	0.8
(Pedestrians)	55	52	94.5	22	42.3	17.1
TOTAL	356	336	94.4	129	38.4	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

4.1.1 Victim age. Of all the people who died in alcohol-related crashes, 24.0% (see last column) were aged 26-35; 21.7% were aged 46-55; 17.1% were aged 36-45; 14.7% were aged 20-25; 10.9% were aged 16-19 and over age 55; and 0.8% were under age 16.

The highest incidence of alcohol involvement occurred in the crashes in which a person aged 26-35 and 16-19 died (62.0% and 60.9%, respectively). The lowest incidence of alcohol involvement was found among the oldest and youngest fatalities – 7.1% of persons under 16 and 14.3% of the fatalities over 55 years of age died in crashes involving alcohol.

4.1.2 Gender. Of all the people who died in alcohol-related crashes, 70.5% were males. The incidence of alcohol in crashes in which a male died (41.2%) was greater than the incidence of alcohol in crashes in which a female died (33.0%).

4.1.3 Victim type. Of all the people who died in alcohol-related crashes, 54.3% were drivers/operators of a vehicle; 28.7% were passengers; and 17.1% were pedestrians.

Within each of the victim types, the highest incidence of alcohol involvement (43.0%) occurred in the crashes in which a passenger died. Alcohol was involved in 42.3% of the crashes in which a pedestrian died and 35.4% of those in which a driver/operator died.

4.1.4 Type of vehicle occupied. Of all the people who died in alcohol-related crashes, 45.7% were in an automobile; 27.1% were in a truck/van; 8.5% were motorcyclists; and 0.8% were occupants of other highway vehicles and off-road vehicles.

Within each of these vehicle types, the incidence of alcohol involvement in which an automobile occupant died was greater than the incidence of alcohol in crashes in which a truck/van occupant or motorcyclist died (41.5% versus 38.0% and 31.4%). Among off-road vehicle occupants, 20.0% were in an alcohol-related crash.

4.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in British Columbia during 2010. *At the time this report was being prepared, coroner data from 2011 to 2014 for British Columbia were not available. For this reason, 2010 data will be reported in this section.* Table 4-2 shows the information by age group, gender, vehicle type (see Section 2.2.1), and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests: the first three of these present results for drivers who showed any evidence of alcohol; the last three columns present information on drivers who had BACs over the statutory limit of 80 mg%.

To illustrate, among 16-19 year olds there were 12 drivers killed during 2010; 11 of these fatally injured drivers (91.7%) were tested for alcohol. Of those who were tested, three (27.3%) were positive for alcohol. This means that 16-19 year old fatally injured drinking drivers accounted for 4.9% of all drinking drivers who were killed.

Then, in the final three columns, it can be seen that three of the 11 (27.3%) fatally injured 16-19 year olds who were tested for alcohol had BACs in excess of 80 mg%. This means that all three of the drivers who tested positive for alcohol had BACs in excess of the legal limit. The final column expresses the number of drivers with illegal BACs as a percent of all drivers with BACs over the limit. Thus, 16-19 year old drivers accounted for 6.0% of all the drivers with BACs over the legal limit.

The main findings are shown by the totals at the bottom of the table. British Columbia had a high testing rate in 2010, with 86.7% of fatally injured drivers being tested for alcohol use.

In British Columbia, 34.7% had been drinking and 50 of 61 (82.0%) fatally injured drinking drivers had BACs over 80 mg%. Although not shown in the table, more refined analyses by different BAC categories show that among tested drivers:

- > 65.3% had BACs of zero mg%;
- > 2.3% had BACs from 1-49 mg%;
- > 4.0% had BACs from 50-80 mg%
- > 6.8% had BACs from 81 to 160 mg%; and,
- > 21.6% had BACs over 160 mg%.

Table 4-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
British Columbia, 2010

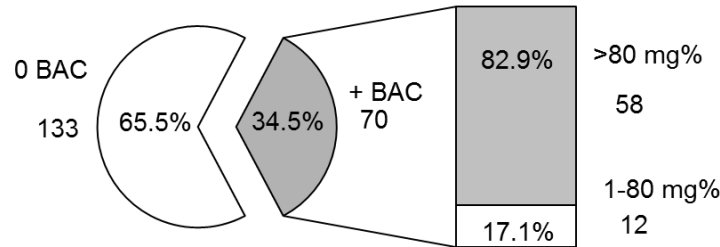
British Columbia, 2010

Category of Driver	Number of Drivers*	Drivers Tested		Positive BAC			BAC >80 mg%		
		No.	% of total	No.	% of tested	% of all drivers with +BAC	No.	% of tested	% of all drivers with BAC >80 mg%
<u>Age Group</u>									
<16	1	1	100.0	0	0.0	0.0	0	0.0	0.0
16-19	12	11	91.7	3	27.3	4.9	3	27.3	6.0
20-25	18	15	83.3	8	53.3	13.1	8	53.3	16.0
26-35	32	30	93.8	17	56.7	27.9	14	46.7	28.0
36-45	31	27	87.1	13	48.1	21.3	11	40.7	22.0
46-55	48	42	87.5	13	31.0	21.3	12	28.6	24.0
>55	61	50	82.0	7	14.0	11.5	2	4.0	4.0
<u>Gender</u>									
Male	155	132	85.2	47	35.6	77.0	38	28.8	76.0
Female	48	44	91.7	14	31.8	23.0	12	27.3	24.0
<u>Vehicle Type</u>									
Automobiles	98	89	90.8	31	34.8	50.8	25	28.1	50.0
Truck/Van	65	54	83.1	21	38.9	34.4	18	33.3	36.0
Motorcycles	32	26	81.3	8	30.8	13.1	6	23.1	12.0
Tractor Trailer	7	7	100.0	1	14.3	1.6	1	14.3	2.0
Other Hwy Veh	1	0	0.0	0	0.0	0.0	0	0.0	0.0
<u>Collision Type</u>									
Single vehicle	111	93	83.8	49	52.7	80.3	43	46.2	86.0
Multiple vehicle	92	83	90.2	12	14.5	19.7	7	8.4	14.0
TOTAL	203	176	86.7	61	34.7	100.0	50	28.4	100.0

* Drivers dying within 30 days in crashes on public roadways.

In Figure 4-1, the BAC distribution for tested fatally injured drivers is extrapolated to reflect the BAC distribution for all fatally injured drivers. In this figure, 70 of 203 (34.5%) fatally injured drivers have a positive BAC. And among fatally injured drinking drivers, 58 (82.9%) have BACs over 80 mg%.

Figure 4-1
BACs* Among Fatally Injured Drivers of
Highway Vehicles: British Columbia, 2010



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

According to the British Columbia member jurisdiction of CCMTA, where information is presented on blood alcohol concentration (BAC) levels of deceased drivers (e.g., Figure 3-2 on page 17, Figure 4-1 on page 54 reflecting British Columbia data), the following must be taken into account:

BAC values presented in these figures only represent BAC values for deceased drivers exclusively and therefore represent only a subset of the BAC levels of drivers involved in motor vehicle crashes that cause deaths and injuries. For example, where a driver is assigned alcohol as a contributing factor to a crash and that driver survives that crash but, another road user is killed (pedestrian, cyclist or another driver or occupants of any vehicle), that driver's BAC level is not reflected in the figures shown above or the similar figures assembled for other Canadian provinces and territories. Furthermore, where a driver is assigned alcohol as a contributing factor to a crash and that driver survives that crash but are themselves injured or another road user is injured (pedestrian, cyclist or any driver or occupants of any vehicle involved in the crash), that driver's BAC level is again NOT reflected in the figures 3-2, 4-1, or the similar figures assembled for other Canadian provinces and territories. This is a major and prevailing limitation of these data and the BAC values represented herein. This means that the BAC levels reflected in these tables do not reflect the full range of BAC levels of drivers involved in serious crashes and should not be relied upon to draw conclusions about BAC levels and motor vehicle crash risk. In order to understand BAC levels and motor vehicle crash risk, a number of research studies exist to do that. Based on an extensive amount of research, there is overwhelming evidence that even BAC levels as low as .02 impair driving abilities and at .04 to .05 BAC there is a clear relationship between crash risk and alcohol (see Zador et al. 2000; Blomberg et al. 2009; Moskowitz et al. 2000).

4.2.1 Age differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 27.9% were aged 26-35; 21.3% were aged 36-45 and 46-55; 13.1% were aged 20-25; 11.5% were over 55; and 4.9% were aged 16-19.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 28.0% were aged 26-35; 24.0% were aged 46-55; 22.0% were aged 36-45; 16.0% were aged 20-25; 6.0% were aged 16-19; and 4.0% were over age 55.

When comparing the incidence of drinking and driving among fatally injured drivers by age group, fatally injured drivers aged 26-35 were the most likely to have been drinking (56.7%). By contrast, the lone tested driver under 16 had not been drinking and only 14.0% of the tested drivers aged over 55 had been drinking.

4.2.2 Gender differences. Males dominate the picture – they account for 77.0% of all the fatally injured drivers who had been drinking, and 76.0% of all of the fatally injured drivers who were legally impaired.

Males dominate the picture largely because they account for most of the drivers who are killed (155 of the 203 fatalities or 76.4% are males). Fatally injured male drivers were more likely to have been drinking than female drivers (35.6% and 31.8%, respectively). And, 80.9% of the male and 85.7% of the female drivers who were drinking had BACs over the legal limit.

4.2.3 Vehicle differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 50.8% were automobile drivers; 34.4% were truck/van drivers; 13.1% were motorcyclists; and 1.6% were tractor-trailer drivers.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 50.0% were automobile drivers, 36.0% were truck/van drivers; 12.0% were motorcyclists; and 2.0% were tractor-trailer drivers.

Within each of the vehicle types, 38.9% of fatally injured drivers of truck/vans, 34.8% of automobile drivers, 30.8% of motorcyclists, and 14.3% of tractor-trailer drivers were found to have been drinking.

4.2.4 Collision differences. Just over half of the drivers killed (111 of the 203) were involved in single-vehicle collisions but these crashes accounted for four-fifths of the drivers who had been drinking or were legally impaired (80.3% and 86.0%, respectively).

The reason for this apparent disparity is because alcohol is overrepresented in single-vehicle crashes. Over half of the drivers involved in single-vehicle crashes (52.7%) tested positive for alcohol, compared to only 14.5% of those involved in multiple-vehicle collisions.

4.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in British Columbia. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 4-3 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 1,941 drivers were involved in crashes in which someone was seriously injured, and among these 19.6% were alcohol-related crashes.

4.3.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 22.4% were aged 26-35, 18.2% were aged 20-25; and 17.4% were aged 46-55. Drivers aged 16-19 and over 55 respectively accounted for only 8.2% and 14.7% of those involved in alcohol-related serious injury crashes.

Over one-quarter of the drivers aged 20-25 and 16-19 (27.3% and 27.2%, respectively) were involved in alcohol-related serious injury crashes. The lowest incidence of involvement in alcohol-related crashes was found for those over 55 (10.4%).

4.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 74.5% were males. The incidence of involvement in alcohol-related serious injury crashes was also greater for males than for females (21.1% and 15.1%, respectively).

4.3.3 Type of vehicle driven. Of all the drivers involved in alcohol-related serious injury crashes, 50.0% were automobile drivers; 38.2% were truck/van drivers; 6.1% were motorcyclists; 5.0% were tractor-trailer drivers; and 0.8% were drivers of other highway vehicles.

The highest incidence of involvement in alcohol-related serious injury crashes was found for drivers of other highway vehicles (23.1%), compared to 22.1% for truck/van drivers; 21.8% for tractor-trailer drivers; and 20.0% for automobile drivers. Among motorcyclists, 9.8% were involved in alcohol-related crashes.

Table 4-3
Drivers* in Alcohol-Related Serious Injury Crashes:
British Columbia, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
16-19	114	31	27.2	8.2
20-25	253	69	27.3	18.2
26-35	353	85	24.1	22.4
36-45	320	62	19.4	16.3
46-55	338	66	19.5	17.4
>55	536	56	10.4	14.7
unknown	27	11	40.7	2.9
<u>Gender</u>				
Male	1343	283	21.1	74.5
Female	575	87	15.1	22.9
unknown	23	10	43.5	2.6
<u>Vehicle Type</u>				
Auto	950	190	20.0	50.0
Truck/Van	656	145	22.1	38.2
Motorcycle	235	23	9.8	6.1
Tractor Trailer	87	19	21.8	5.0
Other Hwy. Vehicle	13	3	23.1	0.8
<u>Collision Type</u>				
Single-Vehicle	801	242	30.2	63.7
Multiple-Vehicle	1140	138	12.1	36.3
TOTAL	1941	380	19.6	100.0

* excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

4.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 63.7% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in single-vehicle crashes – 30.2% of these drivers, compared to only 12.1% for drivers involved in multiple-vehicle crashes.

4.4 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in British Columbia during 2010. *At the time this report was being prepared, coroner data from 2011 to 2014 for British Columbia were not available. For this reason, 2010 data will be reported in this section.* A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 4-4 shows the prevalence of drug use among fatally injured drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.5). The table also shows the number of drivers who tested positive for various categories of drugs. A brief description of the different drug categories is provided in Section 2.2.5.

As can be seen, British Columbia had a high testing rate in 2010, with 82.8% of fatally injured drivers being tested for drug use.

Among fatally injured tested drivers, 70 out of 168 (41.7%) were positive for drugs. The most common category of drugs found within drivers testing positive for drug use was cannabis (50.0%). Other categories of drugs found in fatally injured drivers testing positive for drugs were CNS depressants (41.4%), CNS stimulants (30.0%), narcotic analgesics (14.3%), and dissociative anesthetics (2.9%).

Table 4-4
Drug Use Among Fatally Injured Drivers of Highway
Vehicles: British Columbia, 2010

Prevalence of Drug Use				
Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
203	168	(82.8)	70	(41.7)

Categories of Drugs Found Among Drivers Testing Positive		
Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive*
Cannabis	35	(50.0)
CNS Depressants	29	(41.4)
CNS Stimulants	21	(30.0)
Narcotic Analgesics	10	(14.3)
Dissociative Anesthetics	2	(2.9)
Hallucinogens	0	(0.0)
Inhalants	0	(0.0)

* Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

4.5 Trends in alcohol and drug-impaired driving

Sections 4.1 through 4.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 4.4 examined drug use among fatally injured drivers in 2010. This section examines changes in these four indicators over time.

4.5.1 Deaths involving drinking drivers: 1996-2010. As mentioned earlier in Section 4.1, at the time this report was being prepared, coroner data from 2011 to 2014 for British Columbia were not available. For this reason, 2010 data will be reported in this section. Table 4-5 and Figure 4-2 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2010. These results differ slightly from those in Section 4.1. In this section, deaths that occur in crashes that involve a drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

As shown in the figure, the number of deaths in crashes that involved a drinking driver generally dropped from 206 to 131 between 1996 and 2003, increased to 161 in 2005, and eventually decreased

to 119 in 2010. The percentage of alcohol-related fatalities in British Columbia generally decreased from 46.1% in 1996 to its lowest level in 2003 (29.6%), rose to 37.7% in 2005, and generally decreased to 33.4% in 2010.

As shown at the bottom of the table, during the 2006-2010 baseline period there was an average of 129 fatalities involving a drinking driver and they accounted for 34.2% of all fatalities.

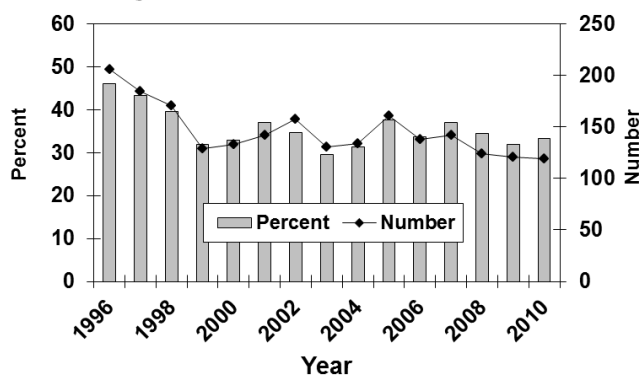
Table 4-5
Number* and Percent of Motor Vehicle Deaths Involving**
a Drinking Driver: British Columbia, 1996-2010

Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	447	206	46.1
1997	426	185	43.4
1998	432	171	39.6
1999	403	129	32.0
2000	404	133	32.9
2001	384	142	37.0
2002	456	158	34.6
2003	442	131	29.6
2004	427	134	31.4
2005	427	161	37.7
2006	409	138	33.7
2007	383	142	37.1
2008	359	124	34.5
2009	379	121	31.9
2010	356	119	33.4
2006-2010 baseline	377	129	34.2

* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

Figure 4-2
Number and Percent of Deaths Involving
a Drinking Driver: British Columbia, 1996-2010



4.5.2 Alcohol use among fatally injured drivers. As mentioned earlier in Section 4.2, at the time this report was being prepared, coroner data from British Columbia were not available from 2011 to 2014. For this reason, 1996-2010 data will be reported in this section in Table 4-6. Trends are illustrated in Figure 4-3 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol (represented by the white area); (2) had BACs below the legal limit (shown by the light grey area); and (3) had BACs over the legal limit (the dark grey area). The data reported here are restricted to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2).

As can be seen, the percent of fatally injured drivers with BACs over the legal limit generally decreased from 1996 (42.3%) to a low of 28.2% in 2004, rose to 37.0% in 2005, fluctuated until 2008, and decreased until 2010 (28.4%). The percent of fatally injured drivers with zero BACs increased from 1996 (50.0%) to 1999 (64.3%), remained relatively stable until 2006, declined in 2007 (55.0%), and peaked in 2010 (65.3%). The percent of fatally injured drivers with BACs between 1 and 80 mg% reached its highest level in 2004 (9.3%), dropped to its lowest mark in 2009 (3.8%), and rose again in 2010 (6.3%).

Table 4-6
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
British Columbia, 1996-2010

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	223	208	93.3	104	50.0	16	7.7	88	42.3
1997	236	208	88.1	106	51.0	14	6.7	88	42.3
1998	234	213	91.0	121	56.8	17	8.0	75	35.2
1999	227	210	92.5	135	64.3	12	5.7	63	30.0
2000	238	217	91.2	133	61.3	12	5.5	72	33.2
2001	229	196	85.6	114	58.2	11	5.6	71	36.2
2002	279	236	84.6	135	57.2	15	6.4	86	36.4
2003	217	179	82.5	112	62.6	10	5.6	57	31.8
2004	264	227	86.0	142	62.6	21	9.3	64	28.2
2005	265	230	86.8	132	57.4	13	5.7	85	37.0
2006	239	214	89.5	129	60.3	16	7.5	69	32.2
2007	243	222	91.4	122	55.0	19	8.6	81	36.5
2008	218	195	89.4	113	57.9	10	5.1	72	36.9
2009	231	209	90.5	136	65.1	8	3.8	65	31.1
2010	203	176	86.7	115	65.3	11	6.3	50	28.4
2006-2010 baseline	227	203	(89.4)	123	(60.6)	13	(6.4)	67	(33.0)

* Dying within 30 days in collisions which occurred on public roadways.

During the 2006-2010 baseline period, the percentage of fatally injured drivers was 60.6% for drivers with zero BACs, 6.4% for drivers with BACs from 1-80 mg%, and 33.0% for drivers with BACs over 80 mg%.

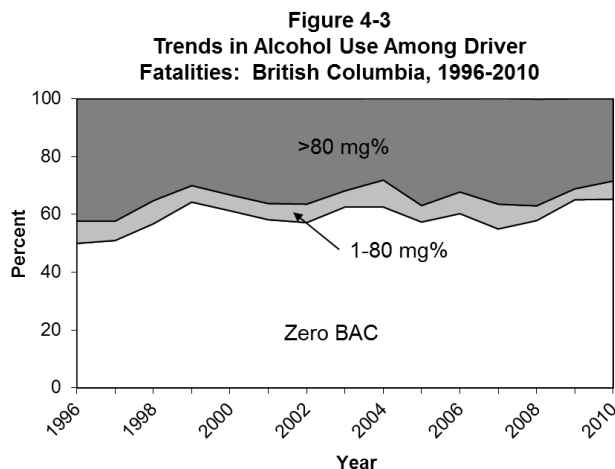


Table 4-7 and Figure 4-4 also show data on alcohol use among fatally injured drivers from 1996 to 2010. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC distribution of drivers tested for alcohol (see Figure 4-1). Second, drivers are grouped in only two BAC categories: zero and positive.

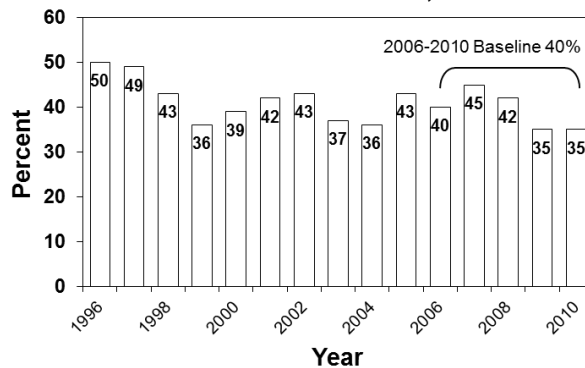
As can be seen at the bottom of Table 4-7, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 39.6%.

Table 4-7
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles*:
British Columbia, 1996-2010

Year	Number of Drivers	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	223	111	(49.8)	112	(50.2)
1997	236	120	(50.8)	116	(49.2)
1998	234	133	(56.8)	101	(43.2)
1999	227	146	(64.3)	81	(35.7)
2000	238	146	(61.3)	92	(38.7)
2001	229	133	(58.1)	96	(41.9)
2002	279	160	(57.3)	119	(42.7)
2003	217	136	(62.7)	81	(37.3)
2004	264	165	(62.5)	99	(37.5)
2005	265	152	(57.4)	113	(42.6)
2006	239	144	(60.3)	95	(39.7)
2007	243	134	(55.1)	109	(44.9)
2008	218	126	(57.8)	92	(42.2)
2009	231	150	(64.9)	81	(35.1)
2010	203	133	(65.5)	70	(34.5)
2006-2010 baseline	227	137	(60.4)	90	(39.6)

* numbers are estimates based on the BAC distribution of drivers tested for alcohol

Figure 4-4
Percent of Fatally Injured Drivers* Positive
for Alcohol: British Columbia, 1996-2010



4.5.3 Drivers in serious injury crashes. In British Columbia, data are only available since 2005 to indicate the degree of injury severity for collision victims. Thus trend tables in this section include data from 2005 to 2014, as opposed to the 1996-2014 period reported for serious injury collisions in most other jurisdictions. Table 4-8 and Figure 4-5 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes.

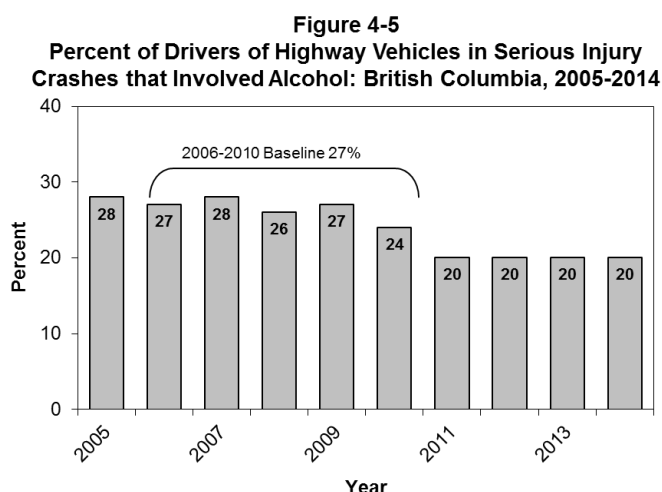
As can be seen, the incidence of alcohol-involvement in serious injury crashes has increased slightly over this 10-year period. Between 2005 and 2009 the percentage of drivers in serious injury crashes that involved alcohol fluctuated, decreased to 19.8% in 2011, rose to 20.4% in 2012, decreased to 19.6% in 2013, and remained at this level in 2014.

As shown in Table 4-8, in the baseline period (2006-2010), an average of 26.5% of drivers in serious injury crashes were in an alcohol-involved crash. In the 2011-2014 period, the incidence of drivers in alcohol-involved serious injury crashes declined to 19.9%, a 24.9% decrease.

Table 4-8
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: British Columbia, 2005-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
2005	2655	730	(27.5)
2006	2653	716	(27.0)
2007	2630	723	(27.5)
2008	2397	633	(26.4)
2009	2195	597	(27.2)
2010	2072	494	(23.8)
2011	1837	363	(19.8)
2012	2033	415	(20.4)
2013	1878	369	(19.6)
2014	1941	380	(19.6)
2006-2010 baseline	2389	633	(26.5)
2011-2014 period	1922	382	(19.9)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement



4.5.4 Drug use among fatally injured drivers. Table 4-9 and Figure 4-6 show data on drug use among fatally injured drivers of highway vehicles over an 11-year period (2000-2010). At the time of publication, drug use data among fatally injured drivers in British Columbia from 2011 to 2014 was not

yet available. Similar to Table 4-6, these results are based on fatally injured drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.5).

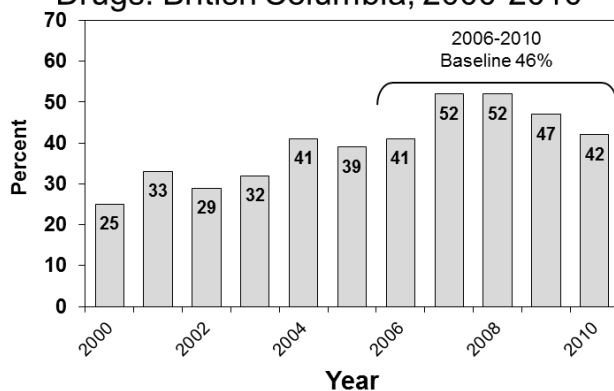
As can be seen at the bottom of Table 4-9, the percentage of fatally injured drivers testing positive for drugs from 2006-2010, the baseline period, is 46.6%. In 2010, 41.7% of fatally injured drivers tested positive for drugs.

Table 4-9
Drug Use Among Fatally Injured Drivers* of Highway Vehicles:
British Columbia, 2000-2010

YEAR	Number of Drivers*	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	238	136	57.1	102	75.0	34	25.0
2001	229	135	59.0	91	67.4	44	32.6
2002	279	135	48.4	96	71.1	39	28.9
2003	217	121	55.8	82	67.8	39	32.2
2004	264	207	78.4	123	59.4	84	40.6
2005	265	205	77.4	125	61.0	80	39.0
2006	239	198	82.8	117	59.1	81	40.9
2007	243	197	81.1	95	48.2	102	51.8
2008	218	186	85.3	90	48.4	96	51.6
2009	231	198	85.7	106	53.5	92	46.5
2010	203	168	82.8	98	58.3	70	41.7
2006-2010 baseline	227	189	83.3	101	53.4	88	46.6

* Dying within 30 days in collisions which occurred on public roadways.

Figure 4-6
Percent of Fatally Injured Drivers Positive for
Drugs: British Columbia, 2000-2010



5.0 ALBERTA

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in Alberta during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 5.1);
- > alcohol use among fatally injured drivers (Section 5.2);
- > drivers involved in alcohol-related serious injury crashes (Section 5.3);
- > drug use among fatally injured drivers (Section 5.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 5.5).

5.1 Deaths in alcohol-related crashes

Table 5-1 presents information on people who died in alcohol-related crashes in Alberta during 2014. This table specifically reports upon persons who died within 30 days of a collision which occurred on a public roadway that involved at least one highway vehicle. Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities in which sufficient information was available to determine if alcohol was involved. *A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.*

For example, 33 people aged 16-19 were killed in motor vehicle crashes in Alberta during 2014. And, in 31 cases (93.9%) it was possible to determine if alcohol was a factor in the crash.

The next column shows the number of people killed in crashes that were known to be alcohol-involved. For example, eight people aged 16-19 died in alcohol-related crashes in Alberta during 2014. The next column expresses this as a percentage – i.e., 25.8% of the 16-19 year olds who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among 16-19 year olds represent 7.0% of all the people killed in alcohol-related crashes in Alberta during 2014.

The totals at the bottom of the table provide a summary. As can be seen, 345 persons died within 30 days of a motor vehicle crash in Alberta during 2014. In 325 (94.2%) of these cases, it was possible to determine if alcohol was a factor. Of these known cases, 114 (35.1%) involved alcohol. Extrapolating

this figure to the total number of motor vehicle fatalities (345 x .351) it can be estimated that *in Alberta during 2014, 121 persons died in alcohol-related crashes within 30 days of the collision.*

5.1.1 Victim age. Of all the people who died in alcohol-related crashes, 28.9% (see last column) were aged 26-35; 22.8% were aged 20-25; 21.1% were aged 46-55; 9.6% were aged 36-45 and over age 55; 7.0% were aged 16-19; and 0.9% were under 16.

The highest incidence of alcohol involvement occurred in the crashes in which a person aged 20-25 died (54.2%). The lowest incidence of alcohol involvement was found among the youngest and oldest fatalities – 12.5% of persons under age 16 and 12.9% of the fatalities over age 55 died in crashes involving alcohol.

Table 5-1
Deaths in Alcohol-Related Crashes: Alberta, 2014

Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARDs
<u>Age Group</u>						
<16	9	8	88.9	1	12.5	0.9
16-19	33	31	93.9	8	25.8	7.0
20-25	50	48	96.0	26	54.2	22.8
26-35	69	64	92.8	33	51.6	28.9
36-45	35	34	97.1	11	32.4	9.6
46-55	60	55	91.7	24	43.6	21.1
>55	89	85	95.5	11	12.9	9.6
<u>Gender</u>						
Male	246	231	93.9	90	39.0	78.9
Female	99	94	94.9	24	25.5	21.1
<u>Victim Type</u>						
Driver/ Operator	230	219	95.2	74	33.8	64.9
Passenger	71	68	95.8	20	29.4	17.5
Pedestrian	40	35	87.5	17	48.6	14.9
Unknown	4	3	75.0	3	100.0	2.6
<u>Vehicle Occupied</u>						
Automobiles	105	102	97.1	33	32.4	28.9
Trucks/Vans	160	148	92.5	56	37.8	49.1
Motorcycles	31	31	100.0	8	25.8	7.0
Other Hwy Vehicles	8	8	100.0	0	0.0	0.0
Off-road Vehicles	1	1	100.0	0	0.0	0.0
(Pedestrians)	40	35	87.5	17	48.6	14.9
TOTAL	345	325	94.2	114	35.1	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

5.1.2 Gender. Of all the people who died in alcohol-related crashes, 78.9% were males. The incidence of alcohol in crashes in which a male died (39.0%) was greater than the incidence of alcohol in crashes in which a female died (25.5%).

5.1.3 Victim type. Of all the people who died in alcohol-related crashes, 64.9% were drivers/operators of a vehicle; 17.5% were passengers; 14.9% were pedestrians; and 2.6% were victims with an unknown position.

Within each of the principal victim types, the highest incidence of alcohol involvement (48.6%) occurred in the crashes in which a pedestrian died. Alcohol was involved in 33.8% of the crashes in which a driver/operator died and 29.4% of those in which a passenger died.

5.1.4 Type of vehicle occupied. Of all the people who died in alcohol-related crashes, 49.1% were in a truck/van; 28.9% were in an automobile; and 7.0% were motorcyclists.

Within each of these vehicle types, the incidence of alcohol involvement in which a truck/van occupant died was greater than the incidence of alcohol in crashes in which an automobile occupant or motorcyclist died (37.8% versus 32.4% and 25.8%). Among fatally injured occupants of other highway vehicles and off-road vehicles, 0.0% were involved in an alcohol-related crash.

5.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in Alberta during 2014. Table 5-2 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests – the first three of these present results for drivers who showed any evidence of alcohol; the last three columns present information on drivers who had BACs over the statutory limit of 80 mg%.

To illustrate, among 16-19 year olds there were 20 drivers killed during 2014; 20 of these fatally injured drivers (100.0%) were tested for alcohol. Of those who were tested, four (20.0%) were positive for alcohol. This means that 16-19 year old fatally injured drinking drivers accounted for 5.6% of all drinking drivers who were killed.

Then, in the final three columns, it can be seen that four of the 20 (20.0%) fatally injured 16-19 year olds who were tested for alcohol had a BAC in excess of 80 mg%. This means that all four drivers who tested positive for alcohol had BACs in excess of the legal limit. The final column expresses the number of drivers with illegal BACs as a percent of all drivers with BACs over the limit. As can be seen, 16-19 year old drivers accounted for 7.0% of all the drivers with BACs over the legal limit.

The main findings are shown by the totals at the bottom of the table. Alberta had a very high testing rate in 2014, with 98.7% of fatally injured drivers being tested for alcohol use.

In Alberta, 31.4% had been drinking and 57 of 71 (80.3%) fatally injured drinking drivers had BACs over 80 mg%. Although not shown in the table, more refined analyses by different BAC categories show that among tested drivers:

- > 68.6% had BACs of zero mg%;

- > 4.0% had BACs from 1-49 mg%;
- > 2.2% had BACs from 50-80 mg%
- > 8.8% had BACs from 81 to 160 mg%; and,
- > 16.4% had BACs over 160 mg%.

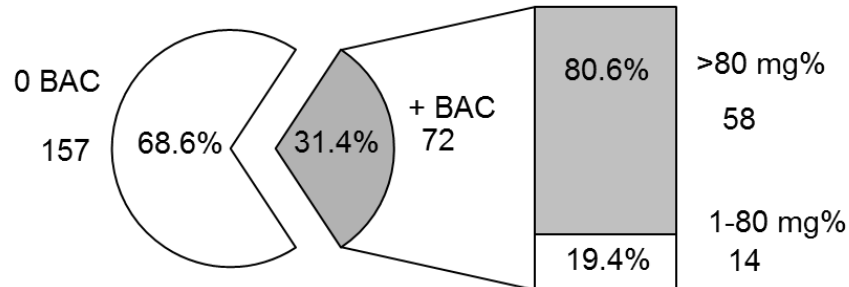
Table 5-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Alberta, 2014

Category of Driver	Number of Drivers*	Drivers Tested		Positive BAC			BAC >80 mg%		
		No.	% of total	No.	% of tested	% of all drivers with +BAC	No.	% of tested	% of all drivers with BAC >80 mg%
<u>Age Group</u>									
16-19	20	20	100.0	4	20.0	5.6	4	20.0	7.0
20-25	34	34	100.0	15	44.1	21.1	10	29.4	17.5
26-35	46	46	100.0	20	43.5	28.2	20	43.5	35.1
36-45	27	27	100.0	8	29.6	11.3	8	29.6	14.0
46-55	45	45	100.0	18	40.0	25.4	13	28.9	22.8
>55	57	54	94.7	6	11.1	8.5	2	3.7	3.5
<u>Gender</u>									
Male	180	179	99.4	58	32.4	81.7	45	25.1	78.9
Female	49	47	95.9	13	27.7	18.3	12	25.5	21.1
<u>Vehicle Type</u>									
Automobiles	75	74	98.7	25	33.8	35.2	20	27.0	35.1
Truck/Van	115	113	98.3	36	31.9	50.7	32	28.3	56.1
Motorcycles	31	31	100.0	10	32.3	14.1	5	16.1	8.8
Tractor Trailer	8	8	100.0	0	0.0	0.0	0	0.0	0.0
<u>Collision Type</u>									
Single vehicle	83	83	100.0	42	50.6	59.2	37	44.6	64.9
Multiple vehicle	146	143	97.9	29	20.3	40.8	20	14.0	35.1
TOTAL	229	226	98.7	71	31.4	100.0	57	25.2	100.0

* Drivers dying within 30 days in crashes on public roadways.

In Figure 5-1, the BAC distribution for tested fatally injured drivers is extrapolated to reflect the BAC distribution for all fatally injured drivers. In this figure, 72 of 229 (31.4%) fatally injured drivers have a positive BAC. And among fatally injured drinking drivers, 58 (80.6%) have BACs over 80 mg%.

Figure 5-1
BACs* Among Fatally Injured Drivers
of Highway Vehicles: Alberta, 2014



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

5.2.1 Age differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 28.2% were aged 26-35; 25.4% were aged 46-55; 21.1% were aged 20-25; 11.3% were aged 36-45; 8.5% were over age 55; and 5.6% were aged 16-19.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 35.1% were aged 26-35; 22.8% were aged 46-55; 17.5% were aged 20-25; 14.0% were aged 36-45; 7.0% were aged 16-19; and 3.5% were over age 55.

When comparing the incidence of drinking and driving among fatally injured drivers by age group, fatally injured drivers aged 20-25 and 26-35 were the most likely to have been drinking (44.1% and 43.5%, respectively). By contrast, only 11.1% of the tested drivers over age 55 had been drinking.

5.2.2 Gender differences. Males dominate the picture – they account for 81.7% of all the fatally injured drivers who had been drinking, and 78.9% of all of the fatally injured drivers who were legally impaired.

Males dominate the picture largely because they account for most of the drivers who are killed (180 of the 229 or 78.6% of the fatalities are males). Fatally injured male drivers were more likely to have been drinking than female drivers (32.4% and 27.7%, respectively). And, 77.6% of the male and 92.3% of the female drivers who were drinking had BACs over the legal limit.

5.2.3 Vehicle differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 50.7% were truck/van drivers; 35.2% were automobile drivers; and 14.1% were motorcyclists.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 56.1% were truck/van drivers; 35.1% were automobile drivers; and 8.8% were motorcyclists.

Within each of the vehicle types, 33.8% of fatally injured automobile drivers; 32.3% of motorcyclists, and 31.9% of truck/van drivers had been drinking. None of the fatally injured tractor-trailer drivers had been drinking.

5.2.4 Collision differences. Less than two-fifths of the drivers killed (83 of the 229) were involved in single-vehicle collisions but these crashes accounted for a majority of the drivers who had been drinking or were legally impaired (59.2% and 64.9%, respectively).

The reason for this apparent disparity is because alcohol is overrepresented in single-vehicle crashes. Over half of the drivers involved in single-vehicle crashes (50.6%) tested positive for alcohol, compared to only 20.3% of those involved in multiple-vehicle collisions.

5.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in Alberta. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 5-3 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 3,603 drivers were involved in crashes in which someone was seriously injured, and among these 16.7% were alcohol-related crashes.

Table 5-3
Drivers* in Alcohol-Related Serious Injury Crashes:
Alberta, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
<16	3	1	33.3	0.2
16-19	283	56	19.8	9.3
20-25	506	120	23.7	20.0
26-35	829	167	20.1	27.8
36-45	635	94	14.8	15.6
46-55	570	93	16.3	15.5
>55	719	62	8.6	10.3
unknown	58	8	13.8	1.3
<u>Gender</u>				
Male	2434	458	18.8	76.2
Female	1129	135	12.0	22.5
unknown	40	8	20.0	1.3
<u>Vehicle Type</u>				
Auto	1261	205	16.3	34.1
Truck/Van	1890	347	18.4	57.7
Motorcycle	246	23	9.3	3.8
Tractor Trailer	167	22	13.2	3.7
Other Hwy. Vehicle	39	4	10.3	0.7
<u>Collision Type</u>				
Single-Vehicle	1060	383	36.1	63.7
Multiple-Vehicle	2543	218	8.6	36.3
TOTAL	3603	601	16.7	100.0

* excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

5.3.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 27.8% were aged 26-35, 20.0% were aged 20-25; and 15.6% were aged 36-45. Drivers under 16 and over 55 accounted for only 0.2% and 10.3%, respectively, of those involved in alcohol-related serious injury crashes.

Almost one-fourth of the drivers aged 20-25 were involved in alcohol-related serious injury crashes (23.7%). The lowest incidence of involvement in alcohol-related crashes was found for those over 55 (8.6%).

5.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 76.2% were males. The incidence of involvement in alcohol-related serious injury crashes was also greater for males than for females (18.8% and 12.0, respectively).

5.3.3 Type of vehicle driven. Of all the drivers involved in alcohol-related serious injury crashes, 57.7% were truck/van drivers; 34.1% were automobile drivers; 3.8% were motorcyclists; 3.7% were tractor-trailer drivers; and 0.7% were drivers of other highway vehicles.

The highest incidence of involvement in alcohol-related serious injury crashes was found for truck/van drivers as 18.4% of these drivers were in crashes that involved alcohol, compared to 16.3% for

automobile drivers; 13.2% for tractor-trailer drivers; and 10.3% for drivers of other highway vehicles. Among motorcyclists, 9.3% were involved in alcohol-related crashes.

5.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 63.7% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in single-vehicle crashes – 36.1% of these drivers, compared to only 8.6% for drivers involved in multiple-vehicle crashes.

5.4 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in Alberta during 2014. A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 5-4 shows the prevalence of drug use among fatally injured drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.5). The table also shows the number of drivers who tested positive for various categories of drugs. A brief description of the different drug categories is provided in Section 2.2.5.

As can be seen, Alberta had a very high testing rate in 2014, with 98.3% of fatally injured drivers being tested for drug use.

Table 5-4
Drug Use Among Fatally Injured Drivers* of
Highway Vehicles: Alberta, 2014

Prevalence of Drug Use				
Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
229	225	(98.3)	99	(44.0)

Categories of Drugs Found Among Drivers Testing Positive		
Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive**
Cannabis	44	(44.4)
CNS Depressants	35	(35.4)
CNS Stimulants	23	(23.2)
Narcotic Analgesics	21	(21.2)
Dissociative Anesthetics	1	(1.0)
Hallucinogens	0	(0.0)
Inhalants	0	(0.0)

* Dying within 30 days in collisions which occurred on public roadways.

** Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

Among fatally injured tested drivers, 99 out of 225 (44.0%) were positive for drugs. The most common category of drugs found within drivers testing positive for drug use was cannabis (44.0%). Other categories of drugs found in fatally injured drivers testing positive for drugs were CNS depressants (35.0%), CNS stimulants (23.0%), narcotic analgesics (21.0%), and dissociative anesthetics (1.0%).

5.5 Trends in alcohol and drug-impaired driving

Sections 5.1 through 5.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 5.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

5.5.1 Deaths involving drinking drivers: 1996-2014. Table 5-5 and Figure 5-2 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2014. These results differ slightly from those in Section 5.1. In this section, deaths that occur in crashes that involve a drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

Table 5-5
Number* and Percent of Motor Vehicle Deaths** Involving a
Drinking Driver: Alberta, 1996-2014

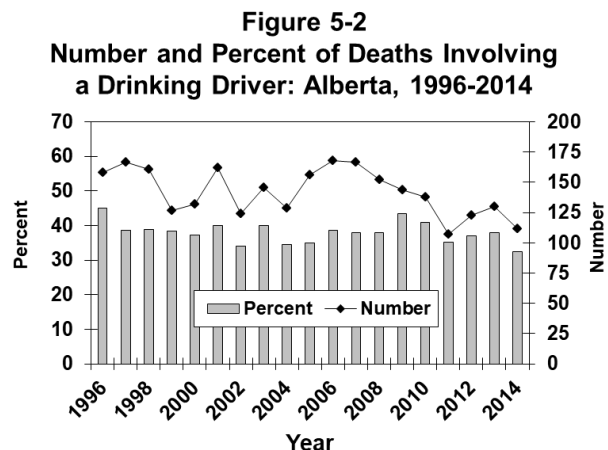
Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	350	158	45.1
1997	432	167	38.7
1998	415	161	38.8
1999	331	127	38.4
2000	354	132	37.3
2001	404	162	40.1
2002	363	124	34.2
2003	365	146	40.0
2004	373	129	34.6
2005	446	156	35.0
2006	434	168	38.7
2007	441	167	37.9
2008	400	152	38.0
2009	332	144	43.4
2010	337	138	40.9
2011	304	107	35.2
2012	332	123	37.0
2013	343	130	37.9
2014	345	112	32.5
2006-2010 baseline	389	154	39.6
2011-2014 period	331	118	35.6

* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

As shown in the figure, the number of deaths in crashes that involved a drinking driver generally decreased from a high of 167 in 1997 to a low of 107 in 2011, rose to 130 in 2013, and decreased again to 112 in 2014. The percentage of alcohol-related fatalities generally decreased from a high of 45.1% in 1996 to 35.2% in 2011, rose to 37.9% in 2013, and fell to a low of 32.5% in 2014.

As shown at the bottom of the table, during the 2006-2010 baseline period, there was an average of 154 fatalities involving a drinking driver and they accounted for 39.6% of all fatalities. This means that the percent of fatalities involving a drinking driver decreased by 10.1% from 39.6% in the baseline period (2006-2010) to 35.6% in the 2011-2014 period. And, in terms of the number of persons killed in crashes involving a drinking driver, there has been a 23.4% decrease from an average of 154 in the 2006-2010 baseline period to 118 in the 2011-2014 period.



5.5.2 Alcohol use among fatally injured drivers. Data on alcohol use among fatally injured drivers of highway vehicles over the 19-year period from 1996-2014 are shown in Table 5-6. Trends are illustrated in Figure 5-3 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol (represented by the white area); (2) had BACs below the legal limit (shown by the light grey area); and (3) had BACs over the legal limit (the dark grey area). The data reported here are restricted to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2).

As can be seen, the percent of fatally injured drivers with BACs over the legal limit was relatively stable from 1996 (30.3%) to 2009 (33.5%), decreased to 24.6% in 2011, rose in 2012 (30.6%), and decreased again until 2014 (25.2%). The percent of fatally injured drivers with zero BACs was also stable from 1996 to 2004, decreased until 2007 (59.4%), rose in 2011 (68.2%), decreased in 2013 (63.3%), and peaked in 2014 (68.6%). The percent of fatally injured drivers with BACs between 1 and 80 mg% was 6.9% in 1996, remained stable until 2011 (7.3%), decreased to its lowest level in 2012 (2.4%), peaked in 2013 (10.0%), and decreased again in 2014 (6.2%).

When compared to the 2006-2010 baseline period shown at the bottom of Table 5-6, the percentage of fatally injured drivers with zero BACs in the 2011-2014 period increased by 11.4% (from 60.1% to 67.0%). Among drivers with BACs from 1-80 mg%, there was no change (from 6.3% to 6.3%). And among those with BACs over 80 mg%, there was a 20.5% decrease (from 33.6% to 26.7%).

Table 5-6
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Alberta, 1996-2014

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	200	188	94.0	118	62.8	13	6.9	57	30.3
1997	252	240	95.2	162	67.5	12	5.0	66	27.5
1998	243	232	95.5	143	61.6	19	8.2	70	30.2
1999	208	204	98.1	136	66.7	9	4.4	59	28.9
2000	196	193	98.5	123	63.7	12	6.2	58	30.1
2001	222	218	98.2	132	60.6	10	4.6	76	34.9
2002	222	215	96.8	140	65.1	16	7.4	59	27.4
2003	225	216	96.0	133	61.6	13	6.0	70	32.4
2004	218	210	96.3	140	66.7	9	4.3	61	29.0
2005	272	260	95.6	160	61.5	12	4.6	88	33.8
2006	274	266	97.1	163	61.3	15	5.6	88	33.1
2007	262	251	95.8	149	59.4	13	5.2	89	35.5
2008	271	263	97.0	160	60.8	15	5.7	88	33.5
2009	207	200	96.6	117	58.5	12	6.0	71	35.5
2010	215	211	98.1	127	60.2	18	8.5	66	31.3
2011	186	179	96.2	122	68.2	13	7.3	44	24.6
2012	216	209	96.8	140	67.0	5	2.4	64	30.6
2013	217	210	96.8	133	63.3	21	10.0	56	26.7
2014	229	226	98.7	155	68.6	14	6.2	57	25.2
2006-2010 baseline	246	238	(96.7)	143	(60.1)	15	(6.3)	80	(33.6)
2011-2014 period	212	206	(97.2)	138	(67.0)	13	(6.3)	55	(26.7)

* Dying within 30 days in collisions which occurred on public roadways.

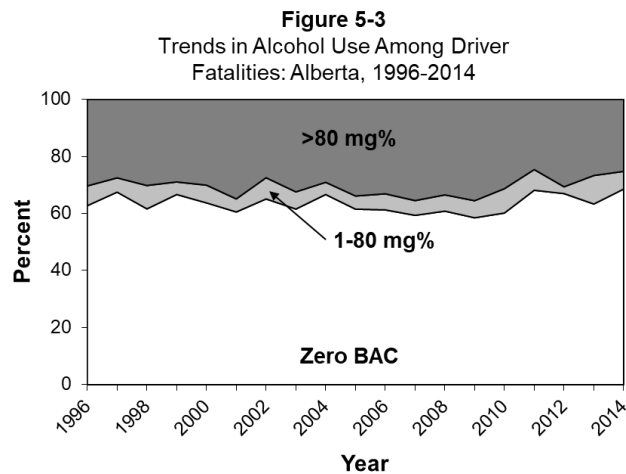


Table 5-7 and Figure 5-4 also show data on alcohol use among fatally injured drivers from 1996 to 2014. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC

distribution of drivers tested for alcohol (see Figure 5-1). Second, drivers are grouped in only two BAC categories: zero and positive.

As can be seen at the bottom of Table 5-7, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 39.8%. In the 2011-2014 period, 33.5% of fatally injured drivers tested positive for alcohol, a 15.8% decrease from the baseline period.

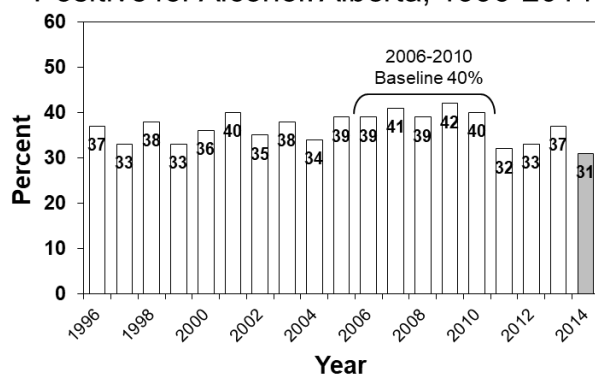
Table 5-7
Alcohol Use* Among Fatally Injured Drivers of Highway Vehicles:
Alberta, 1996-2014

Year	Number of Drivers**	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	200	126	(63.0)	74	(37.0)
1997	252	170	(67.5)	82	(32.5)
1998	243	150	(61.7)	93	(38.3)
1999	208	139	(66.8)	69	(33.2)
2000	196	125	(63.8)	71	(36.2)
2001	222	134	(60.4)	88	(39.6)
2002	222	145	(65.3)	77	(34.7)
2003	225	139	(61.8)	86	(38.2)
2004	218	145	(66.5)	73	(33.5)
2005	272	167	(61.4)	105	(38.6)
2006	274	168	(61.3)	106	(38.7)
2007	262	156	(59.5)	106	(40.5)
2008	271	165	(60.9)	106	(39.1)
2009	207	121	(58.5)	86	(41.5)
2010	215	129	(60.0)	86	(40.0)
2011	186	127	(68.3)	59	(31.7)
2012	216	145	(67.1)	71	(32.9)
2013	217	137	(63.1)	80	(36.9)
2014	229	157	(68.6)	72	(31.4)
2006-2010 baseline	246	148	(60.2)	98	(39.8)
2011-2014 period	212	141	(66.5)	71	(33.5)

* Numbers are estimates based on the BAC distribution of drivers tested for alcohol.

** Dying within 30 days in collisions which occurred on public roadways.

Figure 5-4
Percent of Fatally Injured Drivers*
Positive for Alcohol: Alberta, 1996-2014



5.5.3 Drivers in serious injury crashes. Table 5-8 and Figure 5-5 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. From 1996 to 1997, the percentage of drivers in serious injury crashes that involved alcohol rose from 20.6% to a high of 25.5%, generally decreased until 2003 (20.3%), rose to 21.8% in 2006, decreased until 2013 (14.3%), and rose again in 2014 (16.7%).

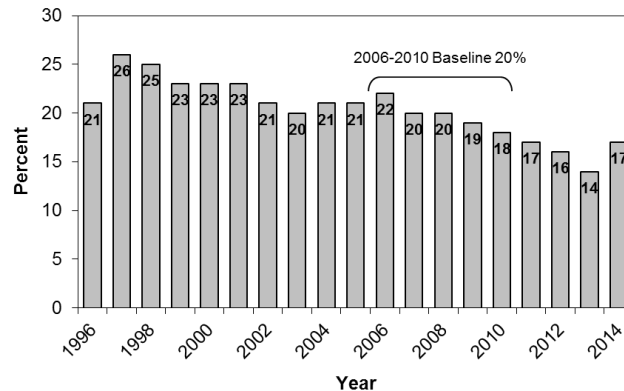
As shown Table 5-8, in the baseline period (2006-2010) an average of 19.7% of drivers in serious injury crashes were in an alcohol-involved crash. In the 2011-2014 period, the incidence of drivers in alcohol-involved crashes decreased to 15.8%, a 19.8% decrease.

Table 5-8
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Alberta, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	3023	622	(20.6)
1997	2938	749	(25.5)
1998	3332	821	(24.6)
1999	3178	742	(23.3)
2000	3269	741	(22.7)
2001	3534	817	(23.1)
2002	3777	784	(20.8)
2003	3587	727	(20.3)
2004	3641	755	(20.7)
2005	3826	788	(20.6)
2006	4382	954	(21.8)
2007	3967	795	(20.0)
2008	3776	737	(19.5)
2009	3537	660	(18.7)
2010	3564	641	(18.0)
2011	3024	504	(16.7)
2012	3129	492	(15.7)
2013	3607	515	(14.3)
2014	3603	601	(16.7)
2006-2010 baseline	3845	757	(19.7)
2011-2014 period	3341	528	(15.8)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 5-5
Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Alberta, 1996-2014



5.5.4 Drug use among fatally injured drivers. Table 5-9 and Figure 5-6 show data on drug use among fatally injured drivers of highway vehicles over a 15-year period (2000-2014). Similar to Table 5-6, these results are based on fatally injured drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.5).

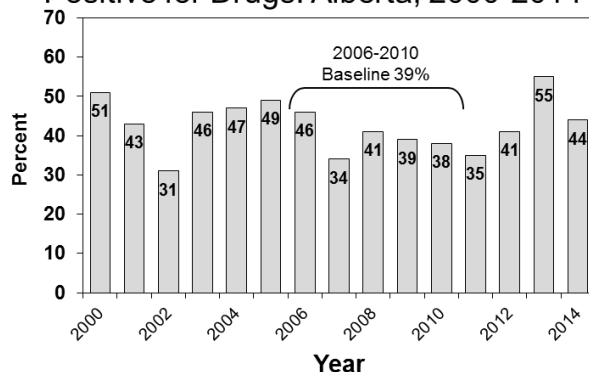
As can be seen at the bottom of Table 5-9, the percentage of fatally injured drivers testing positive for drugs from 2006-2010, the baseline period, is 39.3%. The percentage of fatally injured drivers testing positive for drugs was 35.3% in 2011, 40.6% in 2012, 55.2% in 2013, and 44.4% in 2014. From 2011 to 2014, the average percentage of fatally injured drivers testing positive for drugs was 44.2%, a 12.4% increase from the baseline period.

Table 5-9
Drug Use Among Fatally Injured Drivers of Highway Vehicles:
Alberta, 2000-2014

YEAR	Number of Drivers*	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	196	43	21.9	21	48.8	22	51.2
2001	222	35	15.8	20	57.1	15	42.9
2002	222	49	22.1	34	69.4	15	30.6
2003	225	50	22.2	27	54.0	23	46.0
2004	218	34	15.6	18	52.9	16	47.1
2005	272	53	19.5	27	50.9	26	49.1
2006	274	181	66.1	97	53.6	84	46.4
2007	262	223	85.1	147	65.9	76	34.1
2008	271	238	87.8	141	59.2	97	40.8
2009	207	186	89.9	113	60.8	73	39.2
2010	215	202	94.0	126	62.4	76	37.6
2011	186	170	91.4	110	64.7	60	35.3
2012	216	197	91.2	117	59.4	80	40.6
2013	217	203	93.5	91	44.8	112	55.2
2014	229	225	98.3	126	56.0	99	44.0
2006-2010 baseline	246	206	83.7	125	60.7	81	39.3
2011-2014 period	212	199	93.9	111	55.8	88	44.2

* Dying within 30 days in collisions which occurred on public roadways.

Figure 5-6
Percent of Fatally Injured Drivers
Positive for Drugs: Alberta, 2000-2014



6.0 SASKATCHEWAN

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in Saskatchewan during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 6.1);
- > alcohol use among fatally injured drivers (Section 6.2);
- > drivers involved in alcohol-related serious injury crashes (Section 6.3);
- > drug use among fatally injured drivers (Section 6.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 6.5).

6.1 Deaths in alcohol-related crashes

Table 6-1 presents information on people who died in alcohol-related crashes in Saskatchewan during 2014. This table specifically reports upon persons who died within 30 days of a collision which occurred on a public roadway that involved at least one highway vehicle. Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities in which sufficient information was available to determine if alcohol was involved. *A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.*

For example, it can be seen that 10 people aged 16-19 were killed in motor vehicle crashes in Saskatchewan during 2014. And, in all 10 cases (100.0%) it was possible to determine if alcohol was a factor in the crash.

The next column shows the number of people killed in crashes that were known to be alcohol-involved. There were eight people aged 16-19 who died in alcohol-related crashes in Saskatchewan during 2014. The next column expresses this as a percentage – i.e., 80.0% of the 16-19 year olds who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among 16-19 year olds represent 14.5% of all the people killed in alcohol-related crashes in Saskatchewan during 2014.

The totals at the bottom of the table provide a summary. As can be seen, 116 persons died within 30 days of a motor vehicle crash in Saskatchewan during 2014. In 115 (99.1%) of these cases, it was

possible to determine if alcohol was a factor. Of these known cases, 55 (47.8%) involved alcohol. Extrapolating this figure to the total number of motor vehicle fatalities (116 x .478) it can be estimated that *in Saskatchewan during 2014, 55 persons died in alcohol-related crashes within 30 days of the collision.*

Table 6-1
Deaths in Alcohol-Related Crashes: Saskatchewan, 2014

Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARDs
<u>Age Group</u>						
<16	3	3	100.0	1	33.3	1.8
16-19	10	10	100.0	8	80.0	14.5
20-25	19	19	100.0	9	47.4	16.4
26-35	19	18	94.7	12	66.7	21.8
36-45	16	16	100.0	11	68.8	20.0
46-55	15	15	100.0	8	53.3	14.5
>55	34	34	100.0	6	17.6	10.9
<u>Gender</u>						
Male	83	82	98.8	43	52.4	78.2
Female	33	33	100.0	12	36.4	21.8
<u>Victim Type</u>						
Driver/ Operator	69	69	100.0	32	46.4	58.2
Passenger	30	30	100.0	14	46.7	25.5
Pedestrian	17	16	94.1	9	56.3	16.4
<u>Vehicle Occupied</u>						
Automobiles	34	34	100.0	15	44.1	27.3
Trucks/Vans	57	57	100.0	29	50.9	52.7
Motorcycles	3	3	100.0	1	33.3	1.8
Other Hwy Vehicles	2	2	100.0	0	0.0	0.0
Off-road Vehicles	3	3	100.0	1	33.3	1.8
(Pedestrians)	17	16	94.1	9	56.3	16.4
TOTAL	116	115	99.1	55	47.8	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

6.1.1 Victim age. Of all the people who died in alcohol-related crashes, 21.8% (see last column) were aged 26-35; 20.0% were aged 36-45; 16.4% were aged 20-25; 14.5% were aged 16-19 and 46-55; 10.9% were aged over 55; 1.8% were under 16.

The highest incidence of alcohol involvement occurred in the crashes in which a person aged 16-19 died (80.0%). The lowest incidence of alcohol involvement was found among the oldest fatalities – 17.6% of the fatalities over 55 years of age died in crashes involving alcohol.

6.1.2 Gender. Of all the people who died in alcohol-related crashes, 78.2% were males. The incidence of alcohol in crashes in which a male died (52.4%) was greater than the incidence of alcohol in crashes in which a female died (36.4%).

6.1.3 Victim type. Of all the people who died in alcohol-related crashes, 58.2% were drivers/operators of a vehicle; 25.5% were passengers; and 16.4% were pedestrians.

Within each of the victim types, the highest incidence of alcohol involvement (56.3%) occurred in the crashes in which a pedestrian died. Alcohol was involved in 46.7% of the crashes in which a passenger died and 46.4% of those in which a driver/operator died.

6.1.4 Type of vehicle occupied. Of all the people who died in alcohol-related crashes, 52.7% were truck/van occupants; 27.3% were automobile occupants; and 1.8% were motorcyclists and off-road vehicle occupants.

Within each of these vehicle types, the incidence of alcohol involvement in which a truck/van occupant died (50.9%) was greater than the incidence of alcohol crashes in which an automobile occupant died (44.1%). One-third of both motorcyclists and off-road vehicle occupants (33.3%) died in an alcohol-involved collision.

6.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in Saskatchewan during 2014. Table 6-2 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests: the first three of these present results for drivers who showed any evidence of alcohol; the last three columns present information on drivers who had BACs over the statutory limit of 80 mg%.

To illustrate, among 20-25 year olds there were 11 drivers killed during 2014; all 11 of these fatally injured drivers (100.0%) were tested for alcohol. Of those who were tested, six (54.5%) were positive for alcohol. This means that fatally injured drinking drivers aged 20-25 accounted for 22.2% of all drinking drivers who were killed.

Table 6-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Saskatchewan, 2014

Category of Driver	Number of Drivers*	Drivers Tested		Positive BAC			BAC >80 mg%		
		No.	% of total	No.	% of tested	% of all drivers with +BAC	No.	% of tested	% of all drivers with BAC >80 mg%
<u>Age Group</u>									
16-19	3	3	100.0	1	33.3	3.7	1	33.3	4.2
20-25	11	11	100.0	6	54.5	22.2	4	36.4	16.7
26-35	8	8	100.0	4	50.0	14.8	4	50.0	16.7
36-45	11	10	90.9	7	70.0	25.9	7	70.0	29.2
46-55	11	10	90.9	5	50.0	18.5	5	50.0	20.8
>55	22	20	90.9	4	20.0	14.8	3	15.0	12.5
<u>Gender</u>									
Male	53	49	92.5	24	49.0	88.9	22	44.9	91.7
Female	13	13	100.0	3	23.1	11.1	2	15.4	8.3
<u>Vehicle Type</u>									
Automobiles	21	21	100.0	6	28.6	22.2	4	19.0	16.7
Truck/Van	40	36	90.0	20	55.6	74.1	19	52.8	79.2
Motorcycles	3	3	100.0	1	33.3	3.7	1	33.3	4.2
Tractor Trailer	2	2	100.0	0	0.0	0.0	0	0.0	0.0
<u>Collision Type</u>									
Single vehicle	28	26	92.9	18	69.2	66.7	18	69.2	75.0
Multiple vehicle	38	36	94.7	9	25.0	33.3	6	16.7	25.0
TOTAL	66	62	93.9	27	43.5	100.0	24	38.7	100.0

* Drivers dying within 30 days in crashes on public roadways.

Then, in the final three columns, it can be seen that four of the 11 (36.4%) fatally injured drivers aged 20-25 who were tested for alcohol had BACs in excess of 80 mg%. This means that four of the six drivers who tested positive for alcohol had BACs in excess of the legal limit. The final column expresses the number of drivers with illegal BACs as a percent of all drivers with BACs over the limit. Thus, drivers aged 20-25 accounted for 16.7% of all the drivers with BACs over the legal limit.

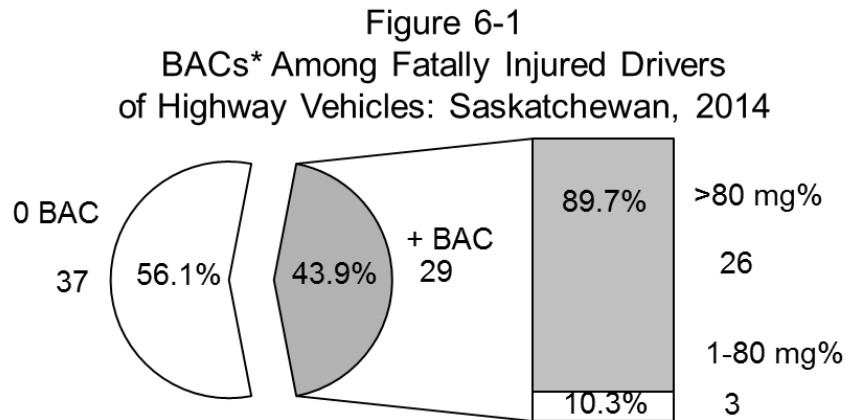
The main findings are shown by the totals at the bottom of the table. Saskatchewan had a very high testing rate in 2014, with 93.9% of fatally injured drivers being tested for alcohol use.

In Saskatchewan, 43.5% had been drinking and 24 of 27 (88.9%) fatally injured drinking drivers had BACs over 80 mg%. Although not shown in the table, more refined analyses by different BAC categories show that among tested drivers:

- > 56.5% had BACs of zero mg%;
- > 4.8% had BACs from 1-49 mg%;
- > 0.0% had BACs from 50-80 mg%
- > 11.3% had BACs from 81 to 160 mg%; and,

- > 27.4% had BACs over 160 mg%.

In Figure 6-1, the BAC distribution for tested fatally injured drivers is extrapolated to reflect the BAC distribution for all fatally injured drivers. In this figure 29 of 66 (43.9%) fatally injured drivers have a positive BAC. And among fatally injured drinking drivers, 26 (89.7%) have BACs over 80 mg%.



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

6.2.1 Age differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 25.9% were aged 36-45; 22.2% were aged 20-25; 18.5% were aged 46-55; 14.8% were aged 26-35 and over 55; and 3.7% were aged 16-19.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 29.2% were aged 36-45; 20.8% were aged 46-55; 16.7% were aged 20-25 and 26-35; 12.5% were over 55; and 4.2% were aged 16-19.

When comparing the incidence of drinking and driving among fatally injured drivers by age group, fatally injured drivers aged 36-45 were the most likely to have been drinking (70.0%). By contrast, only 20.0% of the tested drivers over age 55 had been drinking.

6.2.2 Gender differences. Males dominate the picture – they account for 88.9% of all the fatally injured drivers who had been drinking, and 91.7% of all of the fatally injured drivers who were legally impaired.

Males dominate the picture largely because they account for most of the drivers who are killed (53 of the 66 drivers are males). Fatally injured male drivers were more likely to have been drinking than female drivers (49.0% and 23.1%, respectively). And, 91.7% of the male and 66.7% of the female drivers who were drinking had BACs over the legal limit.

6.2.3 Vehicle differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 74.1% were truck/van drivers; 22.2% were automobile drivers; and 3.7% were motorcyclists.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 79.2% were truck/van drivers; 16.7% were automobile drivers; and 4.2% were motorcyclists.

Within each of the vehicle types, 55.6% of truck/van drivers, 33.3% of motorcyclists, and 28.6% of automobile drivers were found to have been drinking. Neither of the tractor-trailer drivers had been drinking.

6.2.4 Collision differences. Two-fifths of the drivers killed (28 of the 66) were involved in single-vehicle collisions but these crashes accounted for two-thirds of the drivers who had been drinking or were legally impaired (66.7% and 75.0%, respectively).

The reason for this apparent disparity is because alcohol is overrepresented in single-vehicle crashes. Over two-thirds of the drivers involved in single-vehicle crashes (69.2%) tested positive for alcohol, compared to only 25.0% of those involved in multiple-vehicle collisions.

6.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in Saskatchewan. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 6-3 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 381 drivers were involved in crashes in which someone was seriously injured, and among these 22.8% were alcohol-related crashes.

6.3.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 20.7% were aged 16-19, and 19.5% were aged 20-25 and 36-45. Drivers under 16 and over 55 accounted for only 0.0% and 8.0% respectively of those involved in alcohol-related serious injury crashes.

Over half of the drivers aged 16-19 were involved in alcohol-related serious injury crashes (51.4%). The lowest incidence of involvement in alcohol-related crashes was found for those aged under 16 and over 55 (0.0% and 7.1%, respectively).

Table 6-3
Drivers* in Alcohol-Related Serious Injury Crashes:
Saskatchewan, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
<16	2	0	0.0	0.0
16-19	35	18	51.4	20.7
20-25	59	17	28.8	19.5
26-35	67	16	23.9	18.4
36-45	60	17	28.3	19.5
46-55	53	8	15.1	9.2
>55	98	7	7.1	8.0
unknown	7	4	57.1	4.6
<u>Gender</u>				
Male	284	61	21.5	70.1
Female	90	22	24.4	25.3
unknown	7	4	57.1	4.6
<u>Vehicle Type</u>				
Auto	108	24	22.2	27.6
Truck/Van	204	55	27.0	63.2
Motorcycle	21	3	14.3	3.4
Tractor Trailer	44	3	6.8	3.4
Other Hwy. Vehicle	4	2	50.0	2.3
<u>Collision Type</u>				
Single-Vehicle	125	54	43.2	62.1
Multiple-Vehicle	256	33	12.9	37.9
TOTAL	381	87	22.8	100.0

* excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

6.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 70.1% were males. However, the incidence of involvement in alcohol-related serious injury crashes was greater for females than for males (24.4% and 21.5%, respectively).

6.3.3 Type of vehicle driven. Of all the drivers involved in alcohol-related serious injury crashes, 63.2% were truck/van drivers; 27.6% were automobile drivers; 3.4% were motorcyclists and tractor-trailer drivers; and 2.3% were drivers of other highway vehicles.

Among principal vehicle types, the highest incidence of involvement in alcohol-related serious injury crashes was found for truck/van drivers – 27.0% of these drivers were in crashes that involved alcohol, compared to 22.2% for automobile drivers; 14.3% for motorcyclists; and 6.8% for tractor-trailer drivers.

6.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 62.1% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in single-vehicle crashes – 43.2% of these drivers, compared to only 12.9% for drivers involved in multiple-vehicle crashes.

6.4 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in Saskatchewan during 2014. A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 6-4 shows the prevalence of drug use among fatally injured drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.5). The table also shows the number of drivers who tested positive for various categories of drugs. A brief description of the different drug categories is provided in Section 2.2.5.

As can be seen, Saskatchewan had a high testing rate in 2014, with 86.4% of fatally injured drivers being tested for drug use.

Table 6-4
Drug Use Among Fatally Injured Drivers* of
Highway Vehicles: Saskatchewan, 2014

Prevalence of Drug Use				
Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
66	57	(86.4)	21	(36.8)

Categories of Drugs Found Among Drivers Testing Positive		
Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive**
CNS Depressants	9	(42.9)
Narcotic Analgesics	6	(28.6)
Cannabis	6	(28.6)
CNS Stimulants	2	(9.5)
Dissociative Anesthetics	0	(0.0)
Hallucinogens	0	(0.0)
Inhalants	0	(0.0)

* Dying within 30 days in collisions which occurred on public roadways.

** Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

Among fatally injured tested drivers, 21 out of 57 (36.8%) were positive for drugs. The most common category of drugs found within drivers testing positive for drug use was CNS depressants (42.9%). Other categories of drugs found in fatally injured drivers testing positive for drugs were narcotic analgesics and cannabis (28.6% each), and CNS stimulants (9.5%).

6.5 Trends in alcohol and drug-impaired driving

Sections 6.1 through 6.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury

crashes that involved alcohol. Section 6.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

6.5.1 Deaths involving drinking drivers: 1996-2014. Table 6-5 and Figure 6-2 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2014. These results differ slightly from those in Section 6.1. In this section, deaths that occur in crashes that involve a drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

Table 6-5
Number* and Percent of Motor Vehicle Deaths Involving**
a Drinking Driver: Saskatchewan, 1996-2014

Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	126	51	40.5
1997	154	54	35.1
1998	146	61	41.8
1999	175	77	44.0
2000	142	49	34.5
2001	145	69	47.6
2002	130	45	34.6
2003	136	54	39.7
2004	120	44	36.7
2005	141	44	31.2
2006	123	49	39.8
2007	131	54	41.2
2008	144	73	50.7
2009	154	63	40.9
2010	155	68	43.9
2011	145	62	42.8
2012	169	59	34.9
2013	132	53	40.2
2014	116	49	42.2
2006-2010 baseline	141	61	43.3
2011-2014 period	141	56	39.7

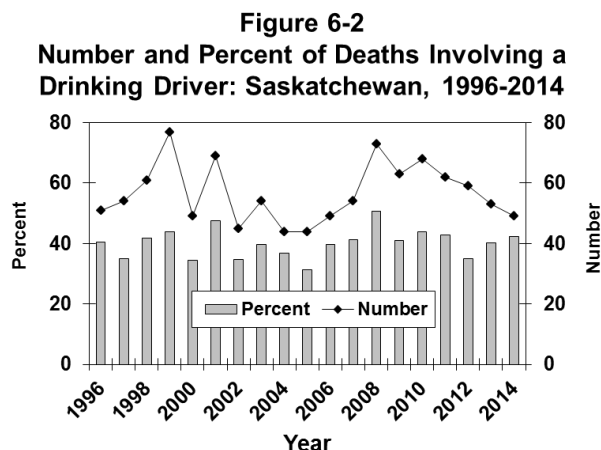
* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

As shown in the table and figure, the number of deaths in crashes that involved a drinking driver rose from 51 in 1996 to a high of 77 in 1999, generally decreased to a low of 44 in 2004 and 2005, increased to 73 in 2008, and generally decreased to 49 in 2014. The percentage of alcohol-related fatalities generally increased from 40.5% in 1996 to 47.6% in 2001, dropped to a low of 31.9% in 2005, peaked at 50.7% in 2008, generally decreased to 34.9% in 2012, and rose again to 42.2% in 2014.

As shown at the bottom of the table, during the 2006-2010 baseline period there was an average of 61 fatalities involving a drinking driver and they accounted for 43.3% of all fatalities. This means that the percent of fatalities involving a drinking driver decreased by 8.3% from 43.3% in the baseline period

(2006-2010) to 39.7% in the 2011-2014 period. And, in terms of the number of persons killed in crashes involving a drinking driver, there has been an 8.2% decrease from an average of 61 in the baseline period (2006-2010) to 56 in the 2011-2014 period.



6.5.2 Alcohol use among fatally injured drivers. Data on alcohol use among fatally injured drivers of highway vehicles over the 19-year period from 1996-2014 are shown in Table 6-6. Trends are illustrated in Figure 6-3 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol (represented by the white area); (2) had BACs below the legal limit (shown by the light grey area); and (3) had BACs over the legal limit (the dark grey area). The data reported here are restricted to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2).

As can be seen, the percent of fatally injured drivers with BACs over the legal limit generally increased from 1996 (30.8%) until 2008 (44.7%), generally decreased until 2013 (24.3%), and rose again in 2014 (38.7%). The percent of fatally injured drivers with zero BACs decreased from 1996 (63.1%) to 2001 (50.0%), generally rose until 2006 (63.8%), declined until 2008 (48.7%), rose in 2012 (68.5%), and decreased until 2014 (56.5%). The percent of fatally injured drivers with BACs from 1-80 mg% decreased from 1996 (6.2%) to its lowest mark in 1998 (1.3%), fluctuated until 2010 (5.9%), declined until 2012 (4.5%), peaked in 2013 (9.5%), and decreased again in 2014 (4.8%).

When compared to the 2006-2010 baseline period shown at the bottom of Table 6-6, the percentage of fatally injured drivers with zero BACs in the 2011-2014 period increased by 6.9% (from 57.8% to 61.8%). Among drivers with BACs from 1-80 mg%, there was a 10.0% increase (from 6.0% to 6.6%). And among those with BACs over 80 mg%, there was a 12.4% decrease (from 36.1% to 31.6%).

Table 6-6
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Saskatchewan, 1996-2014

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	69	65	94.2	41	63.1	4	6.2	20	30.8
1997	72	63	87.5	42	66.7	5	7.9	16	25.4
1998	83	77	92.8	49	63.6	1	1.3	27	35.1
1999	93	85	91.4	47	55.3	8	9.4	30	35.3
2000	81	70	86.4	45	64.3	2	2.9	23	32.9
2001	91	80	87.9	40	50.0	7	8.8	33	41.3
2002	71	58	81.7	31	53.4	4	6.9	23	39.7
2003	89	84	94.4	51	60.7	3	3.6	30	35.7
2004	66	58	87.9	32	55.2	4	6.9	22	37.9
2005	79	67	84.8	40	59.7	4	6.0	23	34.3
2006	81	69	85.2	44	63.8	6	8.7	19	27.5
2007	93	87	93.5	54	62.1	5	5.7	28	32.2
2008	83	76	91.6	37	48.7	5	6.6	34	44.7
2009	101	96	95.0	55	57.3	5	5.2	36	37.5
2010	92	85	92.4	49	57.6	5	5.9	31	36.5
2011	86	79	91.9	44	55.7	4	5.1	31	39.2
2012	95	89	93.7	61	68.5	4	4.5	24	27.0
2013	78	74	94.9	49	66.2	7	9.5	18	24.3
2014	66	62	93.9	35	56.5	3	4.8	24	38.7
2006-2010 baseline	90	83	(92.2)	48	(57.8)	5	(6.0)	30	(36.1)
2011-2014 period	81	76	(93.8)	47	(61.8)	5	(6.6)	24	(31.6)

* Dying within 30 days in collisions which occurred on public roadways.

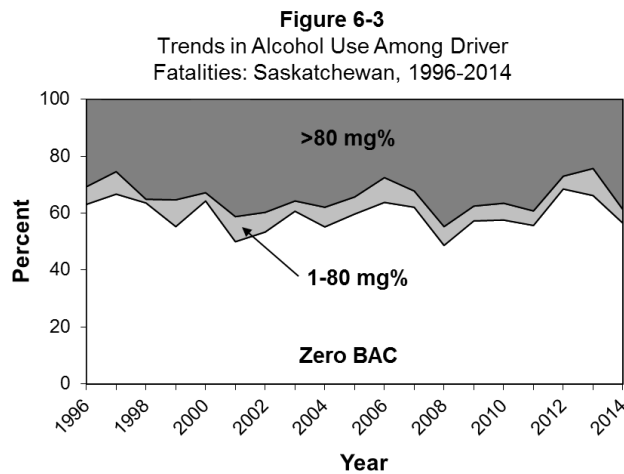


Table 6-7 and Figure 6-4 also show data on alcohol use among fatally injured drivers from 1996 to 2014. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC

distribution of drivers tested for alcohol (see Figure 6-1). Second, drivers are grouped in only two BAC categories: zero and positive.

As can be seen at the bottom of Table 6-7, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 42.2%. In the 2011-2014 period, 38.3% of fatally injured drivers tested positive for alcohol, a 9.2% decrease from the baseline period.

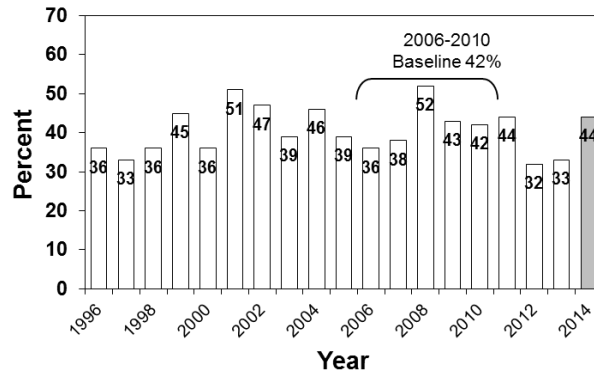
Table 6-7
Alcohol Use* Among Fatally Injured Drivers of Highway Vehicles:
Saskatchewan, 1996-2014

Year	Number of Drivers**	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	69	44	(63.8)	25	(36.2)
1997	72	48	(66.7)	24	(33.3)
1998	83	53	(63.9)	30	(36.1)
1999	93	51	(54.8)	42	(45.2)
2000	81	52	(64.2)	29	(35.8)
2001	91	45	(49.5)	46	(50.5)
2002	71	38	(53.5)	33	(46.5)
2003	89	54	(60.7)	35	(39.3)
2004	66	36	(54.5)	30	(45.5)
2005	79	48	(60.8)	31	(39.2)
2006	81	52	(64.2)	29	(35.8)
2007	93	58	(62.4)	35	(37.6)
2008	83	40	(48.2)	43	(51.8)
2009	101	58	(57.4)	43	(42.6)
2010	92	53	(57.6)	39	(42.4)
2011	86	48	(55.8)	38	(44.2)
2012	95	65	(68.4)	30	(31.6)
2013	78	52	(66.7)	26	(33.3)
2014	66	37	(56.1)	29	(43.9)
2006-2010 baseline	90	52	(57.8)	38	(42.2)
2011-2014 period	81	50	(61.7)	31	(38.3)

* Numbers are estimates based on the BAC distribution of drivers tested for alcohol.

** Dying within 30 days in collisions which occurred on public roadways.

Figure 6-4
Percent of Fatally Injured Drivers* Positive
for Alcohol: Saskatchewan, 1996-2014



6.5.3 Drivers in serious injury crashes. Table 6-8 and Figure 6-5 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. Between 1996 and 2008, the percentage of all drivers in serious injury crashes that involved alcohol generally rose from 25.6% to a high of 33.2% in 2008, decreased to 27.7% in 2009, remained relatively stable until 2013 (28.4%), and decreased in 2014 (22.8%).

In the baseline period (2006-2010), an average of 29.5% of highway vehicle drivers in serious injury crashes were in an alcohol-involved crash. From 2011 to 2014, the average percentage of drivers in alcohol-involved crashes declined to 27.1%, an 8.1% decrease from the baseline period.

Table 6-8

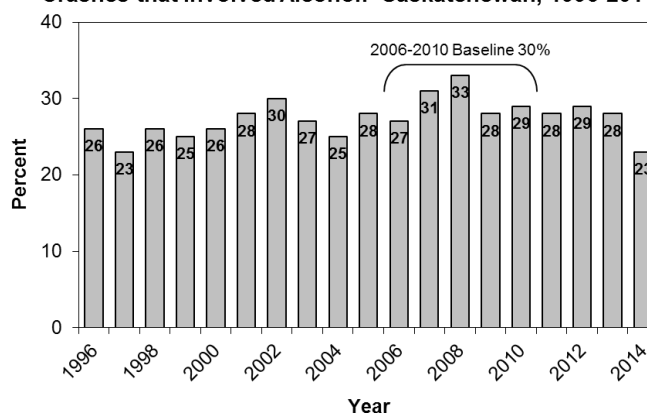
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Saskatchewan, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	656	168	(25.6)
1997	843	197	(23.4)
1998	703	185	(26.3)
1999	757	195	(25.8)
2000	693	183	(26.4)
2001	583	164	(28.1)
2002	599	177	(29.5)
2003	667	177	(26.5)
2004	606	154	(25.4)
2005	443	122	(27.5)
2006	507	136	(26.8)
2007	492	151	(30.7)
2008	540	180	(33.3)
2009	528	146	(27.7)
2010	492	142	(28.9)
2011	460	128	(27.8)
2012	451	129	(28.6)
2013	507	144	(28.4)
2014	381	87	(22.8)
2006-2010 baseline	512	151	(29.5)
2011-2014 period	450	122	(27.1)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 6-5

Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Saskatchewan, 1996-2014



6.5.4 Drug use among fatally injured drivers. Table 6-9 and Figure 6-6 show data on drug use among fatally injured drivers of highway vehicles over a 15-year period (2000-2014). Similar to Table 6-6, these results are based on fatally injured drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.5).

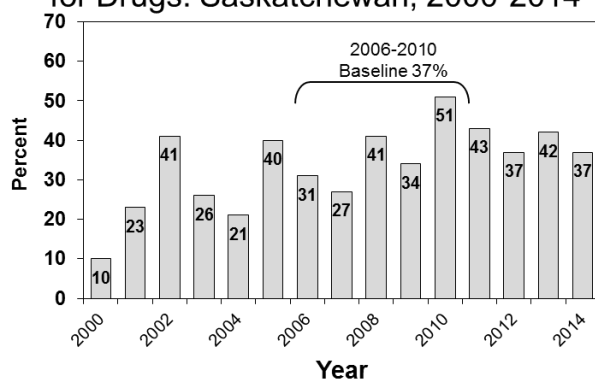
As can be seen at the bottom of Table 6-9, the percentage of fatally injured drivers testing positive for drugs from 2006-2010, the baseline period, is 36.7%. The percentage of fatally injured drivers testing positive for drugs was 42.5% in 2011, 37.3% in 2012, 41.7% in 2013, and 36.8% in 2014. From 2011 to 2014, the average percentage of fatally injured drivers testing positive for drugs was 39.4%, a 7.4% increase from the baseline period.

Table 6-9
Drug Use Among Fatally Injured Drivers of Highway Vehicles:
Saskatchewan, 2000-2014

YEAR	Number of Drivers*	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	81	63	77.8	57	90.5	6	9.5
2001	91	73	80.2	56	76.7	17	23.3
2002	71	54	76.1	32	59.3	22	40.7
2003	89	82	92.1	61	74.4	21	25.6
2004	66	52	78.8	41	78.8	11	21.2
2005	79	62	78.5	37	59.7	25	40.3
2006	81	67	82.7	46	68.7	21	31.3
2007	93	84	90.3	61	72.6	23	27.4
2008	83	74	89.2	44	59.5	30	40.5
2009	101	92	91.1	61	66.3	31	33.7
2010	92	79	85.9	39	49.4	40	50.6
2011	86	73	84.9	42	57.5	31	42.5
2012	95	83	87.4	52	62.7	31	37.3
2013	78	72	92.3	42	58.3	30	41.7
2014	66	57	86.4	36	63.2	21	36.8
2006-2010 baseline	90	79	87.8	50	63.3	29	36.7
2011-2014 period	81	71	87.7	43	60.6	28	39.4

* Dying within 30 days in collisions which occurred on public roadways.

Figure 6-6
Percent of Fatally Injured Drivers Positive
for Drugs: Saskatchewan, 2000-2014



7.0 MANITOBA

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in Manitoba during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 7.1);
- > alcohol use among fatally injured drivers (Section 7.2);
- > drivers involved in alcohol-related serious injury crashes (Section 7.3);
- > drug use among fatally injured drivers (Section 7.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 7.5).

7.1 Deaths in alcohol-related crashes

Table 7-1 presents information on people who died in alcohol-related crashes in Manitoba during 2014. This table specifically reports upon persons who died within 30 days of a collision which occurred on a public roadway that involved at least one highway vehicle. Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities in which sufficient information was available to determine if alcohol was involved. *A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.*

For example, it can be seen that among persons dying within 30 days of the collision, nine people aged 26-35 were killed in motor vehicle crashes in Manitoba during 2014. And, in nine cases (100.0%) it was possible to determine if alcohol was a factor in the crash. The next column shows the number of people killed in crashes that were known to be alcohol-involved. Seven people aged 26-35 died in alcohol-related crashes in Manitoba during 2014. The next column expresses this as a percentage – i.e., 77.8% of the 26-35 year olds who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among 26-35 year olds represent 31.8% of all the people killed in alcohol-related crashes in Manitoba during 2014.

The totals at the bottom of the table provide a summary. As can be seen, 66 persons died within 30 days of a motor vehicle crash in Manitoba during 2014. In all 66 (100.0%) of these cases, it was possible to determine if alcohol was a factor. Of these known cases, 22 (33.3%) involved alcohol. *In Manitoba during 2014, 22 persons died in alcohol-related crashes within 30 days of the collision.*

7.1.1 Victim age. Of all the people who died in alcohol-related crashes, 31.8% (see last column) were aged 26-35; 27.3% were aged 20-25; 18.2% were 36-45; 9.1% were aged 16-19 and 46-55; and 4.5% were over 55.

The highest incidence of alcohol involvement occurred in the crashes in which persons aged 26-35 died (77.8%). The lowest incidence of alcohol involvement was found among the youngest and oldest fatalities as only 0.0% of fatalities among those under 16 and 4.2% of the fatalities over 55 years of age died in crashes involving alcohol.

Table 7-1
Deaths in Alcohol-Related Crashes: Manitoba, 2014

Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARDs
<u>Age Group</u>						
<16	1	1	100.0	0	0.0	0.0
16-19	5	5	100.0	2	40.0	9.1
20-25	10	10	100.0	6	60.0	27.3
26-35	9	9	100.0	7	77.8	31.8
36-45	8	8	100.0	4	50.0	18.2
46-55	9	9	100.0	2	22.2	9.1
>55	24	24	100.0	1	4.2	4.5
<u>Gender</u>						
Male	47	47	100.0	16	34.0	72.7
Female	19	19	100.0	6	31.6	27.3
<u>Victim Type</u>						
Driver/ Operator	40	40	100.0	13	32.5	59.1
Passenger	16	16	100.0	4	25.0	18.2
Pedestrian	10	10	100.0	5	50.0	22.7
<u>Vehicle Occupied</u>						
Automobiles	21	21	100.0	5	23.8	22.7
Trucks/Vans	21	21	100.0	8	38.1	36.4
Motorcycles	4	4	100.0	1	25.0	4.5
Other Hwy Vehicles	4	4	100.0	0	0.0	0.0
Off-road Vehicles	6	6	100.0	3	50.0	13.6
(Pedestrians)	10	10	100.0	5	50.0	22.7
TOTAL	66	66	100.0	22	33.3	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

7.1.2 Gender. Of all the people who died in alcohol-related crashes, 72.7% were males. The incidence of alcohol in crashes in which a male died (34.0%) was greater than the incidence of alcohol in crashes in which a female died (31.6%).

7.1.3 Victim type. Of all the people who died in alcohol-related crashes, 59.1% were drivers/operators of a vehicle; 22.7% were pedestrians; and 18.2% were passengers.

Within each of the victim types, the highest incidence of alcohol involvement (50.0%) occurred in the crashes in which a pedestrian died. Alcohol was involved in 32.5% of the crashes in which a driver/operator died and 25.0% of those in which a passenger died.

7.1.4 Type of vehicle occupied. Of all the people who died in alcohol-related crashes, 36.4% were truck/van occupants; 22.7% were automobile occupants; 13.6% were occupants of off-road vehicles; and 4.5% were motorcyclists.

Within each of these vehicle types, the incidence of alcohol involvement in which an off-road vehicle occupant died (50.0%) was greater than the incidence of alcohol in crashes in which a truck/van occupant died (38.1%). Among motorcyclists, 25.0% died in an alcohol-related crash compared to 23.8% of automobile occupants.

7.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in Manitoba during 2014. Table 7-2 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests – the first three of these present results for drivers who showed any evidence of alcohol; the last three columns present information on drivers who had BACs over the statutory limit of 80 mg%.

To illustrate, among those aged 26-35 there were five drivers killed during 2014; four of these fatally injured drivers (80.0%) were tested for alcohol. Of those who were tested, three (75.0%) were positive for alcohol. This means fatally injured drinking drivers aged 26-35 accounted for 27.3% of all drinking drivers who were killed.

Then, in the final three columns, it can be seen that two (50.0%) fatally injured drivers aged 26-35 who were tested for alcohol had BACs in excess of 80 mg%. This means that two of the three drivers who were positive for alcohol had BACs in excess of the legal limit. The final column expresses the number of drivers with illegal BACs as a percent of all drivers with BACs over the limit. Thus, drivers aged 26-35 accounted for 25.0% of all the drivers with BACs over the legal limit.

The main findings are shown by the totals at the bottom of the table. Manitoba had a very high testing rate in 2014, with 91.4% of fatally injured drivers being tested for alcohol use.

In Manitoba, 34.4% had been drinking and eight of 11 (72.7%) fatally injured drinking drivers had BACs over 80 mg%. Although not shown in the table, more refined analyses by different BAC categories show that among tested drivers:

- > 65.6% had BACs of zero mg%;
- > 0.0% had BACs from 1-49 mg%;

- > 9.4% had BACs from 50-80 mg%
- > 6.3% had BACs from 81 to 160 mg%; and,
- > 18.8% had BACs over 160 mg%.

Table 7-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Manitoba, 2014

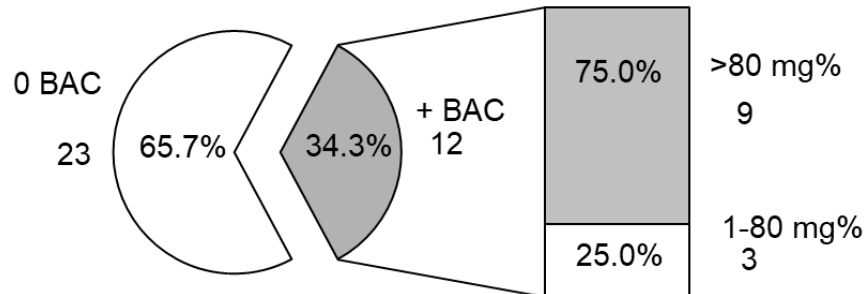
Category of Driver	Number of Drivers*	Drivers Tested		Positive BAC			BAC >80 mg%		
		No.	% of total	No.	% of tested	% of all drivers with +BAC	No.	% of tested	% of all drivers with BAC >80 mg%
<u>Age Group</u>									
16-25**	4	4	100.0	3	75.0	27.3	1	25.0	12.5
26-35	5	4	80.0	3	75.0	27.3	2	50.0	25.0
36-45	6	5	83.3	3	60.0	27.3	3	60.0	37.5
46-55	6	6	100.0	2	33.3	18.2	2	33.3	25.0
>55	14	13	92.9	0	0.0	0.0	0	0.0	0.0
<u>Gender</u>									
Male	30	27	90.0	9	33.3	81.8	8	29.6	100.0
Female	5	5	100.0	2	40.0	18.2	0	0.0	0.0
<u>Vehicle Type</u>									
Automobiles	12	10	83.3	3	30.0	27.3	1	10.0	12.5
Truck/Van	18	17	94.4	7	41.2	63.6	6	35.3	75.0
Motorcycles	2	2	100.0	1	50.0	9.1	1	50.0	12.5
Tractor Trailer	3	3	100.0	0	0.0	0.0	0	0.0	0.0
<u>Collision Type</u>									
Single vehicle	17	16	94.1	10	62.5	90.9	7	43.8	87.5
Multiple vehicle	18	16	88.9	1	6.3	9.1	1	6.3	12.5
TOTAL	35	32	91.4	11	34.4	100.0	8	25.0	100.0

* Drivers dying within 30 days in crashes on public roadways.

** Drivers in two age groups have been aggregated to ensure that an individual will not be identified.

In Figure 7-1, the BAC distribution for tested fatally injured drivers is extrapolated to reflect the BAC distribution for all fatally injured drivers. In this figure, 12 of 35 (34.3%) fatally injured drivers have a positive BAC. And among fatally injured drinking drivers, nine (75.0%) have BACs over 80 mg%.

Figure 7-1
BACs* Among Fatally Injured Drivers
of Highway Vehicles: Manitoba, 2014



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

7.2.1 Age differences. Drivers aged 16-19 and 20-25 have been regrouped (16-25) to ensure that individuals cannot be identified. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 27.3% were aged 16-25, 26-35 and 36-45; and 18.2% were aged 46-55.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 37.5% were aged 36-45; 25.0% were aged 26-35 and 46-55; and 12.5% were aged 16-25.

When comparing the incidence of drinking and driving among fatally injured drivers by age group, fatally injured drivers aged 16-25 and 26-35 were the most likely to have been drinking (75.0% each). By contrast, 0.0% of the tested drivers over age 55 had been drinking.

7.2.2 Gender differences. Males dominate the picture as they account for 81.8% of all the fatally injured drivers who had been drinking and 100.0% of all of the fatally injured drivers who were legally impaired.

Males dominate the picture largely because they account for 30 of the 35 drivers (85.7%) who are killed. However, fatally injured female drivers were more likely to have been drinking than male drivers (40.0% and 33.3%, respectively). Almost all of the male drivers (88.9%) and 0.0% of the female drivers who were drinking had BACs over the legal limit.

7.2.3 Vehicle differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), truck/van drivers accounted for 63.6% of the total, 27.3% were automobile drivers, and 9.1% were motorcyclists. Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 75.0% were truck/van drivers, and automobile drivers and motorcyclists each accounted for 12.5% of the total.

Within each of the vehicle types, 50.0% of fatally injured motorcyclists, 41.2% of truck/van drivers, and 30.0% of automobile drivers had been drinking.

7.2.4 Collision differences. Less than half of the drivers killed (17 of the 35) were involved in single-vehicle collisions but these crashes accounted for a vast majority of the drivers who had been drinking or were legally impaired (90.9% and 87.5%, respectively).

The reason for this apparent disparity is because alcohol is overrepresented in single-vehicle crashes. Over three-fifths of the drivers involved in single-vehicle crashes (62.5%) tested positive for alcohol compared to only 6.3% of those involved in multiple-vehicle collisions.

7.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in Manitoba. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 7-3 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 398 drivers were involved in crashes in which someone was seriously injured, and among these 11.8% were alcohol-related crashes.

Table 7-3
Drivers* in Alcohol-Related Serious Injury Crashes:
Manitoba, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
16-19	26	2	7.7	4.3
20-25	61	10	16.4	21.3
26-35	75	14	18.7	29.8
36-45	64	8	12.5	17.0
46-55	63	7	11.1	14.9
>55	109	6	5.5	12.8
<u>Gender</u>				
Male	258	32	12.4	68.1
Female	139	15	10.8	31.9
unknown	1	0	0.0	0.0
<u>Vehicle Type</u>				
Auto	228	29	12.7	61.7
Truck/Van	148	15	10.1	31.9
Motorcycle	21	3	14.3	6.4
Other Hwy. Vehicle	1	0	0.0	0.0
<u>Collision Type</u>				
Single-Vehicle	109	34	31.2	72.3
Multiple-Vehicle	289	13	4.5	27.7
TOTAL	398	47	11.8	100.0

* excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

7.3.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 29.8% were aged 26-35; 21.3% were aged 20-25; 17.0% were aged 36-45; 14.9% were aged 46-55; and 12.8% were over 55. Drivers aged 16-19 accounted for 4.3% of those involved in alcohol-related serious injury crashes.

Almost one-fifth of the drivers aged 26-35 were involved in alcohol-related serious injury crashes (18.7%). The lowest incidence of involvement in alcohol-related crashes was found for those over 55 (5.5%).

7.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 68.1% were males. The incidence of involvement in alcohol-related serious injury crashes was greater for males than for females (12.4% and 10.8%).

7.3.3 Type of vehicle driven. Of all the drivers involved in alcohol-related serious injury crashes, 61.7% were automobile drivers; 31.9% were truck/van drivers; and 6.4% were motorcyclists.

The highest incidence of involvement in alcohol-related serious injury crashes was found for motorcyclists (14.3%) compared to 12.7% for automobile drivers; and 10.1% for truck/van drivers. The lone driver of another highway vehicle was not involved in an alcohol-related crash.

7.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 72.3% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in single-vehicle crashes – 31.2% of these drivers, compared to only 4.5% for drivers involved in multiple-vehicle crashes.

7.4 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in Manitoba during 2014. A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 7-4 shows the prevalence of drug use among fatally injured drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.5). The table also shows the number of drivers who tested positive for various categories of drugs. A brief description of the different drug categories is provided in Section 2.2.5.

As can be seen, Manitoba had a very high testing rate in 2012, with 91.4% of fatally injured drivers being tested for drug use.

Among fatally injured tested drivers, 16 out of 32 (50.0%) were positive for drugs. The most common category of drugs found within drivers testing positive for drug use was CNS depressants (75.0%). Other categories of drugs found in fatally injured drivers testing positive for drugs were narcotic analgesics (31.3%), CNS stimulants (25.0%), and dissociative anesthetics (6.3%).

Table 7-4
Drug Use Among Fatally Injured Drivers* of
Highway Vehicles: Manitoba, 2014

Prevalence of Drug Use				
Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
35	32	(91.4)	16	(50.0)

Categories of Drugs Found Among Drivers Testing Positive		
Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive**
CNS Depressants	12	(75.0)
Narcotic Analgesics	5	(31.3)
CNS Stimulants	4	(25.0)
Dissociative Anesthetics	1	(6.3)
Cannabis***	0	(0.0)
Hallucinogens	0	(0.0)
Inhalants	0	(0.0)

* Dying within 30 days in collisions which occurred on public roadways.

** Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

*** Results may change, pending completion of further review.

7.5 Trends in alcohol and drug-impaired driving

Sections 7.1 through 7.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 7.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

7.5.1 Deaths involving drinking drivers: 1996-2014. Table 7-5 and Figure 7-2 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2014. These results differ slightly from those in Section 7.1. In this section, deaths that occur in crashes that involve a drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

As shown in the table and figure, the number of deaths in crashes that involved a drinking driver generally dropped from 36 to 29 between 1996 and 2001, peaked at 45 in 2007, eventually decreased to a low of 19 in 2014. The percentage of alcohol-related fatalities generally decreased from 37.9% in 1996 to 27.4% in 2005, peaked in 2008 (57.0%), eventually decreased to its lowest level in 2013 (26.4%), and rose again in 2014 (28.8%).

Table 7-5
Number* and Percent of Motor Vehicle Deaths Involving**
a Drinking Driver: Manitoba, 1996-2014

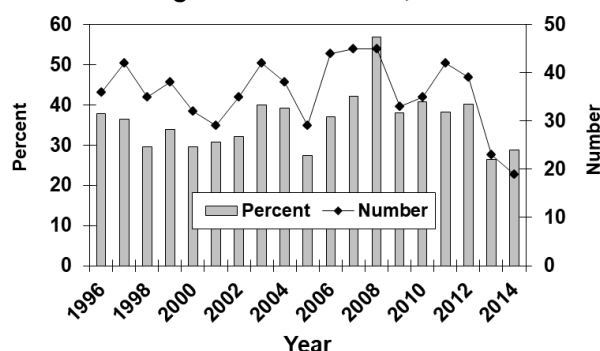
Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	95	36	37.9
1997	115	42	36.5
1998	118	35	29.7
1999	112	38	33.9
2000	108	32	29.6
2001	94	29	30.9
2002	109	35	32.1
2003	105	42	40.0
2004	97	38	39.2
2005	106	29	27.4
2006	119	44	37.0
2007	107	45	42.1
2008	79	45	57.0
2009	87	33	37.9
2010	86	35	40.7
2011	110	42	38.2
2012	97	39	40.2
2013	87	23	26.4
2014	66	19	28.8
2006-2010 baseline	96	40	41.7
2011-2014 period	90	31	34.4

* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

As shown at the bottom of the table, during the 2006-2010 baseline period there was an average of 40 fatalities involving a drinking driver and they accounted for 41.7% of all fatalities. This means that the percent of fatalities involving a drinking driver decreased by 17.5% from 41.7% in the baseline period (2006-2010) to 34.4% in the 2011-2014 period. In terms of the number of persons killed in crashes involving a drinking driver, there was a 22.5% decrease from an average of 40 in the baseline period (2006-2010) to 31 in the 2011-2014 period.

Figure 7-2
Number and Percent of Deaths Involving
a Drinking Driver: Manitoba, 1996-2014



7.5.2 Alcohol use among fatally injured drivers. Data on alcohol use among fatally injured drivers of highway vehicles over the 19-year period from 1996-2014 are shown in Table 7-6. Trends are illustrated in Figure 7-3 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol (represented by the white area); (2) had BACs below the legal limit (shown by the light grey area); and (3) had BACs over the legal limit (the dark grey area). The data reported here are restricted to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2).

As can be seen, the percent of fatally injured drivers with BACs over the legal limit generally declined from 1996 (50.0%) to 22.6% in 2005, increased until 2008 (44.2%), fluctuated until 2013 (21.7%), and rose again in 2014 (25.0%). The percent of fatally injured drivers with zero BACs generally increased from 43.2% in 1996 to its highest level in 2005 (75.5%), decreased to a low of 37.2% in 2008, fluctuated until 2013 (71.7%), and decreased again in 2014 (65.6%). The percent of fatally injured drivers with BACs between 1 and 80 mg% peaked in 2008 (18.6%), dropped to 7.1% in 2011, fluctuated until 2013 (6.5%), and rose again in 2014 (9.4%).

When compared to the 2006-2010 baseline period shown at the bottom of Table 7-6, the percentage of fatally injured drivers with zero BACs in the 2011-2014 period increased by 19.2% (from 54.7% to 65.2%). Among drivers with BACs from 1-80 mg%, there was a 7.4% decrease (from 9.4% to 8.7%) and among those with BACs over 80 mg%, there was a 27.1% decrease (from 35.8% to 26.1%).

Table 7-6
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Manitoba, 1996-2014

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	48	44	91.7	19	43.2	3	6.8	22	50.0
1997	61	55	90.2	34	61.8	5	9.1	16	29.1
1998	62	62	100.0	41	66.1	3	4.8	18	29.0
1999	57	55	96.5	37	67.3	3	5.5	15	27.3
2000	64	62	96.9	39	62.9	4	6.5	19	30.6
2001	62	57	91.9	36	63.2	1	1.8	20	35.1
2002	57	55	96.5	35	63.6	3	5.5	17	30.9
2003	61	57	93.4	27	47.4	5	8.8	25	43.9
2004	54	49	90.7	29	59.2	3	6.1	17	34.7
2005	54	53	98.1	40	75.5	1	1.9	12	22.6
2006	67	64	95.5	39	60.9	3	4.7	22	34.4
2007	65	61	93.8	34	55.7	2	3.3	25	41.0
2008	45	43	95.6	16	37.2	8	18.6	19	44.2
2009	59	53	89.8	32	60.4	8	15.1	13	24.5
2010	44	41	93.2	23	56.1	4	9.8	14	34.1
2011	59	57	96.6	41	71.9	4	7.0	12	21.1
2012	52	49	94.2	25	51.0	7	14.3	17	34.7
2013	48	46	95.8	33	71.7	3	6.5	10	21.7
2014	35	32	91.4	21	65.6	3	9.4	8	25.0
2006-2010 baseline	56	53	(94.6)	29	(54.7)	5	(9.4)	19	(35.8)
2011-2014 period	49	46	(93.9)	30	(65.2)	4	(8.7)	12	(26.1)

* Dying within 30 days in collisions which occurred on public roadways.

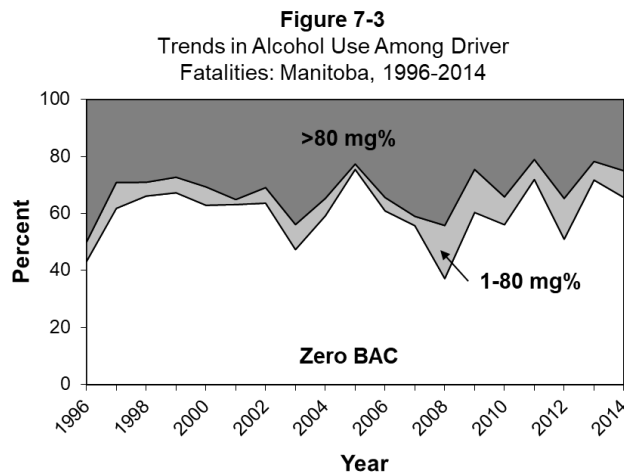


Table 7-7 and Figure 7-4 also show data on alcohol use among fatally injured drivers from 1996 to 2014. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC

distribution of drivers tested for alcohol (see Figure 7-1). Second, drivers are grouped in only two BAC categories: zero and positive.

As can be seen at the bottom of Table 7-7, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 44.6%. In the 2011-2014 period, 34.7% of fatally injured drivers tested positive for alcohol, a 22.2% decrease from the baseline period.

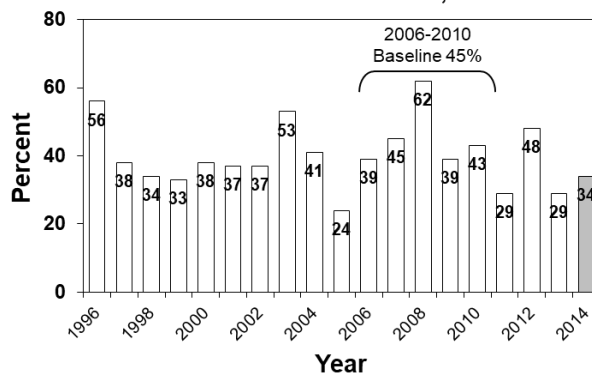
Table 7-7
Alcohol Use* Among Fatally Injured Drivers of Highway Vehicles:
Manitoba, 1996-2014

Year	Number of Drivers**	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	48	21	(43.8)	27	(56.3)
1997	61	38	(62.3)	23	(37.7)
1998	62	41	(66.1)	21	(33.9)
1999	57	38	(66.7)	19	(33.3)
2000	64	40	(62.5)	24	(37.5)
2001	62	39	(62.9)	23	(37.1)
2002	57	36	(63.2)	21	(36.8)
2003	61	29	(47.5)	32	(52.5)
2004	54	32	(59.3)	22	(40.7)
2005	54	41	(75.9)	13	(24.1)
2006	67	41	(61.2)	26	(38.8)
2007	65	36	(55.4)	29	(44.6)
2008	45	17	(37.8)	28	(62.2)
2009	59	36	(61.0)	23	(39.0)
2010	44	25	(56.8)	19	(43.2)
2011	59	42	(71.2)	17	(28.8)
2012	52	27	(51.9)	25	(48.1)
2013	48	34	(70.8)	14	(29.2)
2014	35	23	(65.7)	12	(34.3)
2006-2010 baseline	56	31	(55.4)	25	(44.6)
2011-2014 period	49	32	(65.3)	17	(34.7)

* Numbers are estimates based on the BAC distribution of drivers tested for alcohol.

** Dying within 30 days in collisions which occurred on public roadways.

Figure 7-4
Percent of Fatally Injured Drivers*
Positive for Alcohol: Manitoba, 1996-2014



7.5.3 Drivers in serious injury crashes. Table 7-8 and Figure 7-5 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. Between 1996 and 1997, the percentage of all drivers in serious injury crashes that involved alcohol generally rose from 21.6% to a high of 25.7%, generally decreased to a low of 10.7% in 2012, rose again in 2013 (13.1%), and decreased again in 2014 (11.8%).

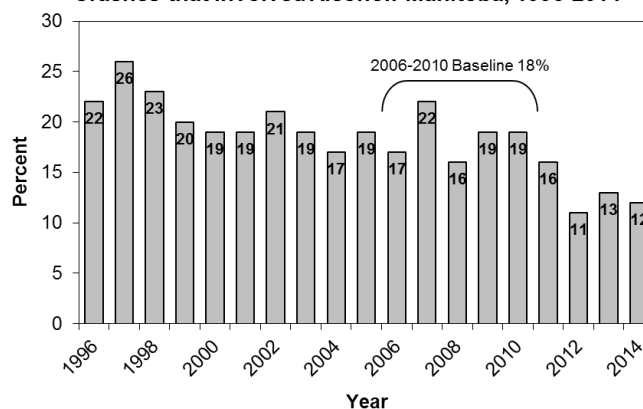
In the baseline period (2006-2010), an average of 18.4% of highway vehicle drivers in serious injury crashes were in an alcohol-involved crash. From 2011 to 2014, the average percentage of drivers in alcohol-involved crashes declined to 12.7%, a 31.0% decrease from the baseline period.

Table 7-8
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Manitoba, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	804	174	(21.6)
1997	630	162	(25.7)
1998	657	151	(23.0)
1999	595	120	(20.2)
2000	587	110	(18.7)
2001	597	115	(19.3)
2002	525	108	(20.6)
2003	532	102	(19.2)
2004	550	95	(17.3)
2005	482	92	(19.1)
2006	526	91	(17.3)
2007	467	103	(22.1)
2008	437	68	(15.6)
2009	452	85	(18.8)
2010	341	63	(18.5)
2011	403	63	(15.6)
2012	438	47	(10.7)
2013	398	52	(13.1)
2014	398	47	(11.8)
2006-2010 baseline	445	82	(18.4)
2011-2014 period	409	52	(12.7)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 7-5
Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Manitoba, 1996-2014



7.5.4 Drug use among fatally injured drivers. Table 7-9 and Figure 7-6 show data on drug use among fatally injured drivers of highway vehicles over a 15-year period (2000-2014). Similar to Table 7-6, these results are based on fatally injured drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.5).

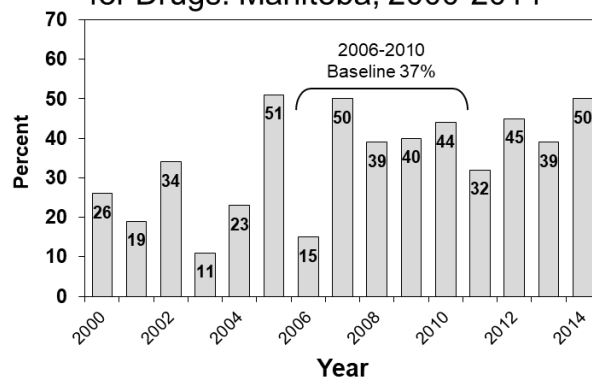
As can be seen at the bottom of Table 7-9, the percentage of fatally injured drivers testing positive for drugs from 2006-2010, the baseline period, is 37.3%. In the 2011-2014 period, 41.3% of fatally injured drivers tested positive for drugs, a 10.7% increase from the baseline period.

Table 7-9
Drug Use Among Fatally Injured Drivers of Highway Vehicles:
Manitoba, 2000-2014

YEAR	Number of Drivers*	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	64	58	90.6	43	74.1	15	25.9
2001	62	54	87.1	44	81.5	10	18.5
2002	57	53	93.0	35	66.0	18	34.0
2003	61	56	91.8	50	89.3	6	10.7
2004	55	47	85.5	36	76.6	11	23.4
2005	54	51	94.4	25	49.0	26	51.0
2006	67	62	92.5	53	85.5	9	14.5
2007	65	60	92.3	30	50.0	30	50.0
2008	45	41	91.1	25	61.0	16	39.0
2009	59	53	89.8	32	60.4	21	39.6
2010	44	41	93.2	23	56.1	18	43.9
2011	59	56	94.9	38	67.9	18	32.1
2012	52	49	94.2	27	55.1	22	44.9
2013	48	46	95.8	28	60.9	18	39.1
2014	35	32	91.4	16	50.0	16	50.0
2006-2010 baseline	56	51	91.1	32	62.7	19	37.3
2011-2014 period	49	46	93.9	27	58.7	19	41.3

* Dying within 30 days in collisions which occurred on public roadways.

Figure 7-6
Percent of Fatally Injured Drivers Positive
for Drugs: Manitoba, 2000-2014



8.0 ONTARIO

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in Ontario during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 8.1);
- > alcohol use among fatally injured drivers (Section 8.2);
- > drivers involved in alcohol-related serious injury crashes (Section 8.3);
- > drug use among fatally injured drivers (Section 8.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 8.5).

8.1 Deaths in alcohol-related crashes

Table 8-1 presents information on people who died in alcohol-related crashes in Ontario during 2014. This table specifically reports upon persons who died within 30 days of a collision which occurred on a public roadway that involved at least one highway vehicle. Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities in which sufficient information was available to determine if alcohol was involved. *A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.*

For example, 37 people aged 16-19 were killed in motor vehicle crashes in Ontario during 2014. And, in 32 cases (86.5%) it was possible to determine if alcohol was a factor in the crash.

The next column shows the number of people killed in crashes that were known to be alcohol-involved. For example, 10 people aged 16-19 died in alcohol-related crashes in Ontario during 2014. The next column expresses this as a percentage – i.e., 31.3% of the 16-19 year olds who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among 16-19 year olds represent 7.1% of all the people killed in alcohol-related crashes in Ontario during 2014.

The totals at the bottom of the table provide a summary. As can be seen, 565 persons died within 30 days of a motor vehicle crash in Ontario during 2014. In 532 (94.2%) of these cases, it was possible to determine if alcohol was a factor. Of these known cases, 140 (26.3%) involved alcohol. Extrapolating

this figure to the total number of motor vehicle fatalities (565 x .263) it can be estimated that *in Ontario during 2014, 149 persons died in alcohol-related crashes within 30 days of the collision.*

8.1.1 Victim age. Of all the people who died in alcohol-related crashes, 25.7% (see last column) were aged 26-35; 19.3% were over 55; 18.6% were aged 20-25 and 46-55; 10.0% were aged 36-45; 7.1% were aged 16-19; and 0.7% were under 16.

Table 8-1
Deaths in Alcohol-Related Crashes: Ontario, 2014

Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARDs
<u>Age Group</u>						
<16	8	8	100.0	1	12.5	0.7
16-19	37	32	86.5	10	31.3	7.1
20-25	69	66	95.7	26	39.4	18.6
26-35	87	85	97.7	36	42.4	25.7
36-45	60	57	95.0	14	24.6	10.0
46-55	93	87	93.5	26	29.9	18.6
>55	211	197	93.4	27	13.7	19.3
<u>Gender</u>						
Male	392	369	94.1	112	30.4	80.0
Female	173	163	94.2	28	17.2	20.0
<u>Victim Type</u>						
Driver/ Operator	370	351	94.9	89	25.4	63.6
Passenger	85	80	94.1	24	30.0	17.1
Pedestrian	110	101	91.8	27	26.7	19.3
<u>Vehicle Occupied</u>						
Automobiles	279	267	95.7	64	24.0	45.7
Trucks/Vans	85	82	96.5	26	31.7	18.6
Motorcycles	62	56	90.3	14	25.0	10.0
Other Hwy Vehicles	8	8	100.0	4	50.0	2.9
Off-road Vehicles	21	18	85.7	5	27.8	3.6
(Pedestrians)	110	101	91.8	27	26.7	19.3
TOTAL	565	532	94.2	140	26.3	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

The highest incidence of alcohol involvement occurred in the crashes in which a person aged 26-35 and 20-25 died (42.4% and 39.4% respectively). The lowest incidence of alcohol involvement was found among the youngest and oldest fatalities – 12.5% of persons under 16 and 13.7% of the fatalities over 55 years of age died in crashes involving alcohol.

8.1.2 Gender. Of all the people who died in alcohol-related crashes, 80.0% were males. The incidence of alcohol in crashes in which a male died (30.4%) was greater than the incidence of alcohol in crashes in which a female died (17.2%).

8.1.3 Victim type. Of all the people who died in alcohol-related crashes, 63.6% were driver/operators of a vehicle; 19.3% were pedestrians; and 17.1% were passengers.

Within each of the victim types, the highest incidence of alcohol involvement (30.0%) occurred in the crashes in which a passenger died. Alcohol was involved in 26.7% of the crashes in which a pedestrian died and 25.4% of the crashes in which a driver/operator died.

8.1.4 Type of vehicle occupied. Of all the people who died in alcohol-related crashes, 45.7% were automobile occupants; 18.6% were truck/van occupants; 10.0% were motorcyclists; 3.6% were off-road vehicle occupants; and 2.9% were occupants of other highway vehicles.

Within each of these vehicle types, the incidence of alcohol involvement in which a truck/van occupant died was greater than the incidence of alcohol in crashes in which a motorcyclist or automobile occupant died (31.7% versus 25.0% and 24.0%). Among occupants of other highway vehicles, 50.0% were involved in an alcohol-related crash compared to 27.8% of off-road vehicle occupants.

8.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in Ontario during 2014. Table 8-2 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests: the first three of these present results for drivers who showed any evidence of alcohol; the last three columns present information on drivers who had BACs over the statutory limit of 80 mg%.

To illustrate, among 20-25 year olds there were 45 drivers killed during 2014; 43 of these fatally injured drivers (95.6%) were tested for alcohol. Of those who were tested, 15 (34.9%) were positive for alcohol. This means that 20-25 year old fatally injured drinking drivers accounted for 21.7% of all drinking drivers who were killed.

Then, in the final three columns, it can be seen that 13 of the 43 (30.2%) fatally injured 20-25 year olds who were tested for alcohol had BACs in excess of 80 mg%. This means that 13 of the 15 drivers who tested positive for alcohol had BACs in excess of the legal limit. The final column expresses the number of drivers with illegal BACs as a percent of all drivers with BACs over the limit. Thus, 20-25 year old drivers accounted for 23.6% of all the drivers with BACs over the legal limit.

The main findings are shown by the totals at the bottom of the table. Ontario had a high testing rate in 2014, with 89.1% of fatally injured drivers being tested for alcohol use.

In Ontario, 22.2% had been drinking and 55 of 69 (79.7%) fatally injured drinking drivers had BACs over 80 mg%. Although not shown in the table, more refined analyses by different BAC categories show that among tested drivers:

- > 77.8% had BACs of zero mg%;
- > 3.5% had BACs from 1-49 mg%;
- > 1.0% had BACs from 50-80 mg%
- > 6.4% had BACs from 81 to 160 mg%; and,
- > 11.3% had BACs over 160 mg%.

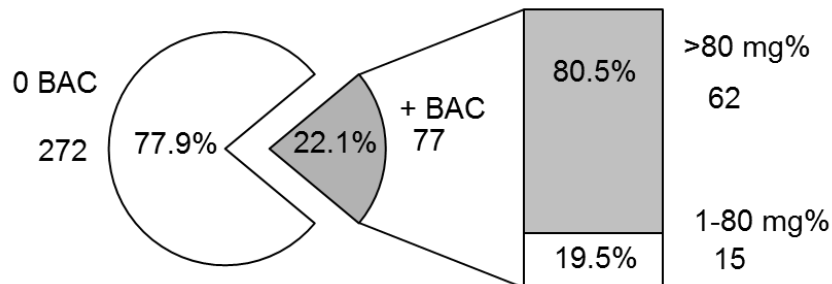
Table 8-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles: Ontario, 2014

Category of Driver	Number of Drivers*	Drivers Tested		Positive BAC			BAC >80 mg%		
		No.	% of total	No.	% of tested	% of all drivers with +BAC	No.	% of tested	% of all drivers with BAC >80 mg%
<u>Age Group</u>									
16-19	19	18	94.7	3	16.7	4.3	3	16.7	5.5
20-25	45	43	95.6	15	34.9	21.7	13	30.2	23.6
26-35	54	54	100.0	18	33.3	26.1	13	24.1	23.6
36-45	47	44	93.6	10	22.7	14.5	8	18.2	14.5
46-55	62	56	90.3	11	19.6	15.9	9	16.1	16.4
>55	122	96	78.7	12	12.5	17.4	9	9.4	16.4
<u>Gender</u>									
Male	269	244	90.7	63	25.8	91.3	52	21.3	94.5
Female	80	67	83.8	6	9.0	8.7	3	4.5	5.5
<u>Vehicle Type</u>									
Automobiles	224	197	87.9	40	20.3	58.0	32	16.2	58.2
Truck/Van	64	57	89.1	16	28.1	23.2	14	24.6	25.5
Motorcycles	57	53	93.0	11	20.8	15.9	9	17.0	16.4
Tractor Trailer	4	4	100.0	2	50.0	2.9	0	0.0	0.0
<u>Collision Type</u>									
Single vehicle	135	123	91.1	53	43.1	76.8	44	35.8	80.0
Multiple vehicle	214	188	87.9	16	8.5	23.2	11	5.9	20.0
TOTAL	349	311	89.1	69	22.2	100.0	55	17.7	100.0

* Drivers dying within 30 days in crashes on public roadways.

In Figure 8-1, the BAC distribution for tested fatally injured drivers is extrapolated to reflect the BAC distribution for all fatally injured drivers. In this figure, 77 of 349 (22.1%) fatally injured drivers have a positive BAC. And among fatally injured drinking drivers, 62 (80.5%) have BACs over 80 mg%.

Figure 8-1
BACs* Among Fatally Injured Drivers
of Highway Vehicles: Ontario, 2014



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

8.2.1 Age differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 26.1% were aged 26-35; 21.7% were aged 20-25; 17.4% were over age 55; 15.9% were aged 46-55; 14.5% were aged 36-45; and 4.3% were aged 16-19.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 23.6% were aged 20-25 and 26-35; 16.4% were aged 46-55 and over age 55; 14.5% were aged 36-45; and 5.5% were aged 16-19.

When comparing the incidence of drinking and driving among fatally injured drivers by age group, fatally injured drivers aged 20-25 and 26-35 were the most likely to have been drinking (34.9% and 33.3%, respectively). By contrast, only 12.5% of the tested drivers aged over 55 had been drinking.

8.2.2 Gender differences. Males dominate the picture as they account for 91.3% of all the fatally injured drivers who had been drinking and 94.5% of all of the fatally injured drivers who were legally impaired.

Males dominate the picture largely because they account for most of the drivers who are killed (269 of the 349 drivers are males). Fatally injured male drivers were more likely to have been drinking than female drivers (25.8% and 9.0%, respectively). And, 82.5% of the male and 50.0% of the female drivers who were drinking had BACs over the legal limit.

8.2.3 Vehicle differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 58.0% were automobile drivers; 23.2% were truck/van drivers; 15.9% were motorcyclists; and 2.9% were tractor-trailer drivers.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 58.2% were automobile drivers, 25.5% were truck/van drivers; and 16.4% were motorcyclists.

Within each of the vehicle types, 28.1% of truck/van drivers, 20.8% of fatally injured motorcyclists, and 20.3% of automobile drivers had been drinking. Among fatally injured tractor-trailer drivers, 50.0% had been drinking.

8.2.4 Collision differences. Less than half of the drivers killed (135 of the 349) were involved in single-vehicle collisions but these crashes accounted for over four-fifths of the drivers who had been drinking or were legally impaired (76.8% and 80.0%, respectively).

The reason for this apparent disparity is because alcohol is over represented in single-vehicle crashes. Over two-fifths of the drivers involved in single-vehicle crashes (43.1%) tested positive for alcohol, compared to only 8.5% of those involved in multiple-vehicle collisions.

8.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in Ontario. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 8-3 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 2,975 drivers were involved in crashes in which someone was seriously injured, and among these 13.3% were alcohol-related crashes.

8.3.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 25.0% were aged 26-35; 21.5% were aged 20-25, and 14.6% were aged 36-45. Drivers under 16 accounted for 0.3% and drivers aged 16-19 accounted for only 9.8% of those involved in alcohol-related serious injury crashes.

One-half of the drivers under 16 years of age (50.0%) and 22.5% of drivers aged 16-19 and 20-25 were involved in alcohol-related serious injury crashes. The lowest incidence of involvement in alcohol-related crashes was found for those over 55 (5.9%).

Table 8-3
Drivers in Alcohol-Related Serious Injury Crashes:
Ontario, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
<16	2	1	50.0	0.3
16-19	173	39	22.5	9.8
20-25	378	85	22.5	21.5
26-35	568	99	17.4	25.0
36-45	508	57	11.2	14.4
46-55	569	58	10.2	14.6
>55	725	43	5.9	10.9
unknown	52	14	26.9	3.5
<u>Gender</u>				
Male	2020	297	14.7	75.0
Female	912	88	9.6	22.2
unknown	43	11	25.6	2.8
<u>Vehicle Type</u>				
Auto	1856	259	14.0	65.4
Truck/Van	652	103	15.8	26.0
Motorcycle	286	27	9.4	6.8
Tractor Trailer	129	5	3.9	1.3
Other Hwy. Vehicle	52	2	3.8	0.5
<u>Collision Type</u>				
Single-Vehicle	811	278	34.3	70.2
Multiple-Vehicle	2164	118	5.5	29.8
TOTAL	2975	396	13.3	100.0

* Excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

8.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 75.0% were males. The incidence of involvement in alcohol-related serious injury crashes was also greater for males than for females (14.7% and 9.6%, respectively).

8.3.3 Type of vehicle driven. Of all the drivers involved in alcohol-related serious injury crashes, 65.4% were automobile drivers; 26.0% were truck/van drivers; 6.8% were motorcyclists; 1.3% were tractor-trailer drivers; and 0.5% were drivers of other highway vehicles.

The highest incidence of involvement in alcohol-related serious injury crashes was found for truck/van drivers – 15.8% of these drivers were in crashes that involved alcohol, compared to 14.0% of automobile drivers; 9.4% of motorcyclists; and 3.9% of tractor-trailer drivers. Among drivers of other highway vehicles, 3.8% were involved in alcohol-related crashes.

8.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 70.2% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in single-vehicle crashes – 34.3% of these drivers, compared to only 5.5% for drivers involved in multiple-vehicle crashes.

8.4 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in Ontario during 2014. A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 8-4 shows the prevalence of drug use among fatally injured drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.5). The table also shows the number of drivers who tested positive for various categories of drugs. A brief description of the different drug categories is provided in Section 2.2.5.

As can be seen, Ontario had a high testing rate in 2014, with 78.8% of fatally injured drivers being tested for drug use.

Among fatally injured tested drivers, 120 out of 275 (43.6%) were positive for drugs. The most common category of drugs found within drivers testing positive for drug use was cannabis (46.7%). Other categories of drugs found in fatally injured drivers testing positive for drugs were CNS depressants (42.5%), CNS stimulants (21.7%), narcotic analgesics (15.0%), and dissociative anesthetics (1.7%).

Table 8-4
Drug Use Among Fatally Injured Drivers* of
Highway Vehicles: Ontario, 2014

Prevalence of Drug Use				
Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
349	275	(78.8)	120	(43.6)

Categories of Drugs Found Among Drivers Testing Positive		
Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive**
Cannabis	56	(46.7)
CNS Depressants	51	(42.5)
CNS Stimulants	26	(21.7)
Narcotic Analgesics	18	(15.0)
Dissociative Anesthetics	2	(1.7)
Hallucinogens	0	(0.0)
Inhalants	0	(0.0)

* Dying within 30 days in collisions which occurred on public roadways.

** Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

8.5 Trends in alcohol and drug-impaired driving

Sections 8.1 through 8.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally

injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 8.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

8.5.1 Deaths involving drinking drivers: 1996-2014. Table 8-5 and Figure 8-2 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2014. These results differ slightly from those in Section 8.1. In this section, deaths that occur in crashes that involve a drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

As shown in the figure, the number of deaths in crashes that involved a drinking driver generally dropped from 292 in 1996 to 137 in 2011, rose to 168 in 2012, decreased to a low of 131 in 2013 and 2014. The percentage of alcohol-related fatalities generally declined from 32.4% in 1996 to 25.9% in 2002, remained relatively stable until 2012 (26.3%), and fell to a low of 23.2% in 2014.

As shown at the bottom of the table, during the 2006-2010 baseline period there was an average of 196 fatalities involving a drinking driver and they accounted for 28.7% of all fatalities. Thus, it can be seen that the percent of fatalities involving a drinking driver decreased by 14.3% from 28.7% in the baseline period (2006-2010) to 24.6% in the 2011-2014 period. And, in terms of the number of persons killed in crashes involving a drinking driver, there has been a 27.6% decrease from an average of 196 in the baseline period (2006-2010) to 142 in the 2011-2014 period.

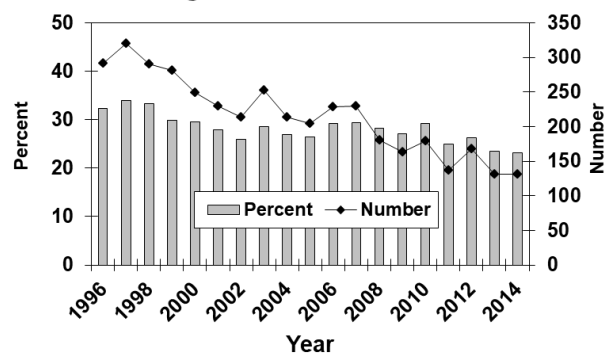
Table 8-5
Number* and Percent of Motor Vehicle Deaths Involving**
a Drinking Driver: Ontario, 1996-2014

Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	902	292	32.4
1997	942	320	34.0
1998	872	290	33.3
1999	939	281	29.9
2000	843	249	29.5
2001	823	230	27.9
2002	826	214	25.9
2003	883	253	28.7
2004	793	214	27.0
2005	777	205	26.4
2006	782	229	29.3
2007	784	230	29.3
2008	638	180	28.2
2009	603	163	27.0
2010	611	179	29.3
2011	550	137	24.9
2012	640	168	26.3
2013	557	131	23.5
2014	565	131	23.2
2006-2010 baseline	684	196	28.7
2011-2014 period	578	142	24.6

* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

Figure 8-2
Number and Percent of Deaths Involving
a Drinking Driver: Ontario, 1996-2014



8.5.2 Alcohol use among fatally injured drivers. Data on alcohol use among fatally injured drivers of highway vehicles over the 19-year period from 1996-2014 are shown in Table 8-6. Trends are illustrated in Figure 8-3 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol (represented by the white area); (2) had BACs below the legal limit (shown by the light grey area); and (3) had BACs over the legal limit (the dark grey area). The data reported here

are restricted to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2).

As can be seen, the percent of fatally injured drivers with BACs over the legal limit generally declined from 1996 (28.7%) to 2008 (21.7%), rose until 2010 (27.8%), and fell to a low in 2014 (17.7%). The percent of fatally injured drivers with zero BACs generally increased from 1996 (63.1%) to 2008 (73.6%), fluctuated until 2012 (69.2%), and rose to its highest level in 2014 (77.8%). The percent of fatally injured drivers with BACs decreased from 8.1% in 1996 to 4.2% in 2001, generally increased until 2007 (8.0%), decreased until 2009 (4.4%), and fluctuated until 2014 (4.5%).

When compared to the 2006-2010 baseline period, the percentage of fatally injured drivers with zero BACs in the 2011-2014 period increased by 4.6% (from 69.3% to 72.5%). Among drivers with BACs from 1-80 mg%, there was a 16.1% decrease (from 6.2% to 5.2%). Among drivers with BACs over 80 mg%, there was a 9.0% decrease (from 24.5% to 22.3%).

Table 8-6
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Ontario, 1996-2014

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	475	407	85.7	257	63.1	33	8.1	117	28.7
1997	550	450	81.8	290	64.4	34	7.6	126	28.0
1998	483	413	85.5	266	64.4	27	6.5	120	29.1
1999	546	467	85.5	330	70.7	25	5.4	112	24.0
2000	494	422	85.4	289	68.5	31	7.3	102	24.2
2001	484	429	88.6	302	70.4	18	4.2	109	25.4
2002	482	432	89.6	316	73.1	22	5.1	94	21.8
2003	500	446	89.2	306	68.6	25	5.6	115	25.8
2004	483	444	91.9	312	70.3	26	5.9	106	23.9
2005	461	408	88.5	287	70.3	20	4.9	101	24.8
2006	446	390	87.4	265	67.9	30	7.7	95	24.4
2007	473	425	89.9	292	68.7	34	8.0	99	23.3
2008	401	345	86.0	254	73.6	16	4.6	75	21.7
2009	350	293	83.7	206	70.3	13	4.4	74	25.3
2010	371	320	86.3	215	67.2	16	5.0	89	27.8
2011	319	275	86.2	197	71.6	16	5.8	62	22.5
2012	354	305	86.2	211	69.2	15	4.9	79	25.9
2013	323	275	85.1	197	71.6	15	5.5	63	22.9
2014	349	311	89.1	242	77.8	14	4.5	55	17.7
2006-2010 baseline	408	355	(87.0)	246	(69.3)	22	(6.2)	87	(24.5)
2011-2014 period	336	291	(86.6)	211	(72.5)	15	(5.2)	65	(22.3)

* Dying within 30 days in collisions which occurred on public roadways.

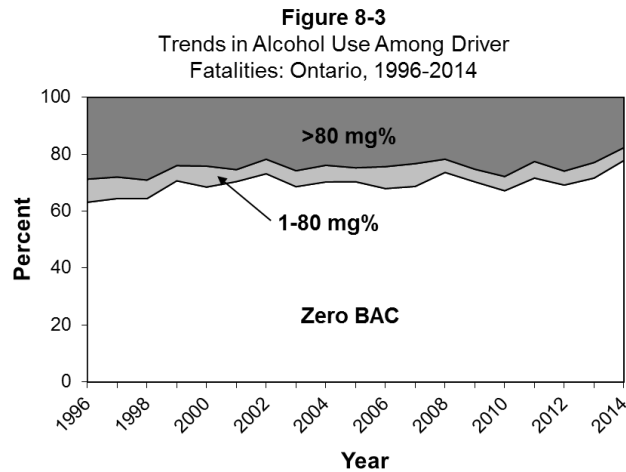


Table 8-7 and Figure 8-4 also show data on alcohol use among fatally injured drivers from 1996 to 2014. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC distribution of drivers tested for alcohol (see Figure 8-1). Second, drivers are grouped in only two BAC categories: zero and positive.

As can be seen at the bottom of Table 8-7, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 30.6%. In the 2011-2014 period, 27.4% of fatally injured drivers tested positive for alcohol, a 10.4% decrease from the baseline period.

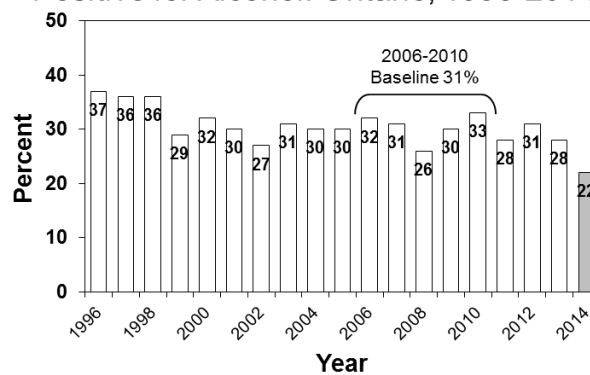
Table 8-7
Alcohol Use* Among Fatally Injured Drivers of Highway Vehicles:
Ontario, 1996-2014

Year	Number of Drivers**	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	475	300	(63.2)	175	(36.8)
1997	550	354	(64.4)	196	(35.6)
1998	483	311	(64.4)	172	(35.6)
1999	546	386	(70.7)	160	(29.3)
2000	494	338	(68.4)	156	(31.6)
2001	484	341	(70.5)	143	(29.5)
2002	482	353	(73.2)	129	(26.8)
2003	500	343	(68.6)	157	(31.4)
2004	483	339	(70.2)	144	(29.8)
2005	461	324	(70.3)	137	(29.7)
2006	446	303	(67.9)	143	(32.1)
2007	473	325	(68.7)	148	(31.3)
2008	401	295	(73.6)	106	(26.4)
2009	350	246	(70.3)	104	(29.7)
2010	371	249	(67.1)	122	(32.9)
2011	319	229	(71.8)	90	(28.2)
2012	354	245	(69.2)	109	(30.8)
2013	323	231	(71.5)	92	(28.5)
2014	349	272	(77.9)	77	(22.1)
2006-2010 baseline	408	283	(69.4)	125	(30.6)
2011-2014 period	336	244	(72.6)	92	(27.4)

* Numbers are estimates based on the BAC distribution of drivers tested for alcohol.

** Dying within 30 days in collisions which occurred on public roadways.

Figure 8-4
Percent of Fatally Injured Drivers*
Positive for Alcohol: Ontario, 1996-2014



8.5.3 Drivers in serious injury crashes. Table 8-8 and Figure 8-5 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. Between 1996 and 2010, the percentage of all drivers in serious injury crashes that involved alcohol generally decreased from 22.1% to 14.5%, rose in 2012 (15.4%), and decreased again in 2014 (13.3%).

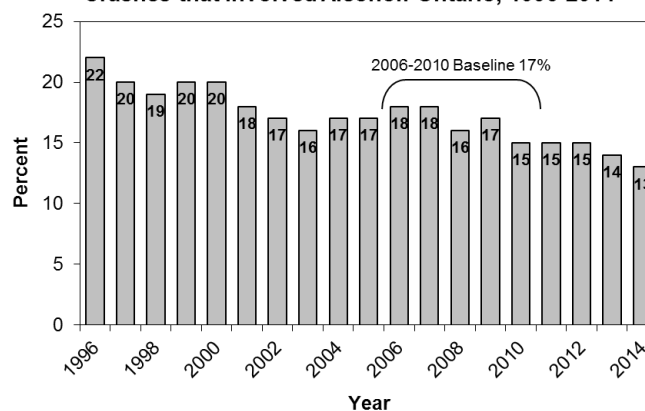
In the baseline period (2006-2010), an average of 16.8% of highway vehicle drivers in serious injury crashes were in an alcohol-involved crash. From 2011 to 2014, the average percentage of drivers in alcohol-involved crashes declined to 14.3%, a 14.9% decrease from the baseline period.

Table 8-8
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Ontario, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	6003	1326	(22.1)
1997	5442	1106	(20.3)
1998	5402	1026	(19.0)
1999	5486	1088	(19.8)
2000	5126	1030	(20.1)
2001	5199	916	(17.6)
2002	5468	939	(17.2)
2003	5086	829	(16.3)
2004	4568	787	(17.2)
2005	4724	783	(16.6)
2006	4155	759	(18.3)
2007	4312	763	(17.7)
2008	4096	669	(16.3)
2009	3306	556	(16.8)
2010	3292	477	(14.5)
2011	3238	497	(15.3)
2012	3255	488	(15.0)
2013	3135	425	(13.6)
2014	2975	396	(13.3)
2006-2010 baseline	3832	645	(16.8)
2011-2014 period	3151	452	(14.3)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 8-5
Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Ontario, 1996-2014



8.5.4 Drug use among fatally injured drivers. Table 8-9 and Figure 8-6 show data on drug use among fatally injured drivers of highway vehicles over a 15-year period (2000-2014). Similar to Table 8-6, these

results are based on fatally injured drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.5).

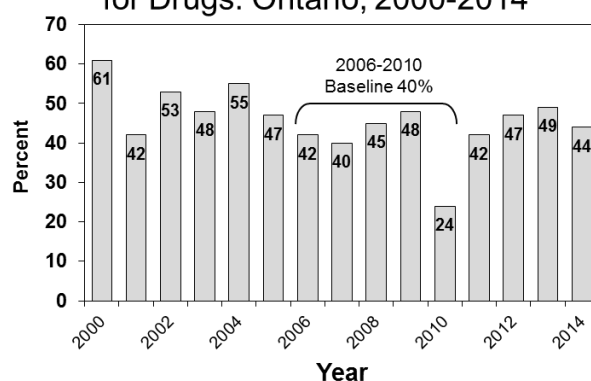
As can be seen at the bottom of Table 8-9, the percentage of fatally injured drivers testing positive for drugs from 2006-2010, the baseline period, is 40.9%. In the 2011-2014 period, 45.5% of fatally injured drivers tested positive for drugs, an 11.2% increase from the baseline period.

Table 8-9
Drug Use Among Fatally Injured Drivers of Highway Vehicles:
Ontario, 2000-2014

YEAR	Number of Drivers*	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	494	69	14.0	27	39.1	42	60.9
2001	484	93	19.2	54	58.1	39	41.9
2002	482	100	20.7	47	47.0	53	53.0
2003	500	113	22.6	59	52.2	54	47.8
2004	483	114	23.6	51	44.7	63	55.3
2005	461	144	31.2	76	52.8	68	47.2
2006	446	154	34.5	89	57.8	65	42.2
2007	473	173	36.6	104	60.1	69	39.9
2008	401	42	10.5	23	54.8	19	45.2
2009	350	29	8.3	15	51.7	14	48.3
2010	371	41	11.1	31	75.6	10	24.4
2011	319	226	70.8	132	58.4	94	41.6
2012	354	262	74.0	138	52.7	124	47.3
2013	323	264	81.7	136	51.5	128	48.5
2014	349	275	78.8	155	56.4	120	43.6
2006-2010 baseline	408	88	21.6	52	59.1	36	40.9
2011-2014 period	336	257	76.5	140	54.5	117	45.5

* Dying within 30 days in collisions which occurred on public roadways.

Figure 8-6
Percent of Fatally Injured Drivers Positive for Drugs: Ontario, 2000-2014



9.0 QUEBEC

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in Quebec during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 9.1);
- > alcohol use among fatally injured drivers (Section 9.2);
- > drivers involved in alcohol-related serious injury crashes (Section 9.3);
- > drug use among fatally injured drivers (Section 9.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 9.5).

9.1 Deaths in alcohol-related crashes

Table 9-1 presents information on people who died in alcohol-related crashes in Quebec during 2014. This table specifically reports upon persons who died within 30 days of a collision which occurred on a public roadway that involved at least one highway vehicle. Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities in which sufficient information was available to determine if alcohol was involved. *A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.*

For example, 41 people aged 26-35 were killed in motor vehicle crashes in Quebec during 2014. And, in 39 cases (95.1%) it was possible to determine if alcohol was a factor in the crash.

The next column shows the number of people killed in crashes that were known to be alcohol-involved. For example, 14 people aged 26-35 died in alcohol-related crashes in Quebec during 2014. The next column expresses this as a percentage – i.e., 35.9% of the 26-35 year olds who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among 26-35 year olds represent 20.6% of all the people killed in alcohol-related crashes in Quebec during 2014.

The totals at the bottom of the table provide a summary. As can be seen, 317 persons died within 30 days of a motor vehicle crash in Quebec during 2014. In 290 (91.5%) of these cases, it was possible to determine if alcohol was a factor. Of these known cases, 68 (23.4%) involved alcohol. Extrapolating this

figure to the total number of motor vehicle fatalities (317 x .234) it can be estimated that *in Quebec during 2014, 74 persons died in alcohol-related crashes within 30 days of the collision.*

9.1.1 Victim age. Of all the people who died in alcohol-related crashes, 20.6% (see last column) were aged 20-25 and 26-35; 17.6% were aged 46-55; 14.7% were over 55; 13.2% were aged 16-19; 10.3% were aged 36-45; and 2.9% were under age 16.

Table 9-1
Deaths in Alcohol-Related Crashes: Quebec, 2014

Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARDs
<u>Age Group</u>						
<16	9	8	88.9	2	25.0	2.9
16-19	28	26	92.9	9	34.6	13.2
20-25	41	40	97.6	14	35.0	20.6
26-35	41	39	95.1	14	35.9	20.6
36-45	31	29	93.5	7	24.1	10.3
46-55	58	56	96.6	12	21.4	17.6
>55	109	92	84.4	10	10.9	14.7
<u>Gender</u>						
Male	239	220	92.1	59	26.8	86.8
Female	78	70	89.7	9	12.9	13.2
<u>Victim Type</u>						
Driver/ Operator	231	214	92.6	52	24.3	76.5
Passenger	49	45	91.8	11	24.4	16.2
Pedestrian	37	31	83.8	5	16.1	7.4
<u>Vehicle Occupied</u>						
Automobiles	160	145	90.6	46	31.7	67.6
Trucks/Vans	55	50	90.9	10	20.0	14.7
Motorcycles	40	40	100.0	5	12.5	7.4
Other Hwy Vehicles	6	6	100.0	0	0.0	0.0
Off-road Vehicles	19	18	94.7	2	11.1	2.9
(Pedestrians)	37	31	83.8	5	16.1	7.4
TOTAL	317	290	91.5	68	23.4	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

The highest incidence of alcohol involvement occurred in the crashes in which persons aged 26-35 and 20-25 died (35.9% and 35.0% respectively). The lowest incidence of alcohol involvement was found among the oldest fatalities as 10.9% of persons over 55 years of age died in crashes involving alcohol.

9.1.2 Gender. Of all the people who died in alcohol-related crashes, 86.8% were males. The incidence of alcohol in crashes in which a male died (26.8%) was greater than the incidence of alcohol in crashes in which a female died (12.9%).

9.1.3 Victim type. Of all the people who died in alcohol-related crashes, 76.5% were drivers/operators of a vehicle; 16.2% were passengers; and 7.4% were pedestrians.

Within each of the victim types, the highest incidence of alcohol involvement (24.4%) occurred in crashes in which a passenger died. Alcohol was involved in 24.3% of the crashes in which a driver/operator died and 16.1% of those in which a pedestrian died.

9.1.4 Type of vehicle occupied. Of all the people who died in alcohol-related crashes, 67.6% were in an automobile; 14.7% were truck/van occupants; 7.4% were motorcyclists; and 2.9% were off-road vehicle occupants.

Within each of these vehicle types, the incidence of alcohol involvement in which an automobile occupant died was greater than the incidence of alcohol in crashes in which a truck/van occupant died (31.7% versus 20.0%). Among motorcyclists, 12.5% died in an alcohol-related crash compared to 11.1% of off-road vehicle occupants.

9.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in Quebec during 2014. Table 9-2 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests – the first three of these present results for drivers who showed any evidence of alcohol; the last three columns present information on drivers who had BACs over the statutory limit of 80 mg%.

To illustrate, among 16-19 year olds there were 12 drivers killed during 2014; 10 of these fatally injured drivers (83.3%) were tested for alcohol. Of those who were tested, four (40.0%) were positive for alcohol. This means that 16-19 year old fatally injured drinking drivers accounted for 8.7% of all drinking drivers who were killed.

Then, in the final three columns, it can be seen that three of the 10 (30.0%) fatally injured 16-19 year olds who were tested for alcohol had BACs in excess of 80 mg%. This means that three out of four drivers who tested positive for alcohol had BACs in excess of the legal limit. The final column expresses the number of drivers with illegal BACs as a percent of all drivers with BACs over the limit. Thus, 16-19 year old drivers accounted for 7.3% of all the drivers with BACs over the legal limit.

The main findings are shown by the totals at the bottom of the table. Quebec had an average testing rate in 2014, with 71.8% of fatally injured drivers being tested for alcohol use.

In Quebec, 30.1% had been drinking and 41 of 46 (89.1%) fatally injured drinking drivers had BACs over 80 mg%. Although not shown in the table, more refined analyses by different BAC categories show that among tested drivers:

- > 69.9% had BACs of zero mg%;
- > 3.3% had BACs from 1-49 mg%;
- > 0.0% had BACs from 50-80 mg%;
- > 5.2% had BACs from 81 to 160 mg%; and,
- > 21.6% had BACs over 160 mg%.

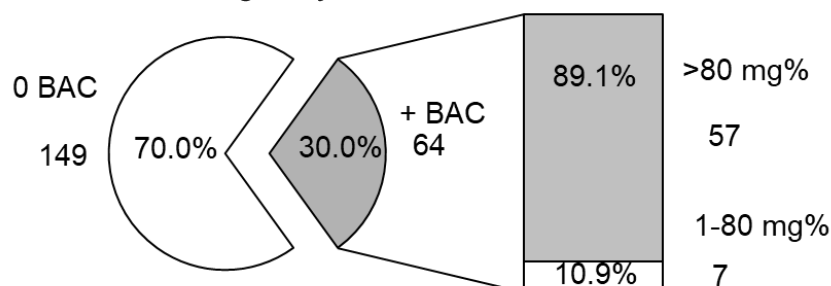
Table 9-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles: Quebec, 2014

Category of Driver	Number of Drivers*	Drivers Tested		Positive BAC			BAC >80 mg%		
		No.	% of total	No.	% of tested	% of all drivers with +BAC	No.	% of tested	% of all drivers with BAC >80 mg%
<u>Age Group</u>									
<16	1	1	100.0	0	0.0	0.0	0	0.0	0.0
16-19	12	10	83.3	4	40.0	8.7	3	30.0	7.3
20-25	32	24	75.0	10	41.7	21.7	8	33.3	19.5
26-35	32	29	90.6	12	41.4	26.1	11	37.9	26.8
36-45	23	17	73.9	4	23.5	8.7	4	23.5	9.8
46-55	43	36	83.7	11	30.6	23.9	11	30.6	26.8
>55	70	36	51.4	5	13.9	10.9	4	11.1	9.8
<u>Gender</u>									
Male	176	131	74.4	42	32.1	91.3	40	30.5	97.6
Female	37	22	59.5	4	18.2	8.7	1	4.5	2.4
<u>Vehicle Type</u>									
Automobiles	125	88	70.4	35	39.8	76.1	31	35.2	75.6
Truck/Van	44	31	70.5	6	19.4	13.0	6	19.4	14.6
Motorcycles	38	29	76.3	5	17.2	10.9	4	13.8	9.8
Tractor Trailer	6	5	83.3	0	0.0	0.0	0	0.0	0.0
<u>Collision Type</u>									
Single vehicle	89	64	71.9	33	51.6	71.7	31	48.4	75.6
Multiple vehicle	124	89	71.8	13	14.6	28.3	10	11.2	24.4
TOTAL	213	153	71.8	46	30.1	100.0	41	26.8	100.0

* Drivers dying within 30 days in crashes on public roadways.

In Figure 9-1, the BAC distribution for tested fatally injured drivers is extrapolated to reflect the BAC distribution for all fatally injured drivers. In this figure, 64 of 213 (30.0%) fatally injured drivers have a positive BAC. And among fatally injured drinking drivers, 57 (89.1%) have BACs over 80 mg%.

Figure 9-1
BACs* Among Fatally Injured Drivers
of Highway Vehicles: Quebec, 2014



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

9.2.1 Age differences. Of all the fatally injured drinking drivers (i.e., those with positive BAC), 26.1% were aged 26-35; 23.9% were aged 46-55; 21.7% were aged 20-25; 10.9% were over 55; and 8.7% were aged 16-19 and 36-45.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 26.8% were aged 26-35 and 46-55; 19.5% were aged 20-25; 9.8% were aged 36-45 and over 55; and 7.3% were aged 16-19.

When comparing the incidence of drinking and driving among fatally injured drivers by age group, fatally injured drivers aged 20-25 and 26-35 were the most likely to have been drinking (41.7% and 41.4%, respectively). By contrast, only 13.9% of the tested drivers over 55 had been drinking.

9.2.2 Gender differences. Males dominate the picture as they account for 91.3% of all the fatally injured drivers who had been drinking and 97.6% of all of the fatally injured drivers who were legally impaired.

Males dominate the picture largely because they account for most of the drivers who are killed (176 of the 213 fatalities or 82.6% are males). Fatally injured male drivers were more likely to have been drinking than female drivers (32.1% and 18.2%, respectively). And, 95.2% of the male and 25.0% of the female drivers who were drinking had BACs over the legal limit.

9.2.3 Vehicle differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 76.1% were automobile drivers; 13.0% were truck/van drivers; and 10.9% were motorcyclists.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 75.6% were automobile drivers; 14.6% were truck/van drivers; and 9.8% were motorcyclists.

Within each of the vehicle types, 39.8% of fatally injured automobile drivers, 19.4% of truck/van drivers, and 17.2% of motorcyclists had been drinking. None of the fatally injured tractor-trailer drivers had been drinking.

9.2.4 Collision differences. Less than half of the drivers killed (89 of the 213) were involved in single-vehicle collisions but these crashes accounted for almost three-quarters of the drivers who had been drinking or were legally impaired (71.7% and 75.6%, respectively). The reason for this apparent disparity is because alcohol is overrepresented in single-vehicle crashes. Over half of the drivers involved in single-vehicle crashes (51.6%) tested positive for alcohol, compared to only 14.6% of those involved in multiple-vehicle collisions.

9.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in Quebec. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 9-3 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers of involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol- related serious injury crashes.

As shown by the totals at the bottom of the table, 2,074 drivers were involved in crashes in which someone was seriously injured, and among these 14.4% were alcohol-related crashes.

9.3.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 25.5% were aged 20-25; 20.1% were aged 26-35; and 12.4% were aged 46-55. Drivers under 16 accounted for 0.0% and drivers over age 55 accounted for 9.1% of those involved in alcohol-related serious injury crashes.

Over one-quarter of the drivers aged 20-25 were involved in alcohol-related serious injury crashes (28.3%). The lowest incidence of involvement in alcohol-related crashes was found for those aged under 16 (0.0%) and over 55 (6.9%).

9.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 77.9% were males. The incidence of involvement in alcohol-related serious injury crashes was also greater for males than for females (16.1% and 10.5%, respectively).

Table 9-3
Drivers* in Alcohol-Related Serious Injury Crashes:
Quebec, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
<16	9	0	0.0	0.0
16-19	135	29	21.5	9.7
20-25	269	76	28.3	25.5
26-35	340	60	17.6	20.1
36-45	256	34	13.3	11.4
46-55	309	37	12.0	12.4
>55	391	27	6.9	9.1
unknown	365	35	9.6	11.7
<u>Gender</u>				
Male	1442	232	16.1	77.9
Female	535	56	10.5	18.8
unknown	97	10	10.3	3.4
<u>Vehicle Type</u>				
Auto and Truck/Van**	1696	263	15.5	88.3
Motorcycle	248	28	11.3	9.4
Tractor-Trailer	85	3	3.5	1.0
Other Hwy. Vehicle	45	4	8.9	1.3
<u>Collision Type</u>				
Single-Vehicle	667	237	35.5	79.5
Multiple-Vehicle	1407	61	4.3	20.5
TOTAL	2074	298	14.4	100.0

* Excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

** Automobiles and light trucks have been regrouped in collision data as of March 2010.

9.3.3 Type of vehicle driven. Drivers of automobiles and light trucks have been merged in this table as Quebec has regrouped these vehicle types into one category in its collision data since March 2010. Of all the drivers involved in alcohol-related serious injury crashes, 88.3% were automobile-truck/van drivers; 9.4% were motorcyclists; 1.3% were drivers of other highway vehicles; and 1.0% were tractor-trailer drivers.

The highest incidence of involvement in alcohol-related serious injury crashes was found for automobile-truck/van drivers – 15.5% of these drivers were in crashes that involved alcohol, compared to 11.3% for motorcyclists and 8.9% for drivers of other highway vehicles. Among tractor-trailer drivers, 3.5% were involved in alcohol-related crashes.

9.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 79.5% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in single-vehicle crashes – 35.5% of these drivers, compared to only 4.3% for drivers involved in multiple-vehicle crashes.

9.4 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in Quebec during 2014. A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 9-4 shows the prevalence of drug use among fatally injured drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.5). The table also shows the number of drivers who tested positive for various categories of drugs. A brief description of the different drug categories is provided in Section 2.2.5.

As can be seen, Quebec had an average testing rate in 2014, with 71.4% of fatally injured drivers being tested for drug use.

Table 9-4
Drug Use Among Fatally Injured Drivers of Highway
Vehicles: Quebec, 2014

Prevalence of Drug Use

Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
213	152	(71.4)	53	(34.9)

Categories of Drugs Found Among Drivers Testing Positive

Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive*
Cannabis	30	(56.6)
CNS Depressants	21	(39.6)
Narcotic Analgesics	21	(39.6)
CNS Stimulants	21	(39.6)
Dissociative Anesthetics	1	(1.9)
Hallucinogens	0	(0.0)
Inhalants	0	(0.0)

* Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

Among fatally injured tested drivers, 53 out of 152 (34.9%) were positive for drugs. The most common category of drugs found within drivers testing positive for drug use was cannabis (56.6%). Other categories of drugs found in fatally injured drivers testing positive for drugs were CNS depressants, narcotic analgesics, and CNS stimulants (39.6% each), as well as dissociative anesthetics (1.9%).

9.5 Trends in alcohol and drug-impaired driving

Sections 9.1 through 9.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 9.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

9.5.1 Deaths involving drinking drivers: 1996-2014. Table 9-5 and Figure 9-2 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2014. These results differ slightly from those in Section 9.1. In this section, deaths that occur in crashes that involve a drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

As shown in the table and figure, the number of deaths in crashes that involved a drinking driver generally dropped from 236 to 111 between 1996 and 2009, rose to 132 in 2011, and decreased again to a low of 73 in 2014. The percentage of alcohol-related fatalities fluctuated between 1996 and 2002, rose to 30.1% in 2003, generally decreased to 21.9% in 2007, rose to 28.9% in 2010, decreased to 22.4% in 2013, and rose slightly in 2014 (23.0%).

As shown at the bottom of the table, during the 2006-2010 baseline period there was an average of 128 fatalities involving a drinking driver and they accounted for 26.8% of all fatalities. This means that the percent of fatalities involving a drinking driver decreased by 6.3% from 26.8% in the baseline period (2006-2010) to 25.1% in the 2011-2014 period. In terms of the number of persons killed in crashes involving a drinking driver, there has been a 21.9% decrease from an average of 128 in the baseline period (2006-2010) to 100 in the 2011-2014 period.

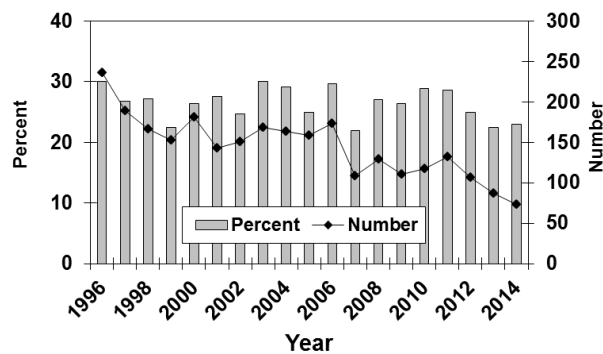
Table 9-5
Number* and Percent of Motor Vehicle Deaths Involving**
a Drinking Driver: Quebec, 1996-2014

Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	785	236	30.1
1997	706	189	26.8
1998	615	167	27.2
1999	682	153	22.4
2000	686	181	26.4
2001	519	143	27.6
2002	611	151	24.7
2003	561	169	30.1
2004	563	164	29.1
2005	636	159	25.0
2006	584	173	29.6
2007	497	109	21.9
2008	478	129	27.0
2009	421	111	26.4
2010	405	117	28.9
2011	462	132	28.6
2012	428	107	25.0
2013	388	87	22.4
2014	317	73	23.0
2006-2010 baseline	477	128	26.8
2011-2014 period	399	100	25.1

* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

Figure 9-2
Number and Percent of Deaths Involving
a Drinking Driver: Quebec, 1996-2014



9.5.2 Alcohol use among fatally injured drivers. Data on alcohol use among fatally injured drivers of highway vehicles over the 19-year period from 1996-2014 are shown in Table 9-6. Trends are illustrated in Figure 9-3 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol (represented by the white area); (2) had BACs below the legal limit (shown by the light grey area); and (3) had BACs over the legal limit (the dark grey area). The data reported here

are restricted to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2).

As can be seen, the percent of fatally injured drivers with BACs over the legal limit generally declined from 1996 (37.2%) to its lowest point in 1999 (22.0%), rose to 38.7% in 2003, fluctuated until 2008, and gradually decreased to 26.8% in 2014. The percent of fatally injured drivers with zero BACs generally increased from 1996 (57.3%) to 1999 (71.9%), fluctuated until 2010 (62.9%), and generally rose until 2014 (60.9%). The percent of fatally injured drivers with BACs between 1 and 80 mg% peaked in 2004 (9.1%), and eventually decreased to 3.3% in 2014.

When compared to the 2006-2010 baseline period shown at the bottom of Table 9-6, the percentage of fatally injured drivers with zero BACs in the 2011-2014 period increased by 7.0% (from 61.6% to 65.9%). Among drivers with BACs from 1-80 mg%, there was a 25.8% decrease (from 6.6% to 4.9%). And among those with BACs over 80 mg%, there was an 8.2% decrease (from 31.8% to 29.2%).

Table 9-6
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Quebec, 1996-2014

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	454	344	75.8	197	57.3	19	5.5	128	37.2
1997	389	275	70.7	160	58.2	19	6.9	96	34.9
1998	368	262	71.2	152	58.0	15	5.7	95	36.3
1999	411	313	76.2	225	71.9	19	6.1	69	22.0
2000	407	311	76.4	199	64.0	23	7.4	89	28.6
2001	326	240	73.6	148	61.7	18	7.5	74	30.8
2002	394	300	76.1	199	66.3	14	4.7	87	29.0
2003	352	253	71.9	140	55.3	15	5.9	98	38.7
2004	347	243	70.0	145	59.7	22	9.1	76	31.3
2005	419	300	71.6	191	63.7	20	6.7	89	29.7
2006	380	266	70.0	162	60.9	23	8.6	81	30.5
2007	321	207	64.5	139	67.1	12	5.8	56	27.1
2008	304	236	77.6	140	59.3	13	5.5	83	35.2
2009	276	180	65.2	105	58.3	12	6.7	63	35.0
2010	255	167	65.5	105	62.9	11	6.6	51	30.5
2011	300	201	67.0	124	61.7	11	5.5	66	32.8
2012	286	193	67.5	128	66.3	9	4.7	56	29.0
2013	257	194	75.5	131	67.5	11	5.7	52	26.8
2014	213	153	71.8	107	69.9	5	3.3	41	26.8
2006-2010 baseline	307	211	(68.7)	130	(61.6)	14	(6.6)	67	(31.8)
2011-2014 period	263	185	(70.3)	122	(65.9)	9	(4.9)	54	(29.2)

* Dying within 30 days in collisions which occurred on public roadways.

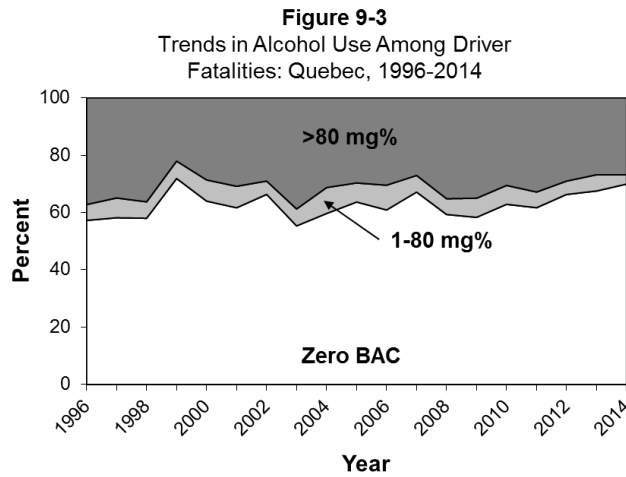


Table 9-7 and Figure 9-4 also show data on alcohol use among fatally injured drivers from 1996 to 2014. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC distribution of drivers tested for alcohol (see Figure 9-1). Second, drivers are grouped in only two BAC categories: zero and positive.

As can be seen at the bottom of Table 9-7, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 38.4%. In the 2011-2014 period, 34.1% of fatally injured drivers tested positive for alcohol, an 11.2% decrease from the baseline period.

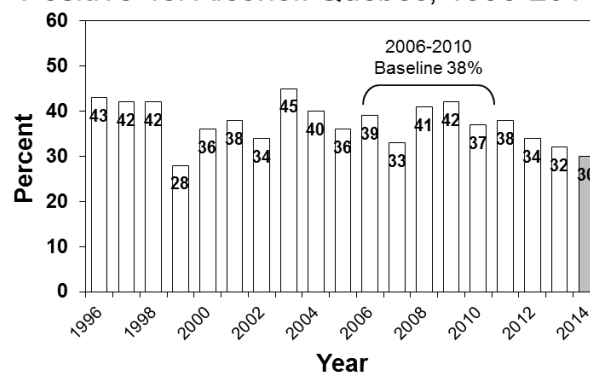
Table 9-7
Alcohol Use* Among Fatally Injured Drivers of Highway Vehicles:
Quebec, 1996-2014

Year	Number of Drivers**	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	454	260	(57.3)	194	(42.7)
1997	389	226	(58.1)	163	(41.9)
1998	368	213	(57.9)	155	(42.1)
1999	411	295	(71.8)	116	(28.2)
2000	407	260	(63.9)	147	(36.1)
2001	326	201	(61.7)	125	(38.3)
2002	394	261	(66.2)	133	(33.8)
2003	352	195	(55.4)	157	(44.6)
2004	347	207	(59.7)	140	(40.3)
2005	419	267	(63.7)	152	(36.3)
2006	380	231	(60.8)	149	(39.2)
2007	321	216	(67.3)	105	(32.7)
2008	304	180	(59.2)	124	(40.8)
2009	276	159	(57.6)	117	(42.4)
2010	255	160	(62.7)	95	(37.3)
2011	300	185	(61.7)	115	(38.3)
2012	286	190	(66.4)	96	(33.6)
2013	257	174	(67.7)	83	(32.3)
2014	213	149	(70.0)	64	(30.0)
2006-2010 baseline	307	189	(61.6)	118	(38.4)
2011-2014 period	264	174	(65.9)	90	(34.1)

* Numbers are estimates based on the BAC distribution of drivers tested for alcohol.

** Dying within 30 days in collisions which occurred on public roadways.

Figure 9-4
Percent of Fatally Injured Drivers*
Positive for Alcohol: Quebec, 1996-2014



9.5.3 Drivers in serious injury crashes. Table 9-8 and Figure 9-5 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. Between 1996 and 1997, the percentage of all drivers in serious injury crashes that involved alcohol generally decreased from 18.9% to 15.3%, rose to 18.8% in 2009, and eventually decreased to 14.4% in 2014.

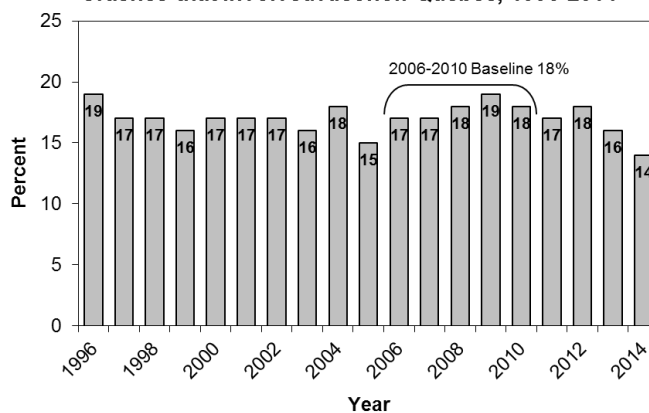
In the baseline period (2006-2010), an average of 17.8% of highway vehicle drivers in serious injury crashes were in an alcohol-involved crash. From 2011 to 2014, the average percentage of drivers in alcohol-involved crashes declined to 16.4%, a 7.9% decrease from the baseline period.

Table 9-8
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Quebec, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	5382	1018	(18.9)
1997	5146	871	(16.9)
1998	4782	800	(16.7)
1999	4557	740	(16.2)
2000	4455	750	(16.8)
2001	4179	699	(16.7)
2002	4323	746	(17.3)
2003	4386	679	(15.5)
2004	4337	761	(17.5)
2005	4856	745	(15.3)
2006	4404	741	(16.8)
2007	3350	584	(17.4)
2008	2812	508	(18.1)
2009	2740	515	(18.8)
2010	2895	531	(18.3)
2011	2542	443	(17.4)
2012	2490	446	(17.9)
2013	2218	345	(15.6)
2014	2074	298	(14.4)
2006-2010 baseline	3240	576	(17.8)
2011-2014 period	2331	383	(16.4)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 9-5
Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Quebec, 1996-2014



9.5.4 Drug use among fatally injured drivers. Table 9-9 and Figure 9-6 show data on drug use among fatally injured drivers of highway vehicles over a 15-year period (2000-2014). Similar to Table 9-6, these

results are based on fatally injured drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.5).

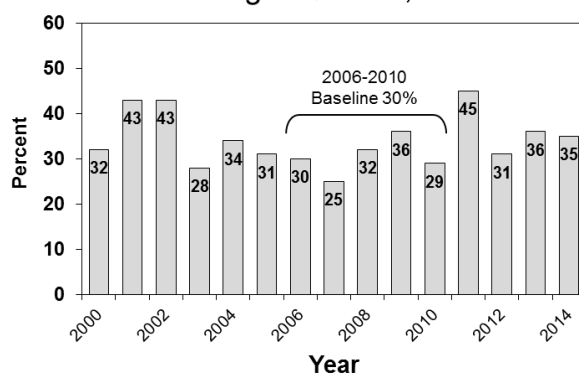
As can be seen at the bottom of Table 9-9, the percentage of fatally injured drivers testing positive for drugs from 2006-2010, the baseline period, is 30.2%. In the 2011-2014 period, 36.3% of fatally injured drivers tested positive for drugs, a 20.2% increase from the baseline period.

Table 9-9
Drug Use Among Fatally Injured Drivers of Highway Vehicles:
Quebec, 2000-2014

YEAR	Number of Drivers*	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	407	189	46.4	128	67.7	61	32.3
2001	326	210	64.4	120	57.1	90	42.9
2002	394	256	65.0	145	56.6	111	43.4
2003	352	211	59.9	153	72.5	58	27.5
2004	347	167	48.1	110	65.9	57	34.1
2005	419	219	52.3	152	69.4	67	30.6
2006	380	244	64.2	170	69.7	74	30.3
2007	321	197	61.4	147	74.6	50	25.4
2008	304	216	71.1	147	68.1	69	31.9
2009	276	137	49.6	88	64.2	49	35.8
2010	255	151	59.2	107	70.9	44	29.1
2011	300	186	62.0	103	55.4	83	44.6
2012	286	190	66.4	132	69.5	58	30.5
2013	257	186	72.4	120	64.5	66	35.5
2014	213	152	71.4	99	65.1	53	34.9
2006-2010 baseline	307	189	61.6	132	69.8	57	30.2
2011-2014 period	264	179	67.8	114	63.7	65	36.3

* Dying within 30 days in collisions which occurred on public roadways.

Figure 9-6
Percent of Fatally Injured Drivers
Positive for Drugs: Quebec, 2000-2014



10.0 NEW BRUNSWICK

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in New Brunswick during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 10.1);
- > alcohol use among fatally injured drivers (Section 10.2);
- > drivers involved in alcohol-related serious injury crashes (Section 10.3);
- > drug use among fatally injured drivers (Section 10.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 10.5).

10.1 Deaths in alcohol-related crashes

Table 10-1 presents information on people who died in alcohol-related crashes in New Brunswick during 2014. This table specifically reports upon persons who died within 30 days of a collision which occurred on a public roadway that involved at least one highway vehicle. Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities in which sufficient information was available to determine if alcohol was involved. *A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.*

For example, seven people aged 20-25 were killed in motor vehicle crashes in New Brunswick during 2014. And, in all seven cases (100.0%) it was possible to determine if alcohol was a factor in the crash.

The next column shows the number of people killed in crashes that were known to be alcohol-involved. There were three people aged 20-25 who died in alcohol-related crashes in New Brunswick during 2014. The next column expresses this as a percentage – i.e., 42.9% of the 20-25 year olds who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among 20-25 year olds represent 30.0% of all the people killed in alcohol-related crashes in New Brunswick during 2014.

The totals at the bottom of the table provide a summary. As can be seen, 51 persons died within 30 days of a motor vehicle crash in New Brunswick during 2014. In 50 (98.0%) of these cases, it was possible to determine if alcohol was a factor. Of these known cases, 10 (20.4%) involved alcohol.

Extrapolating this figure to the total number of motor vehicle fatalities (51 x .204) it can be estimated that *in New Brunswick during 2014, 10 persons died in alcohol-related crashes within 30 days of the collision.*

Table 10-1
Deaths in Alcohol-Related Crashes: New Brunswick, 2014

Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARDs
<u>Age Group</u>						
<16	2	2	100.0	0	0.0	0.0
16-19	5	5	100.0	0	0.0	0.0
20-25	7	7	100.0	3	42.9	30.0
26-35	4	4	100.0	2	50.0	20.0
36-45	6	6	100.0	1	16.7	10.0
46-55	6	6	100.0	2	33.3	20.0
>55	21	20	95.2	2	10.0	20.0
<u>Gender</u>						
Male	37	36	97.3	9	25.0	90.0
Female	14	14	100.0	1	7.1	10.0
<u>Victim Type</u>						
Driver/ Operator	31	31	100.0	6	19.4	60.0
Passenger	15	15	100.0	2	13.3	20.0
Pedestrian	5	4	80.0	2	50.0	20.0
<u>Vehicle Occupied</u>						
Automobiles	26	26	100.0	3	11.5	30.0
Trucks/Vans	16	16	100.0	3	18.8	30.0
Other Vehicles**	4	4	100.0	2	50.0	20.0
(Pedestrians)	5	4	80.0	2	50.0	20.0
TOTAL	51	50	98.0	10	20.0	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

** Motorcyclists and occupants of off-road vehicles have been aggregated to ensure that an individual will not be identified.

10.1.1 Victim age. Of all the people who died in alcohol-related crashes, 30.0% (see last column) were aged 20-25; 20.0% were aged 26-35, 46-55, and over 55; and 10.0% were aged 36-45.

The highest incidence of alcohol involvement occurred in the crashes in which a person aged 26-35 died (50.0%). The lowest incidence of alcohol involvement was found among fatalities under 16 and 16-19 – 0.0% of persons in these age groups died in crashes involving alcohol.

10.1.2 Gender. Of all the people who died in alcohol-related crashes, 90.0% were males. The incidence of alcohol in crashes in which a male died (25.7%) was greater than the incidence of alcohol in crashes in which a female died (7.1%).

10.1.3 Victim type. Of all the people who died in alcohol-related crashes, 60.0% were drivers/operators of a vehicle; and 20.0% each were passengers and pedestrians.

Within each of the victim types, the highest incidence of alcohol involvement (66.7%) occurred in the crashes in which a pedestrian died. Alcohol was involved in 19.4% of the crashes in which a driver/operator died and 13.3% of those in which a passenger died.

10.1.4 Type of vehicle occupied. Motorcyclists and occupants of off-road vehicles have been aggregated to ensure that an individual will not be identified. Of all the people who died in alcohol-related crashes, 30.0% each were automobile and truck/van occupants; and 20.0% were occupants of other vehicles.

Within each of these vehicle types, the incidence of alcohol involvement in which another vehicle occupant died was greater than the incidence of alcohol in crashes in which a truck/van occupant or automobile occupant died (50.0% versus 18.8% versus 11.5%).

10.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in New Brunswick during 2014. Table 10-2 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests: the first three of these present results for drivers who showed any evidence of alcohol; the last three columns present information on drivers who had BACs over the statutory limit of 80 mg%.

To illustrate, among 36-45 year olds there were four drivers killed during 2014; all four of these fatally injured drivers (100.0%) were tested for alcohol. Of those who were tested, two (50.0%) were positive for alcohol. This means that fatally injured drinking drivers aged 36-45 accounted for 33.3% of all drinking drivers who were killed.

Table 10-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles: New Brunswick, 2014

Category of Driver	Number of Drivers*	Drivers Tested		Positive BAC			BAC >80 mg%		
		No.	% of total	No.	% of tested	% of all drivers with +BAC	No.	% of tested	% of all drivers with BAC >80 mg%
<u>Age Group</u>									
16-19	3	3	100.0	0	0.0	0.0	0	0.0	0.0
20-25	4	4	100.0	1	25.0	16.7	1	25.0	16.7
26-35	4	4	100.0	2	50.0	33.3	2	50.0	33.3
36-45	4	4	100.0	2	50.0	33.3	2	50.0	33.3
46-55	3	3	100.0	1	33.3	16.7	1	33.3	16.7
>55	12	9	75.0	0	0.0	0.0	0	0.0	0.0
<u>Gender</u>									
Male	25	22	88.0	6	27.3	100.0	6	27.3	100.0
Female	5	5	100.0	0	0.0	0.0	0	0.0	0.0
<u>Vehicle Type</u>									
Automobiles	19	18	94.7	2	11.1	33.3	2	11.1	33.3
Truck/Van	9	7	77.8	3	42.9	50.0	3	42.9	50.0
Motorcycles	2	2	100.0	1	50.0	16.7	1	50.0	16.7
<u>Collision Type</u>									
Single vehicle	16	15	93.8	6	40.0	100.0	6	40.0	100.0
Multiple vehicle	14	12	85.7	0	0.0	0.0	0	0.0	0.0
TOTAL	30	27	90.0	6	22.2	100.0	6	22.2	100.0

* Drivers dying within 30 days in crashes on public roadways.

Then, in the final three columns, it can be seen that two of the four (50.0%) fatally injured 36-45 year olds who were tested for alcohol had BACs in excess of 80 mg%. This means that both drivers who tested positive for alcohol had BACs above the legal limit. The final column expresses the number of drivers with illegal BACs as a percent of all drivers with BACs over the limit. Thus, 36-45 year old drivers accounted for 33.3% of all the drivers with BACs over the legal limit.

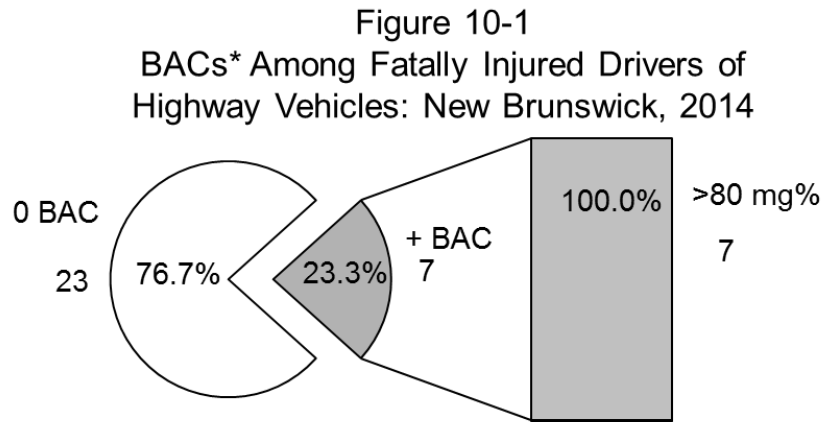
The main findings are shown by the totals at the bottom of the table. New Brunswick had a very high testing rate in 2014, with 90.0% of fatally injured drivers being tested for alcohol use.

In New Brunswick, 22.2% had been drinking and all six (100.0%) fatally injured drinking drivers had BACs >80 mg%. Although not shown in the table, more refined analyses by different BAC categories show that among tested drivers:

- > 77.8% had BACs of zero mg%;
- > 0.0% had BACs from 1-49 mg%;
- > 0.0% had BACs from 50-80 mg%
- > 7.4% had BACs from 81 to 160 mg%; and,

- > 14.8% had BACs over 160 mg%.

In Figure 10-1, the BAC distribution for tested fatally injured drivers is extrapolated to reflect the BAC distribution for all fatally injured drivers. In this figure seven of 30 (23.3%) fatally injured drivers have a positive BAC. And among fatally injured drinking drivers, all seven (100.0%) have BACs over 80 mg%.



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

10.2.1 Age differences. Of all the fatally injured drinking drivers (i.e., those with positive BAC), 33.3% were aged 26-35 and 36-45; and 16.7% were aged 20-25 and 46-55.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 33.3% were aged 26-35 and 36-45; and 16.7% were aged 20-25 and 46-55.

When comparing the incidence of drinking and driving among fatally injured drivers by age group, fatally injured drivers aged 26-35 and 36-45 were the most likely to have been drinking (50.0%). By contrast, 0.0% of the tested drivers aged 16-19 and over 55 had been drinking.

10.2.2 Gender differences. Males dominate the picture – they account for 100.0% of the fatally injured drivers who had been drinking and those who were legally impaired.

Males dominate the picture largely because they account for most of the drivers who are killed (25 of the 30 fatalities or 83.3% are males). Fatally injured male drivers were more likely to have been drinking than female drivers (27.3% and 0.0%, respectively). And, 100.0% of the male drivers and 0.0% of the female drivers who were drinking had BACs over the legal limit.

10.2.3 Vehicle differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 50.0% were truck/van drivers; 33.3% were automobile drivers; and 16.7% were motorcyclists.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 50.0% were truck/van drivers; 33.3% were automobile drivers; and 16.7% were motorcyclists.

Within each of the vehicle types, 50.0% of fatally injured motorcyclists, 42.9% of truck/van drivers, and 11.1% of automobile drivers had been drinking.

10.2.4 Collision differences. Slightly more than half of the drivers killed (16 of the 30) were involved in single-vehicle collisions but these crashes accounted for all of the drivers (100.0%) who had been drinking or were legally impaired.

The reason for this apparent disparity is because alcohol is overrepresented in single-vehicle crashes. Two-fifths of the drivers involved in single-vehicle crashes (40.0%) tested positive for alcohol, compared to 0.0% of those involved in multiple-vehicle collisions.

10.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in New Brunswick. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 10-3 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 222 drivers were involved in crashes in which someone was seriously injured, and among these 23.9% were involved in alcohol-related crashes.

10.3.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 26.4% were aged 26-35; 24.5% were aged 20-25; and 18.9% were aged 46-55. Drivers under 16 and aged 16-19 respectively accounted for only 0.0% and 3.8% of those involved in alcohol-related serious injury crashes.

Over two-fifths of the drivers aged 26-35 were involved in alcohol-related serious injury crashes (42.4%). The lowest incidence of involvement in alcohol-related crashes was found for those aged under 16 and over 55 (0.0% and 9.4%, respectively).

10.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 75.5% were males. The incidence of involvement in alcohol-related serious injury crashes was also greater for males than for females (26.8% and 17.9%, respectively).

Table 10-3
Drivers* in Alcohol-Related Serious Injury Crashes:
New Brunswick, 2014

New Brunswick, 2014				
Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
<16	1	0	0.0	0.0
16-19	11	2	18.2	3.8
20-25	34	13	38.2	24.5
26-35	33	14	42.4	26.4
36-45	26	6	23.1	11.3
46-55	46	10	21.7	18.9
>55	64	6	9.4	11.3
unknown	7	2	28.6	3.8
<u>Gender</u>				
Male	149	40	26.8	75.5
Female	67	12	17.9	22.6
unknown	6	1	16.7	1.9
<u>Vehicle Type</u>				
Auto	119	31	26.1	58.5
Truck/Van	61	16	26.2	30.2
Motorcycle	30	5	16.7	9.4
Tractor-Trailer	10	0	0.0	0.0
Other Hwy. Vehicle	2	1	50.0	1.9
<u>Collision Type</u>				
Single-Vehicle	92	39	42.4	73.6
Multiple-Vehicle	130	14	10.8	26.4
TOTAL	222	53	23.9	100.0

* Excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

10.3.3 Type of vehicle driven. Of all the drivers involved in alcohol-related serious injury crashes, 58.5% were automobile drivers; 30.2% were truck/van drivers; 9.4% were motorcyclists; and 1.9% were drivers of other highway vehicles.

The highest incidence of involvement in alcohol-related serious injury crashes was found for drivers of other highway vehicles – 50.0% of these drivers were in crashes that involved alcohol, compared to 26.2% for truck/van drivers, 26.1% for automobile drivers, and 16.7% for motorcyclists.

10.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 73.6% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in single-vehicle crashes – 42.4% of these drivers, compared to only 10.8% for drivers involved in multiple-vehicle crashes.

10.4 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in New Brunswick during 2014. A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 10-4 shows the prevalence of drug use among fatally injured drivers of highway vehicles who died within 30 days of a crash which occurred on a

public roadway (see Section 2.2.5). The table also shows the number of drivers who tested positive for various categories of drugs. A brief description of the different drug categories is provided in Section 2.2.5.

As can be seen, New Brunswick had a high testing rate in 2014, with 83.3% of fatally injured drivers being tested for drug use.

Among fatally injured tested drivers, 17 out of 25 (68.0%) were positive for drugs. The most common category of drugs found within drivers testing positive for drug use was CNS depressants (58.8%). Other categories of drugs found in fatally injured drivers testing positive for drugs were cannabis and narcotic analgesics (41.2% each), CNS stimulants (23.5%), and dissociative analgesics (5.9%).

Table 10-4
Drug Use Among Fatally Injured Drivers* of
Highway Vehicles: New Brunswick, 2014

Prevalence of Drug Use				
Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
30	25	(83.3)	17	(68.0)

Categories of Drugs Found Among Drivers Testing Positive		
Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive**
CNS Depressants	10	(58.8)
Cannabis	7	(41.2)
Narcotic Analgesics	7	(41.2)
CNS Stimulants	4	(23.5)
Dissociative Anesthetics	1	(5.9)
Hallucinogens	0	(0.0)
Inhalants	0	(0.0)

* Dying within 30 days in collisions which occurred on public roadways.

** Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

10.5 Trends in alcohol and drug-impaired driving

Sections 10.1 through 10.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 10.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

10.5.1 Deaths involving drinking drivers: 1996-2014. Table 10-5 and Figure 10-2 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2014. These results differ slightly from those in Section 10.1. In this section, deaths that occur in crashes that involve a

drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

As shown in the figure, the number of deaths in crashes that involved a drinking driver generally dropped from 33 in 1996 to 25 in 2008, peaked at 39 in 2010, and fell to a low of eight in 2014. The percentage of alcohol-related fatalities generally decreased from 34.4% in 1996 to 26.9% in 2000, peaked at 41.1% in 2010, and generally decreased to its lowest level in 2014 (15.7%).

Table 10-5
Number* and Percent of Motor Vehicle Deaths Involving**
a Drinking Driver: New Brunswick, 1996-2014

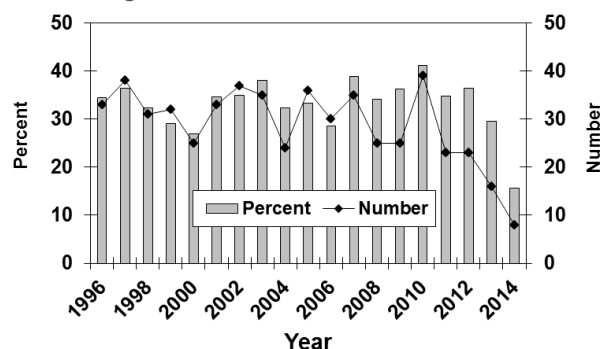
Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	96	33	34.4
1997	104	38	36.5
1998	96	31	32.3
1999	110	32	29.1
2000	93	25	26.9
2001	95	33	34.7
2002	106	37	34.9
2003	92	35	38.0
2004	74	24	32.4
2005	108	36	33.3
2006	105	30	28.6
2007	90	35	38.9
2008	73	25	34.2
2009	69	25	36.2
2010	95	39	41.1
2011	66	23	34.8
2012	63	23	36.5
2013	54	16	29.6
2014	51	8	15.7
2006-2010 baseline	86	31	36.0
2011-2014 period	59	18	30.5

* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

As shown at the bottom of the table, during the 2006-2010 baseline period there was an average of 31 fatalities involving a drinking driver and they accounted for 36.0% of all fatalities. This means that the percent of fatalities involving a drinking driver decreased by 15.3% from 36.0% in the baseline period (2006-2010) to 30.5% in the 2011-2014 period. In terms of the number of persons killed in crashes involving a drinking driver, there has been a 41.9% decrease from an average of 31 in the baseline period (2006-2010) to 18 in the 2011-2014 period.

Figure 10-2
Number and Percent of Deaths Involving a
Drinking Driver: New Brunswick, 1996-2014



10.5.2 Alcohol use among fatally injured drivers. Data on alcohol use among fatally injured drivers of highway vehicles over the 19-year period from 1996-2014 are shown in Table 10-6. Trends are illustrated in Figure 10-3 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol (represented by the white area); (2) had BACs below the legal limit (shown by the light grey area); and (3) had BACs over the legal limit (the dark grey area). The data reported here are restricted to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2).

As can be seen, the percentage of fatally injured drivers with BACs over the legal limit fluctuated, peaking in 2010 (45.6%) generally decreasing until 2013 (16.1%), and rising again in 2014 (22.2%). The percent of fatally injured drivers with zero BACs generally decreased from 1996 (62.5%) to 2001 (46.5%), generally increased until 2006 (67.2%), eventually decreased in 2010 (50.9%), and peaked in 2014 (77.8%). The percent of fatally injured drivers with BACs between 1 and 80 mg% generally rose from 1996 (8.3%) until 2001 (11.6%), fluctuated until 2007, declined until 2011 (2.5%), peaked in 2013 (12.9%), and fell to 0.0% in 2014.

When compared to the 2006-2010 baseline period shown at the bottom of Table 10-6, the percentage of fatally injured drivers with zero BACs in the 2011-2014 period increased by 18.4% (from 57.1% to 77.8%). Among drivers with BACs from 1-80 mg%, there was a 3.3% decrease (from 6.1% to 5.9%). And among drivers with BACs over 80 mg%, there was a 27.8% decrease (from 36.7% to 26.5%).

Table 10-6
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
New Brunswick, 1996-2014

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	56	48	85.7	30	62.5	4	8.3	14	29.2
1997	58	52	89.7	30	57.7	4	7.7	18	34.6
1998	57	50	87.7	29	58.0	2	4.0	19	38.0
1999	60	49	81.7	32	65.3	2	4.1	15	30.6
2000	51	40	78.4	24	60.0	2	5.0	14	35.0
2001	56	43	76.8	20	46.5	5	11.6	18	41.9
2002	61	49	80.3	30	61.2	2	4.1	17	34.7
2003	59	53	89.8	31	58.5	4	7.5	18	34.0
2004	42	37	88.1	25	67.6	2	5.4	10	27.0
2005	60	54	90.0	35	64.8	3	5.6	16	29.6
2006	65	58	89.2	39	67.2	3	5.2	16	27.6
2007	50	45	90.0	23	51.1	5	11.1	17	37.8
2008	41	38	92.7	20	52.6	2	5.3	16	42.1
2009	48	46	95.8	28	60.9	2	4.3	16	34.8
2010	60	57	95.0	29	50.9	2	3.5	26	45.6
2011	45	40	88.9	27	67.5	1	2.5	12	30.0
2012	39	36	92.3	24	66.7	1	2.8	11	30.6
2013	34	31	91.2	22	71.0	4	12.9	5	16.1
2014	30	27	90.0	21	77.8	0	0.0	6	22.2
2006-2010 baseline	53	49	(92.5)	28	(57.1)	3	(6.1)	18	(36.7)
2011-2014 period	37	34	(91.9)	23	(67.6)	2	(5.9)	9	(26.5)

* Dying within 30 days in collisions which occurred on public roadways.

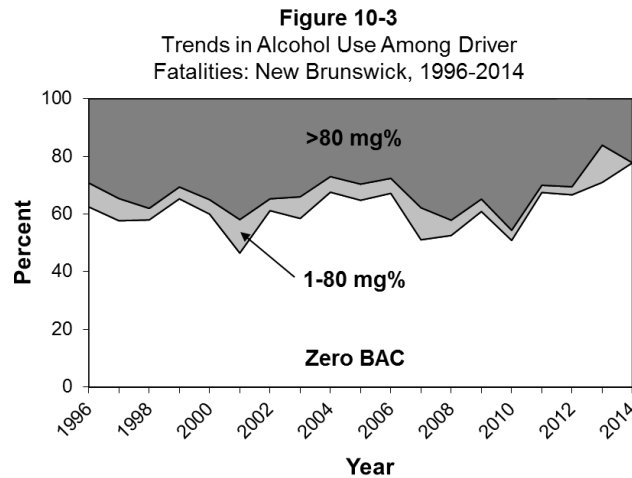


Table 10-7 and Figure 10-4 also show data on alcohol use among fatally injured drivers from 1996 to 2014. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC

distribution of drivers tested for alcohol (see Figure 10-1). Second, drivers are grouped in only two BAC categories: zero and positive.

As can be seen at the bottom of Table 10-7, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 43.4%. In the 2011-2014 period, 29.7% of fatally injured drivers tested positive for alcohol, a 31.6% decrease from the baseline period.

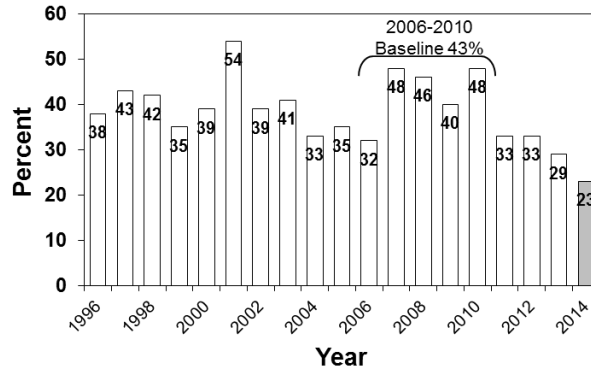
Table 10-7
Alcohol Use* Among Fatally Injured Drivers of Highway Vehicles:
New Brunswick, 1996-2014

Year	Number of Drivers**	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	56	35	(62.5)	21	(37.5)
1997	58	33	(56.9)	25	(43.1)
1998	57	33	(57.9)	24	(42.1)
1999	60	39	(65.0)	21	(35.0)
2000	51	31	(60.8)	20	(39.2)
2001	56	26	(46.4)	30	(53.6)
2002	61	37	(60.7)	24	(39.3)
2003	59	35	(59.3)	24	(40.7)
2004	42	28	(66.7)	14	(33.3)
2005	60	39	(65.0)	21	(35.0)
2006	65	44	(67.7)	21	(32.3)
2007	50	26	(52.0)	24	(48.0)
2008	41	22	(53.7)	19	(46.3)
2009	48	29	(60.4)	19	(39.6)
2010	60	31	(51.7)	29	(48.3)
2011	45	30	(66.7)	15	(33.3)
2012	39	26	(66.7)	13	(33.3)
2013	34	24	(70.6)	10	(29.4)
2014	30	23	(76.7)	7	(23.3)
2006-2010 baseline	53	30	(56.6)	23	(43.4)
2011-2014 period	37	26	(70.3)	11	(29.7)

* Numbers are estimates based on the BAC distribution of drivers tested for alcohol.

** Dying within 30 days in collisions which occurred on public roadways.

Figure 10-4
Percent of Fatally Injured Drivers* Positive
for Alcohol: New Brunswick, 1996-2014



10.5.3 Drivers in serious injury crashes. Table 10-8 and Figure 10-5 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. Collision data from 2013 for New Brunswick were not available at the time this report was being prepared. For this reason, the 2011-2014 period in this table only includes data for 2011, 2012, and 2014. From 1996 to 2001, the percentage of all drivers in serious injury crashes that involved alcohol generally rose from 24.5% to a high of 27.8%. Since then, the incidence declined until 2005 (23.8%), rose in 2010 (27.5%), and decreased until 2014 (23.9%).

In the baseline period (2006-2010), an average of 25.6% of drivers in serious injury crashes were in an alcohol-involved crash. In the 2011-2014 period, the percentage of drivers in serious injury crashes involving alcohol was 25.5%, resulting in a 0.4% decrease.

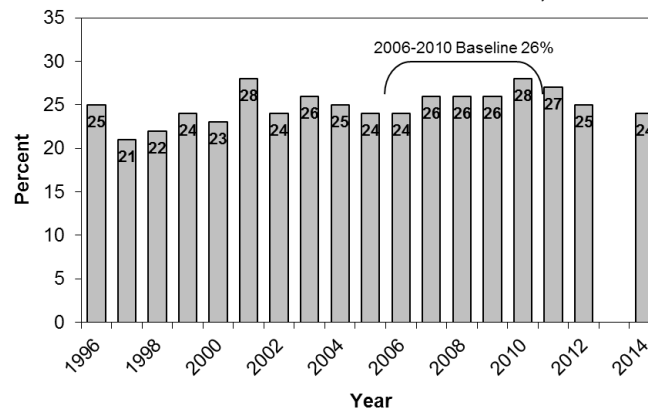
Table 10-8
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: New Brunswick, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	597	146	(24.5)
1997	561	118	(21.0)
1998	542	121	(22.3)
1999	512	124	(24.2)
2000	493	112	(22.7)
2001	511	142	(27.8)
2002	439	105	(23.9)
2003	426	110	(25.8)
2004	425	108	(25.4)
2005	429	102	(23.8)
2006	369	89	(24.1)
2007	327	85	(26.0)
2008	302	78	(25.8)
2009	313	80	(25.6)
2010	309	85	(27.5)
2011	277	76	(27.4)
2012	230	57	(24.8)
2013			
2014	222	53	(23.9)
2006-2010 baseline	324	83	(25.6)
2011-2014 period**	243	62	(25.5)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

** 2013 data were not available at the time of publication; the 2011-2014 period only includes 2011, 2012 and 2014.

Figure 10-5
Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: New Brunswick, 1996-2014



10.5.4 Drug use among fatally injured drivers. Table 10-9 and Figure 10-6 show data on drug use among fatally injured drivers of highway vehicles over a 15-year period (2000-2014). Similar to Table 10-6, these results are based on fatally injured drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.5).

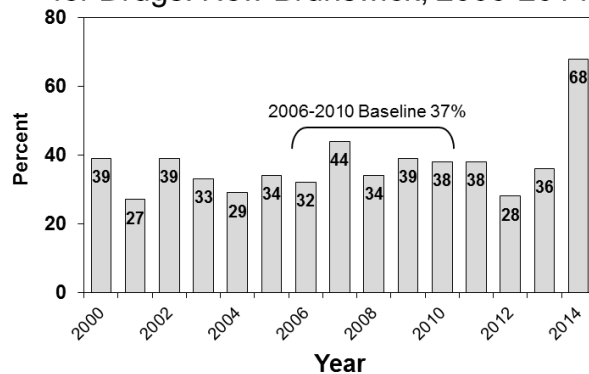
As can be seen at the bottom of Table 10-9, the percentage of fatally injured drivers testing positive for drugs from 2006-2010, the baseline period, is 37.0%. In the 2011-2014 period, an average of 41.9% of fatally injured drivers tested positive for drugs, a 13.2% increase from the baseline period.

Table 10-9
Drug Use Among Fatally Injured Drivers of Highway Vehicles:
New Brunswick, 2000-2014

YEAR	Number of Drivers*	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	51	39	76.5	24	61.5	15	38.5
2001	56	37	66.1	27	73.0	10	27.0
2002	61	44	72.1	27	61.4	17	38.6
2003	59	52	88.1	35	67.3	17	32.7
2004	42	35	83.3	25	71.4	10	28.6
2005	60	50	83.3	33	66.0	17	34.0
2006	65	56	86.2	38	67.9	18	32.1
2007	50	43	86.0	24	55.8	19	44.2
2008	41	35	85.4	23	65.7	12	34.3
2009	48	44	91.7	27	61.4	17	38.6
2010	60	56	93.3	35	62.5	21	37.5
2011	45	34	75.6	21	61.8	13	38.2
2012	39	32	82.1	23	71.9	9	28.1
2013	34	31	91.2	20	64.5	11	35.5
2014	30	25	83.3	8	32.0	17	68.0
2006-2010 baseline	53	46	86.8	29	63.0	17	37.0
2011-2014 period	37	31	83.8	18	58.1	13	41.9

* Dying within 30 days in collisions which occurred on public roadways.

Figure 10-6
Percent of Fatally Injured Drivers Positive
for Drugs: New Brunswick, 2000-2014



11.0 NOVA SCOTIA

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in Nova Scotia during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 11.1);
- > alcohol use among fatally injured drivers (Section 11.2);
- > drivers involved in alcohol-related serious injury crashes (Section 11.3);
- > drug use among fatally injured drivers (Section 11.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 11.5).

11.1 Deaths in alcohol-related crashes

Table 11-1 presents information on people who died in alcohol-related crashes in Nova Scotia during 2014. This table specifically reports upon persons who died within 30 days of a collision which occurred on a public roadway that involved at least one highway vehicle. Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities in which sufficient information was available to determine if alcohol was involved. *A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.*

For example, nine people aged 20-25 were killed in motor vehicle crashes in Nova Scotia during 2014. And, in all nine cases (100.0%) it was possible to determine if alcohol was a factor in the crash.

The next column shows the number of people killed in crashes that were known to be alcohol-involved. There were four people aged 20-25 who died in alcohol-related crashes in Nova Scotia during 2014. The next column expresses this as a percentage – i.e., 44.4% of the 20-25 year olds who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among 20-25 year olds represent 30.8% of all the people killed in alcohol-related crashes in Nova Scotia during 2014.

The totals at the bottom of the table provide a summary. As can be seen, 52 persons died within 30 days of a motor vehicle crash in Nova Scotia during 2014. In 50 (96.2%) of these cases, it was possible to determine if alcohol was a factor. Of these known cases, 13 (26.0%) involved alcohol. Extrapolating

this figure to the total number of motor vehicle fatalities (52 x .26) it can be estimated that *in Nova Scotia during 2014, 14 persons died in alcohol-related crashes within 30 days of the collision.*

Table 11-1
Deaths in Alcohol-Related Crashes: Nova Scotia, 2014

Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARDs
<u>Age Group</u>						
<16	1	1	100.0	0	0.0	0.0
16-19	4	4	100.0	0	0.0	0.0
20-25	9	9	100.0	4	44.4	30.8
26-35	4	4	100.0	2	50.0	15.4
36-45	7	7	100.0	2	28.6	15.4
46-55	7	7	100.0	1	14.3	7.7
>55	20	18	90.0	4	22.2	30.8
<u>Gender</u>						
Male	33	32	97.0	10	31.3	76.9
Female	19	18	94.7	3	16.7	23.1
<u>Victim Type</u>						
Driver/ Operator	37	36	97.3	8	22.2	61.5
Passenger	11	11	100.0	3	27.3	23.1
Pedestrian	4	3	75.0	2	66.7	15.4
<u>Vehicle Occupied</u>						
Automobiles	25	24	96.0	5	20.8	38.5
Trucks/Vans	14	14	100.0	5	35.7	38.5
Motorcycles	6	6	100.0	1	16.7	7.7
Other Highway Vehicles	2	2	100.0	0	0.0	0.0
Off-road Vehicles	1	1	100.0	0	0.0	0.0
(Pedestrians)	4	3	75.0	2	66.7	15.4
TOTAL	52	50	96.2	13	26.0	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

11.1.1 Victim age. Of all the people who died in alcohol-related crashes, 30.8% (see last column) were aged 20-25 and over 55; 15.4% were aged 26-35 and 36-45; and 7.7% were aged 46-55.

The highest incidence of alcohol involvement occurred in the crashes in which a person aged 26-35 died (50.0%). The lowest incidence of alcohol involvement was found among those aged under 16 and 16-19 (0.0%).

11.1.2 Gender. Of all the people who died in alcohol-related crashes, 76.9% were males. The incidence of alcohol in crashes in which a male died (31.3%) was greater than the incidence of alcohol in crashes in which a female died (16.7%).

11.1.3 Victim type. Of all the people who died in alcohol-related crashes, 61.5% were drivers/operators of a vehicle; 23.1% were passengers; and 15.4% were pedestrians.

Within each of the victim types, the highest incidence of alcohol involvement (66.7%) occurred in the crashes in which a pedestrian died. Alcohol was involved in 27.3% of the crashes in which a passenger died and 22.2% of those in which a driver/operator died.

11.1.4 Type of vehicle occupied. Of all the people who died in alcohol-related crashes, 38.5% were automobile and truck/van occupants; and 7.7% were motorcyclists.

Within each of these vehicle types, the incidence of alcohol involvement in which a truck/van occupant died was greater than the incidence of alcohol in crashes in which an automobile occupant or motorcyclist died (35.7% versus 20.8% and 16.7%). The number of fatalities in each of the other types of vehicles is too small to produce reliable estimates of alcohol-involvement.

11.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in Nova Scotia during 2014. Table 11-2 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests – the first three of these present results for drivers who showed any evidence of alcohol; the last three columns present information on drivers who had BACs over the statutory limit of 80 mg%.

Table 11-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles: Nova Scotia, 2014

Category of Driver	Number of Drivers*	Drivers Tested		Positive BAC			BAC >80 mg%		
		No.	% of total	No.	% of tested	% of all drivers with +BAC	No.	% of tested	% of all drivers with BAC >80 mg%
<u>Age Group</u>									
16-19	4	4	100.0	0	0.0	0.0	0	0.0	0.0
20-25	6	6	100.0	2	33.3	25.0	2	33.3	28.6
26-35	2	2	100.0	1	50.0	12.5	1	50.0	14.3
36-45	6	6	100.0	2	33.3	25.0	2	33.3	28.6
46-55	5	3	60.0	1	33.3	12.5	1	33.3	14.3
>55	13	9	69.2	2	22.2	25.0	1	11.1	14.3
<u>Gender</u>									
Male	26	22	84.6	6	27.3	75.0	5	22.7	71.4
Female	10	8	80.0	2	25.0	25.0	2	25.0	28.6
<u>Vehicle Type</u>									
Automobiles	18	15	83.3	4	26.7	50.0	4	26.7	57.1
Truck/Van	12	10	83.3	3	30.0	37.5	3	30.0	42.9
Motorcycles	5	4	80.0	1	25.0	12.5	0	0.0	0.0
Tractor-Trailers	1	1	100.0	0	0.0	0.0	0	0.0	0.0
<u>Collision Type</u>									
Single vehicle	18	14	77.8	7	50.0	87.5	6	42.9	85.7
Multiple vehicle	18	16	88.9	1	6.3	12.5	1	6.3	14.3
TOTAL	36	30	83.3	8	26.7	100.0	7	23.3	100.0

* Drivers dying within 30 days in crashes on public roadways.

To illustrate, among 20-25 year olds there were six drivers killed during 2014; all six of these fatally injured drivers (100.0%) were tested for alcohol. Of those who were tested, two (33.3%) were positive for alcohol. This means that 20-25 year old fatally injured drinking drivers accounted for 25.0% of all drinking drivers who were killed.

Then, in the final three columns, it can be seen that two of the six (33.3%) fatally injured 20-25 year olds who were tested for alcohol had BACs in excess of 80 mg%. The final column expresses the number of drivers with illegal BACs as a percent of all drivers with BACs over the limit. Thus, 20-25 year old drivers accounted for 28.6% of all the drivers with BACs over the legal limit.

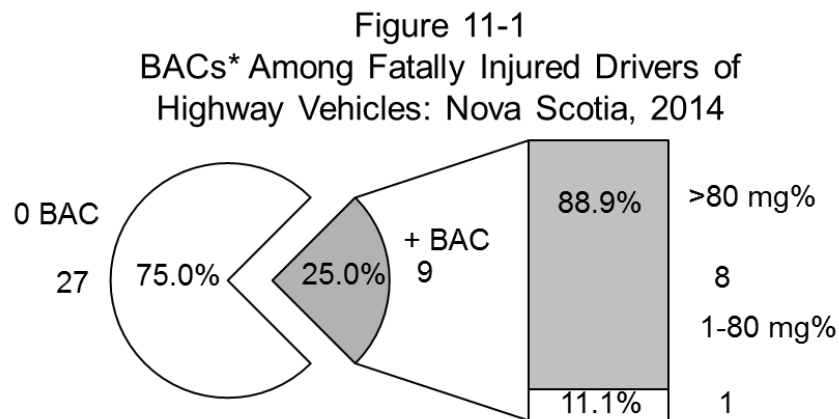
The main findings are shown by the totals at the bottom of the table. Nova Scotia had a high testing rate in 2014, with 83.3% of fatally injured drivers being tested for alcohol use.

In Nova Scotia, 26.7% had been drinking and seven of eight (87.5%) fatally injured drinking drivers had BACs over 80 mg%. Although not shown in the table, more refined analyses by different BAC categories show that among tested drivers:

- > 73.3% had BACs of zero mg%
- > 3.3% had BACs from 1-49 mg%;

- > 0.0% had BACs from 50-80 mg%
- > 3.3% had BACs from 81 to 160 mg%; and,
- > 20.0% had BACs over 160 mg%.

The BAC distribution for fatally injured drivers is shown in Figure 11-1. In this figure nine of 36 (25.0%) fatally injured drivers have a positive BAC. And among fatally injured drinking drivers, eight (88.9%) have BACs over 80 mg%.



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

11.2.1 Age differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 25.0% were aged 20-25, 36-45, and over 55; and 12.5% were aged 26-35 and 46-55.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 28.6% were aged 20-25 and 36-45; and 14.3% were aged 26-35, 46-55, and over 55.

When comparing the incidence of drinking and driving among fatally injured drivers by age group, fatally injured drivers aged 26-35 were the most likely to have been drinking (50.0%). By contrast, 0.0% of the tested drivers aged 16-19 had been drinking.

11.2.2 Gender differences. Males dominate the picture – they account for 75.0% of all of the fatally injured drivers who had been drinking and 71.4% of those who were legally impaired.

Males dominate the picture largely because they account for most of the drivers who are killed (26 of the 36 fatalities or 72.2% are males). Fatally injured male drivers were slightly more likely to have been drinking than female drivers (27.3% and 25.0%, respectively). And 83.3% of the male drivers and 100.0% of the female drivers who were drinking had BACs over the legal limit.

11.2.3 Vehicle differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 50.0% were automobile drivers; 37.5% were truck/van drivers; and 12.5% were motorcyclists.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 57.1% were automobile drivers and 42.9% were truck/van drivers.

Within each of the vehicle types, 30.0% of fatally injured truck/van drivers, 26.7% of automobile drivers; and 25.0% of motorcyclists were found to have been drinking. The lone fatally injured tractor-trailer driver had not been drinking.

11.2.4 Collision differences. Half of the drivers killed (18 of the 36) were involved in single-vehicle collisions but these crashes accounted for 87.5% of the drivers who had been drinking and 85.7% of the drivers who were legally impaired.

The reason for this apparent disparity is because alcohol is overrepresented in single-vehicle crashes. Half of the drivers involved in single-vehicle crashes (50.0%) tested positive for alcohol, compared to only 6.3% of those involved in multiple-vehicle collisions.

11.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in Nova Scotia. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 11-3 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 308 drivers were involved in crashes in which someone was seriously injured, and among these 16.6% were alcohol-related crashes.

11.3.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 29.4% were aged 20-25; 19.6% were aged 46-55; 15.7% were over 55; 11.8% were aged 16-19 and 36-45; 9.8% were aged 26-35; and 2.0% were under 16.

One-half of drivers under 16 (50.0%) were involved in alcohol-related serious injury crashes. Given that there were only two drivers in this age group, the results should be treated with caution. One-third of the drivers aged 20-25 were involved in alcohol-related serious injury crashes (32.6%). The lowest incidence of involvement in alcohol-related crashes was found for those over 55 (9.2%).

Table 11-3
Drivers* in Alcohol-Related Serious Injury Crashes:
Nova Scotia, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
<16	2	1	50.0	2.0
16-19	24	6	25.0	11.8
20-25	46	15	32.6	29.4
26-35	41	5	12.2	9.8
36-45	42	6	14.3	11.8
46-55	53	10	18.9	19.6
>55	87	8	9.2	15.7
unknown	13	0	0.0	0.0
<u>Gender</u>				
Male	196	39	19.9	76.5
Female	100	12	12.0	23.5
unknown	12	0	0.0	0.0
<u>Vehicle Type</u>				
Auto	167	31	18.6	60.8
Truck/Van	94	15	16.0	29.4
Motorcycle	38	2	5.3	3.9
Tractor-Trailer	7	2	28.6	3.9
Other Hwy. Vehicle	2	1	50.0	2.0
<u>Collision Type</u>				
Single-Vehicle	132	43	32.6	84.3
Multiple-Vehicle	176	8	4.5	15.7
TOTAL	308	51	16.6	100.0

* Excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

11.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 76.5% were males. The incidence of involvement in alcohol-related serious injury crashes was greater for males than for females (19.9% and 12.0%, respectively).

11.3.3 Type of vehicle driven. Of all the drivers involved in alcohol-related serious injury crashes, 60.8% were automobile drivers; 29.4% were truck/van drivers; 3.9% were motorcyclists and tractor-trailer drivers; and 2.0% were drivers of other highway vehicles.

Among drivers of other highway vehicles, 50.0% were involved in alcohol-related crashes. However, these results should be treated with caution as this subgroup only includes two drivers. Among other vehicle types, the highest incidence of involvement in alcohol-related serious injury crashes was found for tractor-trailer drivers – 28.6% of these drivers were in crashes that involved alcohol, compared to 18.6% for automobile drivers and 16.0% for truck/van drivers. Among motorcyclists, 5.3% were involved in alcohol-related crashes.

11.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 84.3% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious

injury crashes was also found among drivers in single-vehicle crashes – 32.6% of these drivers, compared to only 4.5% for drivers involved in multiple-vehicle crashes.

11.4 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in Nova Scotia during 2014. A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 11-4 shows the prevalence of drug use among fatally injured drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.5). The table also shows the number of drivers who tested positive for various categories of drugs. A brief description of the different drug categories is provided in Section 2.2.5.

As can be seen, Nova Scotia had a high testing rate in 2014, with 83.3% of fatally injured drivers being tested for drug use.

Among fatally injured tested drivers, 11 out of 30 (36.7%) were positive for drugs. The most common category of drugs found within drivers testing positive for drug use was cannabis (63.6%). Other categories of drugs found in fatally injured drivers testing positive for drugs were narcotic analgesics and CNS stimulants (27.3% each), and CNS depressants (18.2%).

Table 11-4
Drug Use Among Fatally Injured Drivers* of
Highway Vehicles: Nova Scotia, 2014

Prevalence of Drug Use				
Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
36	30	(83.3)	11	(36.7)

Categories of Drugs Found Among Drivers Testing Positive		
Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive**
Cannabis	7	(63.6)
Narcotic Analgesics	3	(27.3)
CNS Stimulants	3	(27.3)
CNS Depressants	2	(18.2)
Hallucinogens	0	(0.0)
Dissociative Anesthetics	0	(0.0)
Inhalants	0	(0.0)

* Dying within 30 days in collisions which occurred on public roadways.

** Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

11.5 Trends in alcohol and drug-impaired driving

Sections 11.1 through 11.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 11.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

11.5.1 Deaths involving drinking drivers: 1996-2014. Table 11-5 and Figure 11-2 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2014. These results differ slightly from those in Section 11.1. In this section, deaths that occur in crashes that involve a drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

As shown in the figure, the number of deaths in crashes that involved a drinking driver generally dropped from 39 in 1996 to 22 in 2004, increased to 35 in 2007, and generally decreased to a low of 14 in 2014. The percentage of alcohol-related fatalities rose from 34.8% in 1996 to 43.4% in 1998, decreased to a low of 23.1% in 2008, increased to 37.3% in 2009, decreased to 23.6% in 2013, and rose again to 26.9% in 2014.

Table 11-5
Number* and Percent of Motor Vehicle Deaths Involving**
a Drinking Driver: Nova Scotia, 1996-2014

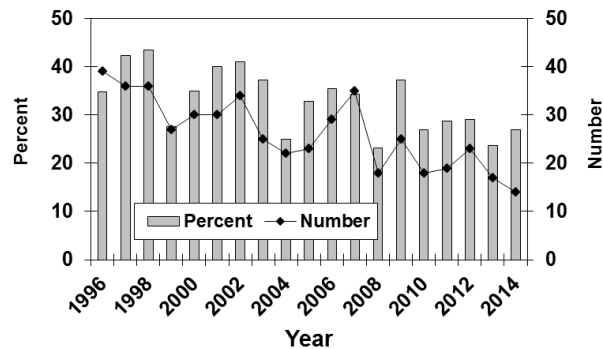
Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	112	39	34.8
1997	85	36	42.4
1998	83	36	43.4
1999	95	27	28.4
2000	86	30	34.9
2001	75	30	40.0
2002	83	34	41.0
2003	67	25	37.3
2004	88	22	25.0
2005	70	23	32.9
2006	82	29	35.4
2007	102	35	34.3
2008	78	18	23.1
2009	67	25	37.3
2010	67	18	26.9
2011	66	19	28.8
2012	79	23	29.1
2013	72	17	23.6
2014	52	14	26.9
2006-2010 baseline	79	25	31.6
2011-2014 period	67	18	26.9

* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

As shown at the bottom of the table, during the 2006-2010 baseline period there was an average of 25 fatalities involving a drinking driver and they accounted for 31.6% of all fatalities. This means that the percent of fatalities involving a drinking driver decreased by 14.9% from 31.6% in the baseline period (2006-2010) to 26.9% in the 2011-2014 period. In terms of the number of persons killed in crashes involving a drinking driver, there has been a 28.0% decrease from an average of 25 in the baseline period (2006-2010) to 18 in the 2011-2014 period.

Figure 11-2
Number and Percent of Deaths Involving
a Drinking Driver: Nova Scotia, 1996-2014



11.5.2 Alcohol use among fatally injured drivers. Data on alcohol use among fatally injured drivers of highway vehicles over the 19-year period from 1996-2014 are shown in Table 11-6. Trends are illustrated in Figure 11-3 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol (represented by the white area); (2) had BACs below the legal limit (shown by the light grey area); and (3) had BACs over the legal limit (the dark grey area). The data reported here are restricted to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2).

As can be seen, the percent of fatally injured drivers with BACs over the legal limit peaked in 1998 (52.6%), generally decreased until 2004 (18.4%), fluctuated until 2011 (32.4%), decreased until 2013 (14.0%), and rose again in 2014 (23.3%). The percent of fatally injured drivers with zero BACs generally increased from 1996 (56.1%) until 2008 (78.4%), fluctuated until 2011 (61.8%), reached its highest level in 2013 (79.1%), and decreased again in 2014 (73.3%). The percent of fatally injured drivers with BACs between 1 and 80 mg% generally increased from 1996 (4.9%) to its highest level in 2002 (22.2%), remained relatively stable until 2012 (1.9%), rose in 2013 (7.0%), and decreased again in 2014 (3.3%).

When compared to the 2006-2010 baseline period shown at the bottom of Table 11-6, the percentage of fatally injured drivers with zero BACs in the 2011-2014 period increased by 10.0% (from 65.9% to 72.5%). Among drivers with BACs from 1-80 mg%, there was an 11.1% increase (from 4.5% to 5.0%). And among drivers with BACs over 80 mg%, there was a 23.7% decrease (from 29.5% to 22.5%).

Table 11-6
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Nova Scotia, 1996-2014

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	57	41	71.9	23	56.1	2	4.9	16	39.0
1997	46	38	82.6	21	55.3	4	10.5	13	34.2
1998	51	38	74.5	17	44.7	1	2.6	20	52.6
1999	59	40	67.8	24	60.0	3	7.5	13	32.5
2000	56	45	80.4	22	48.9	1	2.2	22	48.9
2001	52	46	88.5	25	54.3	4	8.7	17	37.0
2002	40	36	90.0	16	44.4	8	22.2	12	33.3
2003	47	44	93.6	26	59.1	1	2.3	17	38.6
2004	44	38	86.4	29	76.3	2	5.3	7	18.4
2005	41	40	97.6	21	52.5	3	7.5	16	40.0
2006	46	41	89.1	27	65.9	2	4.9	12	29.3
2007	54	47	87.0	29	61.7	4	8.5	14	29.8
2008	54	51	94.4	40	78.4	2	3.9	9	17.6
2009	47	43	91.5	25	58.1	1	2.3	17	39.5
2010	40	40	100.0	26	65.0	3	7.5	11	27.5
2011	41	34	82.9	21	61.8	2	5.9	11	32.4
2012	59	54	91.5	40	74.1	1	1.9	13	24.1
2013	47	43	91.5	34	79.1	3	7.0	6	14.0
2014	36	30	83.3	22	73.3	1	3.3	7	23.3
2006-2010 baseline	48	44	(91.7)	29	(65.9)	2	(4.5)	13	(29.5)
2011-2014 period	46	40	(87.0)	29	(72.5)	2	(5.0)	9	(22.5)

* Dying within 30 days in collisions which occurred on public roadways.

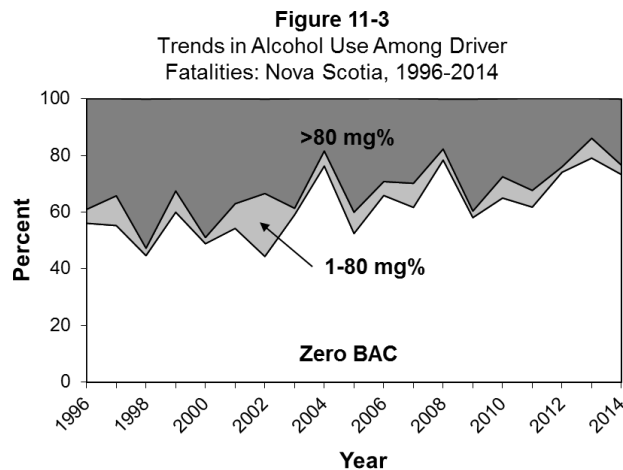


Table 11-7 and Figure 11-4 also show data on alcohol use among fatally injured drivers from 1996 to 2014. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC

distribution of drivers tested for alcohol (see Figure 11-1). Second, drivers are grouped in only two BAC categories: zero and positive.

As can be seen at the bottom of Table 11-7, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 33.3%. In the 2011-2014 period, 28.3% of fatally injured drivers tested positive for alcohol, a 15.0% decrease from the baseline period.

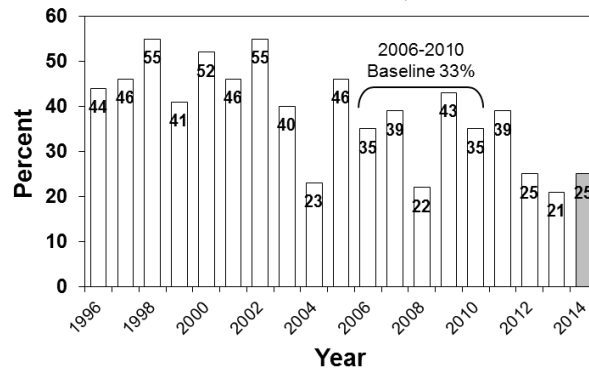
Table 11-7
Alcohol Use* Among Fatally Injured Drivers of Highway Vehicles:
Nova Scotia, 1996-2014

Year	Number of Drivers**	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	57	32	(56.1)	25	(43.9)
1997	46	25	(54.3)	21	(45.7)
1998	51	23	(45.1)	28	(54.9)
1999	59	35	(59.3)	24	(40.7)
2000	56	27	(48.2)	29	(51.8)
2001	52	28	(53.8)	24	(46.2)
2002	40	18	(45.0)	22	(55.0)
2003	47	28	(59.6)	19	(40.4)
2004	44	34	(77.3)	10	(22.7)
2005	41	22	(53.7)	19	(46.3)
2006	46	30	(65.2)	16	(34.8)
2007	54	33	(61.1)	21	(38.9)
2008	54	42	(77.8)	12	(22.2)
2009	47	27	(57.4)	20	(42.6)
2010	40	26	(65.0)	14	(35.0)
2011	41	25	(61.0)	16	(39.0)
2012	59	44	(74.6)	15	(25.4)
2013	47	37	(78.7)	10	(21.3)
2014	36	27	(75.0)	9	(25.0)
2006-2010 baseline	48	32	(66.7)	16	(33.3)
2011-2014 period	46	33	(71.7)	13	(28.3)

* Numbers are estimates based on the BAC distribution of drivers tested for alcohol.

** Dying within 30 days in collisions which occurred on public roadways.

Figure 11-4
Percent of Fatally Injured Drivers* Positive
for Alcohol: Nova Scotia, 1996-2014



11.5.3 Drivers in serious injury crashes. Table 11-8 and Figure 11-5 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. From 1996 to 1998, the percentage of drivers in serious injury crashes that involved alcohol decreased from 24.9% to 20.4%, generally increased to 26.2% in 2007, decreased to 20.0% in 2008, rose to 25.8% in 2010, decreased to a low of 15.8% in 2013, and rose again in 2014 (16.6%).

As shown Table 11-8, in the baseline period (2006-2010) an average of 23.7% of drivers in serious injury crashes were in an alcohol-involved crash. In the 2011-2014 period, the incidence of drivers in alcohol-involved crashes decreased to 17.1%, a 27.8% decrease.

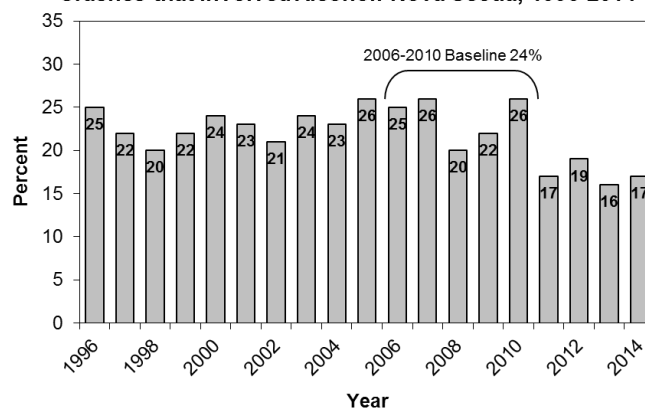
Table 11-8

Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Nova Scotia, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	458	114	(24.9)
1997	458	102	(22.3)
1998	427	87	(20.4)
1999	577	125	(21.7)
2000	390	92	(23.6)
2001	400	93	(23.3)
2002	383	81	(21.1)
2003	332	78	(23.5)
2004	351	81	(23.1)
2005	330	86	(26.1)
2006	325	81	(24.9)
2007	336	88	(26.2)
2008	288	58	(20.1)
2009	332	73	(22.0)
2010	299	77	(25.8)
2011	345	59	(17.1)
2012	345	64	(18.6)
2013	285	45	(15.8)
2014	308	51	(16.6)
2006-2010 baseline	316	75	(23.7)
2011-2014 period	321	55	(17.1)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 11-5
Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Nova Scotia, 1996-2014



11.5.4 Drug use among fatally injured drivers. Table 11-9 and Figure 11-6 show data on drug use among fatally injured drivers of highway vehicles over a 15-year period (2000-2014). Similar to Table 11-6, these results are based on fatally injured drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.5).

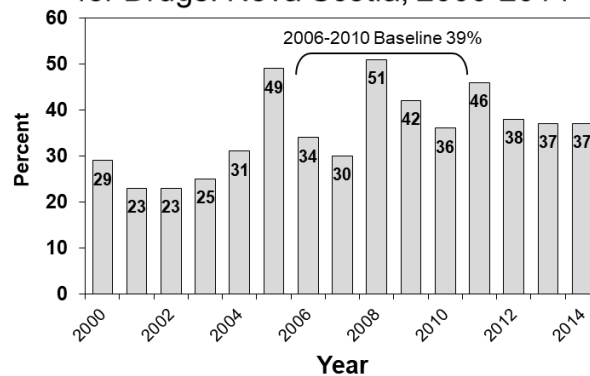
As can be seen at the bottom of Table 11-9, the percentage of fatally injured drivers testing positive for drugs from 2006-2010, the baseline period, is 39.0%. In the 2011-2014 period, 40.0% of fatally injured drivers tested positive for drugs, a 2.6% increase from the baseline period.

Table 11-9
Drug Use Among Fatally Injured Drivers of Highway Vehicles:
Nova Scotia, 2000-2014

YEAR	Number of Drivers*	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	56	35	62.5	25	71.4	10	28.6
2001	52	40	76.9	31	77.5	9	22.5
2002	40	35	87.5	27	77.1	8	22.9
2003	47	40	85.1	30	75.0	10	25.0
2004	44	32	72.7	22	68.8	10	31.3
2005	41	35	85.4	18	51.4	17	48.6
2006	46	35	76.1	23	65.7	12	34.3
2007	54	44	81.5	31	70.5	13	29.5
2008	54	43	79.6	21	48.8	22	51.2
2009	47	43	91.5	25	58.1	18	41.9
2010	40	39	97.5	25	64.1	14	35.9
2011	41	33	80.5	18	54.5	15	45.5
2012	59	53	89.8	33	62.3	20	37.7
2013	47	43	91.5	27	62.8	16	37.2
2014	36	30	83.3	19	63.3	11	36.7
2006-2010 baseline	48	41	85.4	25	61.0	16	39.0
2011-2014 period	46	40	87.0	24	60.0	16	40.0

* Dying within 30 days in collisions which occurred on public roadways.

Figure 11-6
Percent of Fatally Injured Drivers Positive
for Drugs: Nova Scotia, 2000-2014



12.0 PRINCE EDWARD ISLAND

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in Prince Edward Island during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 12.1);
- > alcohol use among fatally injured drivers (Section 12.2);
- > drivers involved in alcohol-related serious injury crashes (Section 12.3);
- > drug use among fatally injured drivers (Section 12.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 12.5).

12.1 Deaths in alcohol-related crashes

Table 12-1 presents information on people who died in alcohol-related crashes in Prince Edward Island during 2014. This table specifically reports upon persons who died within 30 days of a collision which occurred on a public roadway that involved at least one highway vehicle. Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities in which sufficient information was available *there was at least one drinking driver or drinking pedestrian in the fatal crash*.

For example, two people under 56 years of age were killed in motor vehicle crashes in Prince Edward Island during 2014. And, in both cases (100.0%) it was possible to determine if alcohol was a factor in the crash.

The next column shows the number of people killed in crashes that were known to be alcohol-involved. For example, one person under 56 years of age died in an alcohol-related crash in Prince Edward Island during 2014. The next column expresses this as a percentage – i.e., 50.0% of those under 56 years of age who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among those under 56 years of age represents 100.0% of all the people killed in alcohol-related crashes in Prince Edward Island during 2014.

The totals at the bottom of the table provide a summary. As can be seen, five persons died within 30 days of a motor vehicle crash in Prince Edward Island during 2014. In all five (100.0%) of these cases, it was possible to determine if alcohol was a factor. Of these cases, one (20.0%) involved alcohol.

12.1.1 Victim age. Persons under 16 years of age and those aged 46-55 have been placed into a broader age group (<56) to ensure that individuals cannot be identified. Of all the people who died in alcohol-related crashes, 100.0% (see last column) were under 56 years of age.

The highest incidence of alcohol involvement occurred in the crashes in which a person under 56 years of age died (50.0%). The lowest incidence of alcohol involvement was found among persons aged over 55 as 0.0% of persons in this age group died in crashes involving alcohol.

Table 12-1
Deaths in Alcohol-Related Crashes: Prince Edward Island, 2014

Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARDs
<u>Age Group</u>						
<56**	2	2	100.0	1	50.0	100.0
>55	3	3	100.0	0	0.0	0.0
<u>Gender</u>						
Male	4	4	100.0	1	25.0	100.0
Female	1	1	100.0	0	0.0	0.0
<u>Victim Type</u>						
Driver/ Operator	3	3	100.0	1	33.3	100.0
Passenger	1	1	100.0	0	0.0	0.0
Pedestrian	1	1	100.0	0	0.0	0.0
<u>Vehicle Occupied</u>						
Automobiles	1	1	100.0	0	0.0	0.0
Other Vehicles***	3	3	100.0	1	33.3	100.0
(Pedestrians)	1	1	100.0	0	0.0	0.0
TOTAL	5	5	100.0	1	20.0	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

** Persons in two age groups have been aggregated to ensure that an individual will not be identified.

*** Persons in two vehicle groups have been aggregated to ensure that an individual will not be identified.

12.1.2 Gender. Of all the people who died in alcohol-related crashes, 100.0% were males. The incidence of alcohol in crashes in which a male died (25.0%) was greater than the incidence of alcohol in crashes in which a female died (0.0%).

12.1.3 Victim type. Of all the people who died in alcohol-related crashes, 100.0% were drivers/operators of a vehicle; and 0.0% were passengers and pedestrians.

Within each of the victim types, the highest incidence of alcohol involvement (33.3%) occurred in the crashes in which a driver/operator died. Alcohol was involved in 0.0% of the crashes in which a passenger or pedestrian died.

12.1.4 Type of vehicle occupied. Occupants of motorcycles and trucks/vans have been placed into a broader vehicle group (other vehicles) to ensure that individuals cannot be identified. Of all the people who died in alcohol-related crashes, 100.0% each were occupants of other vehicles and 0.0% were automobile occupants.

Within each of these vehicle types, the incidence of alcohol involvement in which an occupant of another vehicle died (33.3%) was greater than the incidence of alcohol in crashes in which an automobile occupant died (0.0%).

12.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in Prince Edward Island during 2014. Table 12-2 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests – the first three of these present results for drivers who showed any evidence of alcohol; the last three columns present information on drivers who had BACs over the statutory limit of 80 mg%.

To illustrate, among motorcyclists there were two drivers killed during 2014; both of these fatally injured drivers (100.0%) were tested for alcohol. Of those who were tested, one (50.0%) was positive for alcohol. This means that fatally injured motorcyclists accounted for 100.0% of all drinking drivers who were killed.

Table 12-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Prince Edward Island, 2014

Category of Driver	Number of Drivers*	Drivers Tested		Positive BAC			BAC >80 mg%		
		No.	% of total	No.	% of tested	% of all drivers with +BAC	No.	% of tested	% of all drivers with BAC >80 mg%
<u>Gender</u>									
Male	3	3	100.0	1	33.3	100.0	1	33.3	100.0
<u>Vehicle Type</u>									
Truck/Van	1	1	100.0	0	0.0	0.0	0	0.0	0.0
Motorcycles	2	2	100.0	1	50.0	100.0	1	50.0	100.0
<u>Collision Type</u>									
Single vehicle	2	2	100.0	1	50.0	100.0	1	50.0	100.0
Multiple vehicle	1	1	100.0	0	0.0	0.0	0	0.0	0.0
TOTAL	3	3	100.0	1	33.3	100.0	1	33.3	100.0

* Drivers dying within 30 days in crashes on public roadways.

Then, in the final three columns, it can be seen that one of the fatally injured motorcyclists (50.0%) who was tested for alcohol had a BAC in excess of 80 mg%. This means that lone driver who was positive for alcohol had a BAC in excess of the legal limit. The final column expresses the number of drivers with illegal BACs as a percent of all drivers with BACs over the limit. As can be seen, motorcyclists accounted for 100.0% of all the drivers with BACs over the legal limit.

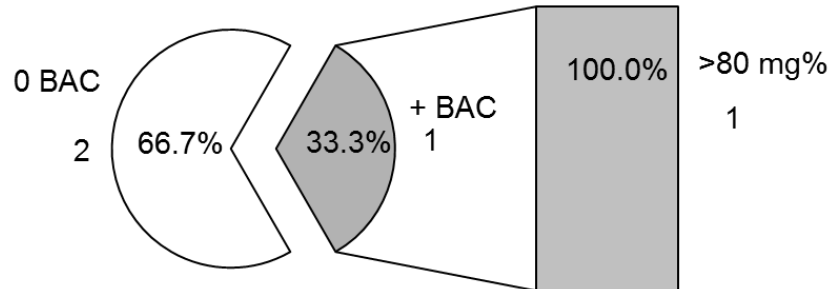
The main findings are shown by the totals at the bottom of the table. Prince Edward Island had a very high testing rate in 2014, with 100.0% of fatally injured drivers being tested for alcohol use.

In Prince Edward Island, 33.3% had been drinking and the sole fatally injured drinking driver (100.0%) had a BAC over 80 mg%. Although not shown in the table, more refined analyses by different BAC categories show that among tested drivers:

- > 66.7% had BACs of zero mg%;
- > 0.0% had BACs from 1-49 mg%;
- > 0.0% had BACs from 50-80 mg%;
- > 0.0% had BACs from 81-160 mg%; and,
- > 33.3% had BACs over 160 mg%.

The BAC distribution for fatally injured drivers is shown in Figure 12-1. As can be seen, one of three (33.3%) fatally injured drivers had a positive BAC. And among fatally injured drinking drivers, one (100.0%) had a BAC over 80 mg%.

Figure 12-1
BACs* Among Fatally Injured Drivers of
Highway Vehicles: Prince Edward Island, 2014



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

12.2.1 Age differences. Detailed results are not provided for age group to ensure confidentiality.

12.2.2 Gender differences. Males dominate the picture as they account for 100.0% of all the fatally injured drivers who had been drinking and those that were legally impaired.

Males dominate the picture largely because they account for all three (100.0%) of the drivers who are killed. One-third of fatally injured male drivers (33.3%) had been drinking. And, 100.0% of the male drivers who were drinking had BACs over the legal limit.

12.2.3 Vehicle differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 100.0% were motorcyclists.

Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 100.0% were motorcyclists.

Within each of the vehicle types, 50.0% of motorcyclists had been drinking. The lone fatally injured truck/van driver had not been drinking.

12.2.4 Collision differences. Two of three drivers killed (66.7%) were involved in single-vehicle collisions and these crashes accounted for 100.0% of the drivers who had been drinking as well as 100.0% those who were legally impaired.

The reason for this apparent disparity is because alcohol is overrepresented in single-vehicle crashes. Half of the drivers involved in single-vehicle crashes (50.0%) tested positive for alcohol, compared to 0.0% of those involved in multiple-vehicle collisions.

12.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in Prince Edward Island. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom

tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 12-3 for drivers grouped in terms of age, gender, type of vehicle driven (Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 48 drivers were involved in crashes in which someone was seriously injured, and among these 25.0% were alcohol-related crashes.

12.3.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 33.8% were aged 16-19; 25.0% were aged 26-35; 16.7% were aged 20-25 and over 55; and 8.3% were aged 36-45.

Two-thirds of the drivers aged 16-19 were involved in alcohol-related serious injury crashes (66.7%). The lowest incidence of involvement in alcohol-related crashes was found for those aged 46-55 (0.0%).

12.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 66.7% were males. The incidence of involvement in alcohol-related serious injury crashes was slightly greater for males than for females (25.8% and 23.5%, respectively).

12.3.3 Type of vehicle driven. Of all the drivers involved in alcohol-related serious injury crashes, 58.3% were automobile drivers; 25.0% were truck/van drivers; and 8.3% were motorcyclists and tractor-trailer drivers.

The highest incidence of involvement in alcohol-related serious injury crashes was found for truck/van drivers (42.9%) compared to 33.3% for tractor-trailer drivers. Among automobile drivers, 22.6% were involved in alcohol-related crashes compared to 14.3% of motorcyclists.

12.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 100.0% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in single-vehicle crashes – 52.2% of these drivers, compared to only 0.0% for drivers involved in multiple-vehicle crashes.

Table 12-3
Drivers* in Alcohol-Related Serious Injury Crashes:
Prince Edward Island, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
16-19	6	4	66.7	33.3
20-25	8	2	25.0	16.7
26-35	9	3	33.3	25.0
36-45	6	1	16.7	8.3
46-55	6	0	0.0	0.0
>55	13	2	15.4	16.7
<u>Gender</u>				
Male	31	8	25.8	66.7
Female	17	4	23.5	33.3
<u>Vehicle Type</u>				
Auto	31	7	22.6	58.3
Truck/Van	7	3	42.9	25.0
Motorcycle	7	1	14.3	8.3
Tractor-Trailer	3	1	33.3	8.3
<u>Collision Type</u>				
Single-Vehicle	23	12	52.2	100.0
Multiple-Vehicle	25	0	0.0	0.0
TOTAL	48	12	25.0	100.0

* Excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

12.4 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in Prince Edward Island during 2014. A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 12-4 shows the prevalence of drug use among fatally injured drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.5). The table also shows the number of drivers who tested positive for various categories of drugs. A brief description of the different drug categories is provided in Section 2.2.5.

As can be seen, Prince Edward Island had a very high testing rate in 2014, with 100.0% of fatally injured drivers being tested for drug use.

Among fatally injured tested drivers, one out of three (33.3%) were positive for drugs. The most common categories of drugs found within drivers testing positive for drug use was narcotic analgesics (100.0%).

Table 12-4
Drug Use Among Fatally Injured Drivers* of
Highway Vehicles: Prince Edward Island, 2014

Prevalence of Drug Use				
Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
3	3	(100.0)	1	(33.3)

Categories of Drugs Found Among Drivers Testing Positive		
Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive**
Narcotic Analgesics	1	(100.0)
CNS Stimulants	0	(0.0)
Cannabis	0	(0.0)
CNS Depressants	0	(0.0)
Hallucinogens	0	(0.0)
Dissociative Anesthetics	0	(0.0)
Inhalants	0	(0.0)

* Dying within 30 days in collisions which occurred on public roadways.

** Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

12.5 Trends in alcohol and drug-impaired driving

Sections 12.1 through 12.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 12.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

12.5.1 Deaths involving drinking drivers: 1996-2014. Table 12-5 and Figure 12-2 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2014. These results differ slightly from those in Section 12.1. In this section, deaths that occur in crashes that involve a drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

As shown in the table and figure, the number of deaths in crashes that involved a drinking driver generally increased from four to a high of 14 between 1996 and 2006. This number decreased to a low of one in 2010, rose to 10 in 2011, and decreased again to a low of one in 2014. The percentage of alcohol-related fatalities generally increased from 26.7% in 1996 to 61.5% in 2003, remained stable until 2009, fell to a low of 11.1% in 2010, peaked at 72.7% in 2012, and decreased again in 2014 (20.0%).

As shown at the bottom of the table, during the 2006-2010 baseline period, there was an average of seven fatalities involving a drinking driver and they accounted for 50.0% of all fatalities. Thus, it can be seen that the percent of fatalities involving a drinking driver did not change from 50.0% in the baseline

period (2006-2010) to 50.0% in the 2011-2014 period. In terms of the number of persons killed in crashes involving a drinking driver, there was a 14.3% decrease from an average of seven in the baseline period (2006-2010) to six in the 2011-2014 period.

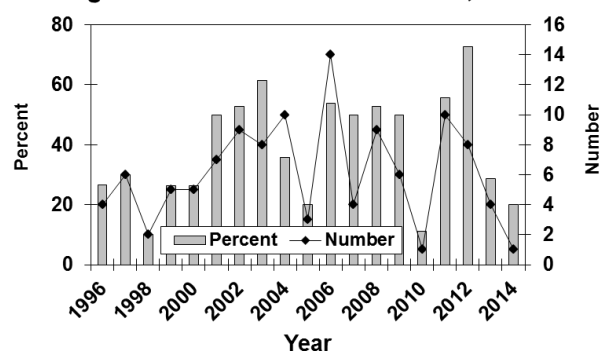
Table 12-5
Number* and Percent of Motor Vehicle Deaths Involving a**
Drinking Driver: Prince Edward Island, 1996-2014

Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	15	4	26.7
1997	20	6	30.0
1998	20	2	10.0
1999	19	5	26.3
2000	19	5	26.3
2001	14	7	50.0
2002	17	9	52.9
2003	13	8	61.5
2004	28	10	35.7
2005	15	3	20.0
2006	26	14	53.8
2007	8	4	50.0
2008	17	9	52.9
2009	12	6	50.0
2010	9	1	11.1
2011	18	10	55.6
2012	11	8	72.7
2013	14	4	28.6
2014	5	1	20.0
2006-2010 baseline	14	7	50.0
2011-2014 period	12	6	50.0

* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

Figure 12-2
Number and Percent of Deaths Involving a
Drinking Driver: Prince Edward Island, 1996-2014



12.5.2 Alcohol use among fatally injured drivers. Data on alcohol use among fatally injured drivers of highway vehicles over the 19-year period from 1996-2014 are shown in Table 12-6. Trends are

illustrated in Figure 12-3 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol (represented by the white area); (2) had BACs below the legal limit (shown by the light grey area); and (3) had BACs over the legal limit (the dark grey area). The data reported here are restricted to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2).

As can be seen, the percent of fatally injured drivers with BACs over the legal limit generally increased from 1996 (18.2%) to its highest level in 2007 (75.0%), decreased in 2010 (0.0%), rose in 2011 (45.5%), decreased until 2013 (22.2%), and rose again in 2014 (33.3%). The percent of fatally injured drivers with zero BACs generally decreased from 1996 (72.7%) to 2007 (25.0%), rose in 2010 (83.3%), dropped to its lowest point in 2012 (16.7%), rose in 2013 (66.7%) and remained at this level in 2014. The percent of fatally injured drivers with BACs between 1 and 80 mg% reached 22.2% in 1997, fell to 0.0% in both 1998 to 2002 and 2005 to 2009, peaked in 2012 (50.0%), and decreased until 2014 (0.0%).

When compared to the 2006-2010 baseline period, the percentage of fatally injured drivers with zero BACs in the 2011-2014 period decreased by 22.8% (from 55.6% to 42.9%). Among drivers with BACs from 1-80 mg%, there was an increase from 0.0% to 14.3%. Among drivers with BACs over 80 mg%, there was a 3.4% decrease from 44.4% in the baseline period to 42.9% in the 2011-2014 period.

Table 12-6
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Prince Edward Island, 1996-2014

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	11	11	100.0	8	72.7	1	9.1	2	18.2
1997	10	9	90.0	5	55.6	2	22.2	2	22.2
1998	11	8	72.7	7	87.5	0	0.0	1	12.5
1999	10	7	70.0	5	71.4	0	0.0	2	28.6
2000	12	9	75.0	6	66.7	0	0.0	3	33.3
2001	5	5	100.0	3	60.0	0	0.0	2	40.0
2002	10	10	100.0	6	60.0	0	0.0	4	40.0
2003	8	7	87.5	4	57.1	1	14.3	2	28.6
2004	16	14	87.5	8	57.1	1	7.1	5	35.7
2005	13	8	61.5	5	62.5	0	0.0	3	37.5
2006	13	12	92.3	9	75.0	0	0.0	3	25.0
2007	4	4	100.0	1	25.0	0	0.0	3	75.0
2008	12	12	100.0	4	33.3	0	0.0	8	66.7
2009	10	10	100.0	5	50.0	0	0.0	5	50.0
2010	6	6	100.0	5	83.3	1	16.7	0	0.0
2011	11	11	100.0	4	36.4	2	18.2	5	45.5
2012	6	6	100.0	1	16.7	3	50.0	2	33.3
2013	10	9	90.0	6	66.7	1	11.1	2	22.2
2014	3	3	100.0	2	66.7	0	0.0	1	33.3
2006-2010 baseline	9	9	(100.0)	5	(55.6)	0	(0.0)	4	(44.4)
2011-2014 period	7	7	(100.0)	3	(42.9)	1	(14.3)	3	(42.9)

* Dying within 30 days in collisions which occurred on public roadways.

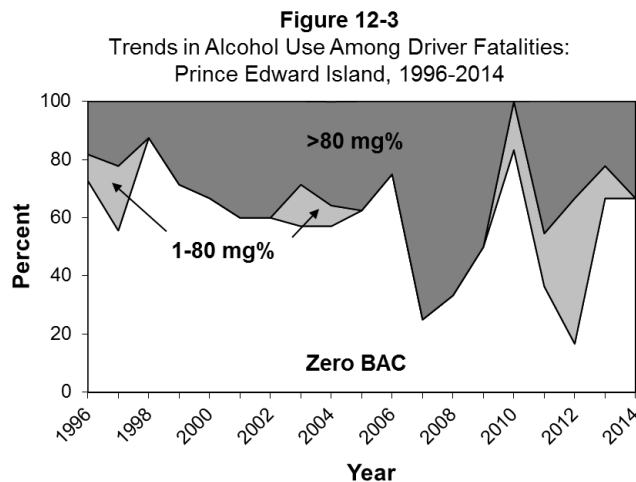


Table 12-7 and Figure 12-4 also show data on alcohol use among fatally injured drivers from 1996 to 2014. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those

reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC distribution of drivers tested for alcohol (see Figure 12-1). Second, drivers are grouped in only two BAC categories: zero and positive.

As can be seen at the bottom of Table 12-7, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 44.4%. In the 2011-2014 period, 57.1% of fatally injured drivers tested positive for alcohol, a 28.6% increase from the baseline period.

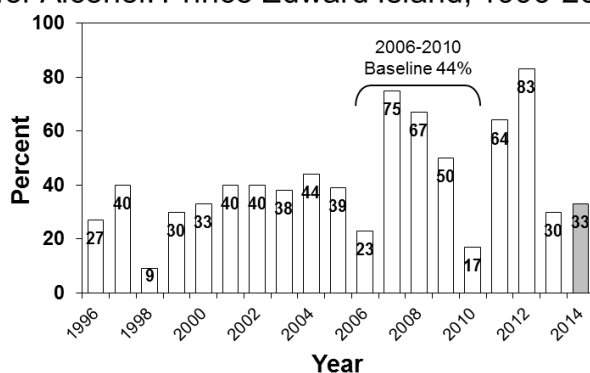
Table 12-7
Alcohol Use* Among Fatally Injured Drivers of Highway Vehicles:
Prince Edward Island, 1996-2014

Year	Number of Drivers**	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	11	8	(72.7)	3	(27.3)
1997	10	6	(60.0)	4	(40.0)
1998	11	10	(90.9)	1	(9.1)
1999	10	7	(70.0)	3	(30.0)
2000	12	8	(66.7)	4	(33.3)
2001	5	3	(60.0)	2	(40.0)
2002	10	6	(60.0)	4	(40.0)
2003	8	5	(62.5)	3	(37.5)
2004	16	9	(56.3)	7	(43.8)
2005	13	8	(61.5)	5	(38.5)
2006	13	10	(76.9)	3	(23.1)
2007	4	1	(25.0)	3	(75.0)
2008	12	4	(33.3)	8	(66.7)
2009	10	5	(50.0)	5	(50.0)
2010	6	5	(83.3)	1	(16.7)
2011	11	4	(36.4)	7	(63.6)
2012	6	1	(16.7)	5	(83.3)
2013	10	7	(70.0)	3	(30.0)
2014	3	2	(66.7)	1	(33.3)
2006-2010 baseline	9	5	(55.6)	4	(44.4)
2011-2014 period	7	3	(42.9)	4	(57.1)

* Numbers are estimates based on the BAC distribution of drivers tested for alcohol.

** Dying within 30 days in collisions which occurred on public roadways.

Figure 12-4
Percent of Fatally Injured Drivers* Positive
for Alcohol: Prince Edward Island, 1996-2014



12.5.3 Drivers in serious injury crashes. Table 12-8 and Figure 12-5 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. Between 1996 and 2003 the percentage of drivers in serious injury crashes that involved alcohol generally decreased from 29.7% to a low of 16.2%, peaked in 2009 (31.0%), decreased to 19.7% in 2010, and stabilized from 2011 to 2014 (25.0%).

As shown in Table 12-8, in the baseline period (2006-2010) an average of 23.0% of drivers in serious injury crashes were in an alcohol-involved crash. In the 2011-2014 period, the incidence of drivers in alcohol-involved crashes rose to 25.0%, an 8.7% increase.

Table 12-8

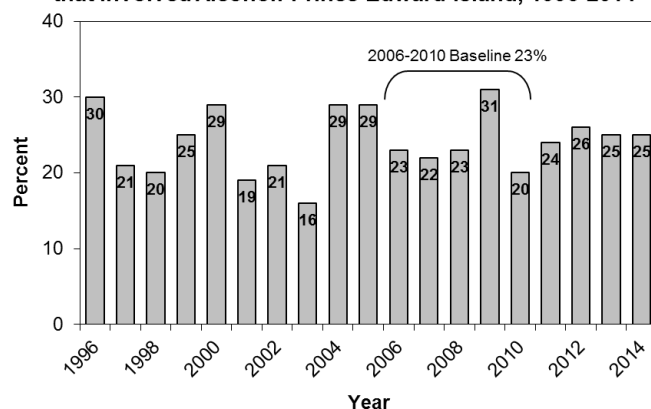
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Prince Edward Island, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	74	22	(29.7)
1997	102	21	(20.6)
1998	108	22	(20.4)
1999	130	33	(25.4)
2000	110	32	(29.1)
2001	83	16	(19.3)
2002	80	17	(21.3)
2003	111	18	(16.2)
2004	92	27	(29.3)
2005	66	19	(28.8)
2006	77	18	(23.4)
2007	68	15	(22.1)
2008	35	8	(22.9)
2009	58	18	(31.0)
2010	66	13	(19.7)
2011	62	15	(24.2)
2012	62	16	(25.8)
2013	53	13	(24.5)
2014	48	12	(25.0)
2006-2010 baseline	61	14	(23.0)
2011-2014 period	56	14	(25.0)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 12-5

Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Prince Edward Island, 1996-2014



12.5.4 Drug use among fatally injured drivers. Table 12-9 and Figure 12-6 show data on drug use among fatally injured drivers of highway vehicles over a 15-year period (2000-2014). Similar to Table 12-6, these results are based on fatally injured drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.5).

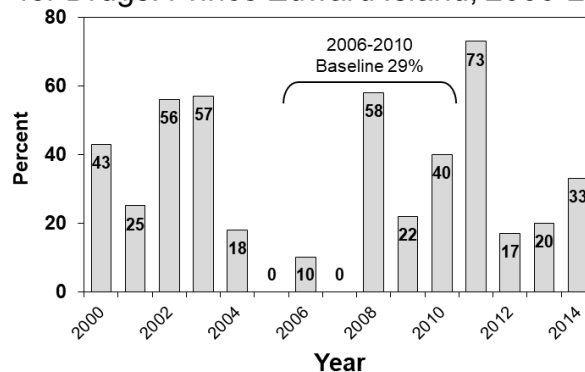
As can be seen at the bottom of Table 12-9, the percentage of fatally injured drivers testing positive for drugs from 2006-2010, the baseline period, is 28.6%. In the 2011-2014 period, 50.0% of fatally injured drivers tested positive for drugs, a 74.8% increase from the baseline period.

Table 12-9
Drug Use Among Fatally Injured Drivers of Highway Vehicles:
Prince Edward Island, 2000-2014

YEAR	Number of Drivers*	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	12	7	58.3	4	57.1	3	42.9
2001	5	4	80.0	3	75.0	1	25.0
2002	10	9	90.0	4	44.4	5	55.6
2003	8	7	87.5	3	42.9	4	57.1
2004	16	11	68.8	9	81.8	2	18.2
2005	13	8	61.5	8	100.0	0	0.0
2006	13	10	76.9	9	90.0	1	10.0
2007	4	3	75.0	3	100.0	0	0.0
2008	12	12	100.0	5	41.7	7	58.3
2009	10	9	90.0	7	77.8	2	22.2
2010	6	5	83.3	3	60.0	2	40.0
2011	11	11	100.0	3	27.3	8	72.7
2012	6	6	100.0	5	83.3	1	16.7
2013	10	5	50.0	4	80.0	1	20.0
2014	3	3	100.0	2	66.7	1	33.3
2006-2010 baseline	9	7	77.8	5	71.4	2	28.6
2011-2014 period	7	6	85.7	3	50.0	3	50.0

* Dying within 30 days in collisions which occurred on public roadways.

Figure 12-6
Percent of Fatally Injured Drivers Positive
for Drugs: Prince Edward Island, 2000-2014



13.0 NEWFOUNDLAND AND LABRADOR

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in Newfoundland and Labrador during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 13.1);
- > alcohol use among fatally injured drivers (Section 13.2);
- > drivers involved in alcohol-related serious injury crashes (Section 13.3);
- > drug use among fatally injured drivers (Section 13.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 13.5).

13.1 Deaths in alcohol-related crashes

Table 13-1 presents information on people who died in alcohol-related crashes in Newfoundland and Labrador during 2014. This table specifically reports upon persons who died within 30 days of a collision which occurred on a public roadway that involved at least one highway vehicle. Motor vehicle deaths are categorized in terms of the victim's age, gender, type (i.e., driver, passenger, pedestrian) and the type of vehicle they occupied (see Section 2.2.1). The first column in the table presents the number of deaths. The next two columns show the number and percent of these fatalities in which sufficient information was available to determine if alcohol was involved. *A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.*

For example, six people aged 26-35 were killed in motor vehicle crashes in Newfoundland and Labrador during 2014. And, in all six cases (100.0%) it was possible to determine if alcohol was a factor in the crash.

The next column shows the number of people killed in crashes that were known to be alcohol-involved. For example, three people aged 26-35 died in alcohol-related crashes in Newfoundland and Labrador during 2014. The next column expresses this as a percentage – i.e., 50.0% of the 26-35 year olds who were killed died in an alcohol-related crash.

The final column (percent of all alcohol-related deaths) expresses the number of deaths in alcohol-related crashes as a percent of all the deaths in such crashes. For example, the alcohol-related deaths among 26-35 year olds represent 33.3% of all the people killed in alcohol-related crashes in Newfoundland and Labrador during 2014.

The totals at the bottom of the table provide a summary. As can be seen, 33 persons died within 30 days of a motor vehicle crash in Newfoundland and Labrador during 2014. In 31 (93.9%) of these cases, it was possible to determine if alcohol was a factor. Of these known cases, nine (29.0%) involved alcohol. Extrapolating this figure to the total number of motor vehicle fatalities (32 x .29) it can be estimated that *in Newfoundland and Labrador during 2014, 10 persons died in alcohol-related crashes within 30 days of the collision.*

13.1.1 Victim age. Of all the people who died in alcohol-related crashes, 33.3% (see last column) were aged 26-35; and 22.2% were aged 20-25, 36-45 and over 55.

The highest incidence of alcohol involvement occurred in the crashes in which persons aged 20-25 and 36-45 died (66.7%). The lowest incidence of alcohol involvement was found among persons aged 16-19 and 46-55 (0.0%).

Table 13-1
Deaths in Alcohol-Related Crashes: Newfoundland and Labrador, 2014

Category of Victim	Number of Deaths*	Alcohol Use Known		Alcohol-Related Deaths (ARDs)		
		Number	% of total	Number	% of known cases	% of all ARDs
<u>Age Group</u>						
16-19	1	1	100.0	0	0.0	0.0
20-25	3	3	100.0	2	66.7	22.2
26-35	6	6	100.0	3	50.0	33.3
36-45	3	3	100.0	2	66.7	22.2
46-55	5	4	80.0	0	0.0	0.0
>55	15	14	93.3	2	14.3	22.2
<u>Gender</u>						
Male	25	23	92.0	7	30.4	77.8
Female	8	8	100.0	2	25.0	22.2
<u>Victim Type</u>						
Driver/ Operator	21	20	95.2	7	35.0	77.8
Passenger	8	7	87.5	2	28.6	22.2
Pedestrian	4	4	100.0	0	0.0	0.0
<u>Vehicle Occupied</u>						
Automobiles	12	12	100.0	6	50.0	66.7
Trucks/Vans	14	12	85.7	3	25.0	33.3
Motorcycles	3	3	100.0	0	0.0	0.0
(Pedestrians)	4	4	100.0	0	0.0	0.0
TOTAL	33	31	93.9	9	29.0	100.0

* Persons dying within 30 days in crashes on public roadways that involved at least one principal highway vehicle.

13.1.2 Gender. Of all the people who died in alcohol-related crashes, 77.8% were males. The incidence of alcohol in crashes in which a male died (30.4%) was greater than the incidence of alcohol in crashes in which a female died (25.0%).

13.1.3 Victim type. Of all the people who died in alcohol-related crashes, 77.8% were drivers/operators of a vehicle and 22.2% were passengers.

Within each of the victim types, the highest incidence of alcohol involvement (35.0%) occurred in the crashes in which a driver/operator died. Alcohol was involved in 28.6% of the crashes in which a passenger died and 0.0% of the crashes in which a pedestrian died.

13.1.4 Type of vehicle occupied. Of all the people who died in alcohol-related crashes, 66.7% were automobile occupants and 33.3% were truck/van occupants.

Within each of these vehicle types, the incidence of alcohol involvement in which an automobile occupant died (50.0%) was greater than the incidence of alcohol in crashes in which a truck/van occupant died (25.0%). None of the fatally injured motorcyclists (0.0%) died in an alcohol-related collision.

13.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in Newfoundland and Labrador during 2014. Table 13-2 shows the information by age group, gender, vehicle type, and collision type (single vs. multiple) for drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The first column in the table shows the number of drivers killed. The next columns show the number and percent of these victims who were tested for alcohol. The remaining columns provide information on the results of the alcohol tests – the first three of these present results for drivers who showed any evidence of alcohol; the last three columns present information on drivers who had BACs over the statutory limit of 80 mg%.

To illustrate, among drivers aged 36-45 there were three drivers killed during 2014; all three of these fatally injured drivers (100.0%) were tested for alcohol. Of those who were tested, two (66.7%) were positive for alcohol. This means that fatally injured drinking drivers aged 36-45 accounted for 28.6% of all drinking drivers who were killed.

Then, in the final three columns, it can be seen that two of the three (66.7%) fatally injured drivers aged 36-45 who were tested for alcohol had a BAC in excess of 80 mg%. This means that both drivers who were positive for alcohol had BACs in excess of the legal limit. The final column expresses the number of drivers with illegal BACs as a percent of all drivers with BACs over the limit. Thus, drivers aged 36-45 accounted for 33.3% of all the drivers with BACs over the legal limit.

The main findings are shown by the totals at the bottom of the table. Newfoundland and Labrador had a very high testing rate in 2014, with 90.5% of fatally injured drivers being tested for alcohol use.

In Newfoundland and Labrador, 36.8% had been drinking and six out of seven (85.7%) fatally injured drinking drivers had BACs over 80 mg%. Although not shown in the table, more refined analyses by different BAC categories show that among tested drivers:

- > 63.2% had BACs of zero mg%;

- > 5.3% had BACs from 1-49 mg%;
- > 0.0% had BACs from 50-80 mg%;
- > 15.8% had BACs from 81 to 160 mg%; and,
- > 15.8% had BACs over 160 mg%.

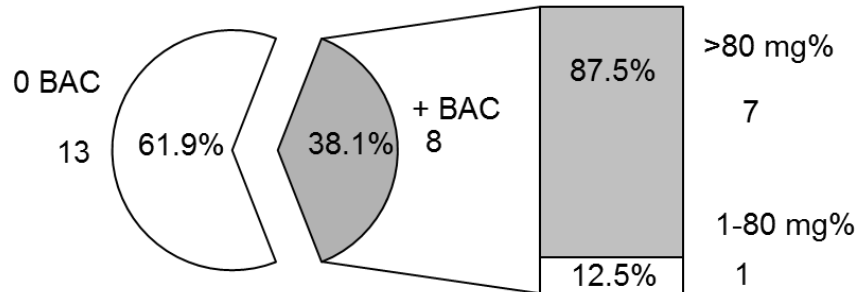
Table 13-2
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Newfoundland and Labrador, 2014

Category of Driver	Number of Drivers*	Drivers Tested		Positive BAC			BAC >80 mg%		
		No.	% of total	No.	% of tested	% of all drivers with +BAC	No.	% of tested	% of all drivers with BAC >80 mg%
<u>Age Group</u>									
16-19	1	1	100.0	0	0.0	0.0	0	0.0	0.0
20-25	3	3	100.0	2	66.7	28.6	1	33.3	16.7
26-35	5	5	100.0	3	60.0	42.9	3	60.0	50.0
36-45	3	3	100.0	2	66.7	28.6	2	66.7	33.3
46-55	2	1	50.0	0	0.0	0.0	0	0.0	0.0
>55	7	6	85.7	0	0.0	0.0	0	0.0	0.0
<u>Gender</u>									
Male	19	17	89.5	6	35.3	85.7	6	35.3	100.0
Female	2	2	100.0	1	50.0	14.3	0	0.0	0.0
<u>Vehicle Type</u>									
Automobiles	11	10	90.9	5	50.0	71.4	4	40.0	66.7
Truck/Van	7	6	85.7	2	33.3	28.6	2	33.3	33.3
Motorcycles	3	3	100.0	0	0.0	0.0	0	0.0	0.0
<u>Collision Type</u>									
Single vehicle	18	16	88.9	7	43.8	100.0	6	37.5	100.0
Multiple vehicle	3	3	100.0	0	0.0	0.0	0	0.0	0.0
TOTAL	21	19	90.5	7	36.8	100.0	6	31.6	100.0

* Drivers dying within 30 days in crashes on public roadways.

In Figure 13-1, the BAC distribution for tested fatally injured drivers is extrapolated to reflect the BAC distribution for all fatally injured drivers. In this figure eight of 21 (38.1%) fatally injured drivers have a positive BAC. And among fatally injured drinking drivers, seven (87.5%) have BACs over 80 mg%.

Figure 13-1
BACs* Among Fatally Injured Drivers of Highway
Vehicles: Newfoundland and Labrador, 2014



* numbers are estimates based on the BAC distribution of drivers tested for alcohol

13.2.1 Age differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 42.9% were aged 26-35; and 28.6% were aged 20-25 and 36-45. Of all the fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 50.0% were aged 26-35; 33.3% were aged 36-45; and 16.7% were aged 20-25.

When comparing the incidence of drinking and driving among fatally injured drivers by age group, fatally injured drivers aged 20-25 and 36-45 were the most likely to have been drinking (66.7%). By contrast, 0.0% of fatally injured drivers aged 16-19, 46-55 and over 55 had been drinking.

13.2.2 Gender differences. Males dominate the picture – they account for 85.7% of the fatally injured drivers who had been drinking and 100.0% of those who were legally impaired.

Males dominate the picture largely because they account for most of the drivers who are killed (19 of the 21 fatalities or 90.5% are males). However, fatally injured female drivers were more likely to have been drinking than male drivers (50.0% and 35.3%, respectively). All of the male drivers (100.0%) and 0.0% of female drivers who were drinking had BACs over the legal limit.

13.2.3 Vehicle differences. Of all the fatally injured drinking drivers (i.e., those with a positive BAC), 71.4% were automobile drivers and 28.6% were truck/van drivers. Among fatally injured legally impaired drivers (i.e., those with BACs over 80 mg%), 66.7% were automobile drivers and 33.3% were truck/van drivers.

Within each of the vehicle types, 50.0% of fatally injured automobile drivers and 33.3% of fatally injured truck/van drivers were found to have been drinking, compared to 0.0% of fatally injured motorcyclists.

13.2.4 Collision differences. A large majority of the drivers killed (18 of the 21) were involved in single-vehicle collisions and these crashes accounted for 100.0% of drivers who had been drinking and who were legally impaired.

The reason for this apparent disparity is because alcohol is usually overrepresented in single-vehicle crashes. Almost half of the drivers involved in single-vehicle crashes (43.8%) tested positive for alcohol, compared to 0.0% of those involved in multiple-vehicle collisions.

13.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in Newfoundland and Labrador. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 13-3 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 149 drivers were involved in crashes in which someone was seriously injured, and among these 7.4% were alcohol-related crashes.

13.3.1 Driver age. Of all the drivers involved in alcohol-related serious injury crashes, 27.3% were aged 46-55 and 18.2% were aged 26-35. Drivers aged 36-45 and over 55 accounted for 9.1% of those involved in alcohol-related serious injury crashes.

Almost one-fifth of the drivers aged 26-35 were involved in alcohol-related serious injury crashes (18.2%). The lowest incidence of involvement in alcohol-related crashes was found for those aged 16-19 and 20-25 (0.0%).

13.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 54.5% were males. The incidence of involvement in alcohol-related serious injury crashes was also greater for males than for females (10.2% and 2.7%, respectively).

Table 13-3
Drivers* in Alcohol-Related Serious Injury Crashes:
Newfoundland and Labrador, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
16-19	4	0	0.0	0.0
20-25	13	0	0.0	0.0
26-35	11	2	18.2	18.2
36-45	11	1	9.1	9.1
46-55	19	3	15.8	27.3
>55	38	1	2.6	9.1
Unknown	53	4	7.5	36.4
<u>Gender</u>				
Male	59	6	10.2	54.5
Female	37	1	2.7	9.1
unknown	53	4	7.5	36.4
<u>Vehicle Type</u>				
Auto	80	7	8.8	63.6
Truck/Van	57	3	5.3	27.3
Motorcycle	9	1	11.1	9.1
Other Hwy. Vehicle	3	0	0.0	0.0
<u>Collision Type</u>				
Single-Vehicle	46	8	17.4	72.7
Multiple-Vehicle	103	3	2.9	27.3
TOTAL	149	11	7.4	100.0

* Excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

13.3.3 Type of vehicle driven. Of all the drivers involved in alcohol-related serious injury crashes, 63.6% were automobile drivers; 27.3% were truck/van drivers; and 9.1% were motorcyclists.

The highest incidence of involvement in alcohol-related serious injury crashes was found for motorcyclists (11.1%), compared to 8.8% for automobile drivers; and 5.3% for truck/van drivers.

13.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 72.7% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in single-vehicle crashes (17.4%) compared to 2.9% for drivers involved in multiple-vehicle crashes.

13.4 Drug use among fatally injured drivers

This section presents information on the presence of drugs, exclusively among drivers fatally injured in Newfoundland and Labrador during 2014. A comparison of testing rates of fatally injured drivers for both alcohol and drugs can be found in Table 3-15 on p. 43. Table 13-4 shows the prevalence of drug use among fatally injured drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.5). The table also shows the number of drivers who

tested positive for various categories of drugs. A brief description of the different drug categories is provided in Section 2.2.5.

As can be seen, Newfoundland and Labrador had a low testing rate in 2014, with 33.3% of fatally injured drivers being tested for drug use.

Among fatally injured tested drivers, three out of seven (42.9%) were positive for drugs. The most common categories of drugs found within drivers testing positive for drug use were cannabis (100.0%), CNS stimulants (66.7%), and narcotic analgesics (33.3%).

Table 13-4
Drug Use Among Fatally Injured Drivers* of Highway
Vehicles: Newfoundland and Labrador, 2014

Prevalence of Drug Use				
Number of Drivers	Drivers Tested		Positive for Drugs	
	Number	% of total	Number	% of tested
21	7	(33.3)	3	(42.9)

Categories of Drugs Found Among Drivers Testing Positive		
Drug Category	Positive for Drug Type	
	Number of Drivers	% of drivers testing positive**
Cannabis	3	(100.0)
CNS Stimulants	2	(66.7)
Narcotic Analgesics	1	(33.3)
CNS Depressants	0	(0.0)
Hallucinogens	0	(0.0)
Dissociative Anesthetics	0	(0.0)
Inhalants	0	(0.0)

* Dying within 30 days in collisions which occurred on public roadways.

** Percentages will not add up to 100% due to multiple drug types found in blood samples of some drivers.

13.5 Trends in alcohol and drug-impaired driving

Sections 13.1 through 13.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 13.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

13.5.1 Deaths involving drinking drivers: 1996-2014. Table 13-5 and Figure 13-2 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2013. These results differ slightly from those in Section 13.1. In this section, deaths that occur in crashes that involve a

drinking pedestrian are not necessarily classified as alcohol- related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

As shown in the table and the figure, the number of deaths in crashes that involved a drinking driver was 17 in 1996, decreased to four in 2000, peaked at 21 in 2008, fluctuated until 2013, and decreased again to 10 in 2014. Between 1996 and 2000, the percentage of alcohol-related fatalities generally decreased from 39.5% to a low of 8.9%, peaked at 58.3% in 2008, decreased to 18.8% in 2009, and generally decreased to 30.3% in 2014.

Table 13-5
Number* and Percent of Motor Vehicle Deaths Involving a**
Drinking Driver: Newfoundland and Labrador, 1996-2014

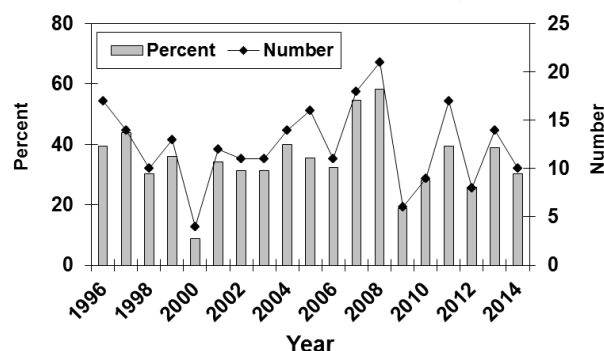
Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	43	17	39.5
1997	32	14	43.8
1998	33	10	30.3
1999	36	13	36.1
2000	45	4	8.9
2001	35	12	34.3
2002	35	11	31.4
2003	35	11	31.4
2004	35	14	40.0
2005	45	16	35.6
2006	34	11	32.4
2007	33	18	54.5
2008	36	21	58.3
2009	32	6	18.8
2010	32	9	28.1
2011	43	17	39.5
2012	31	8	25.8
2013	36	14	38.9
2014	33	10	30.3
2006-2010 baseline	33	13	39.4
2011-2014 period	36	12	33.3

* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

As shown at the bottom of the table, during the 2006-2010 baseline period there was an average of 13 fatalities involving a drinking driver and they accounted for 39.4% of all fatalities. This means that the percent of fatalities involving a drinking driver decreased by 15.4% from 39.4% in the baseline period (2006-2010) to 33.3% in the 2011-2014 period. And, in terms of the number of persons killed in crashes involving a drinking driver, there has been a 7.7% decrease from an average of 13 in the baseline period (2006-2010) to 12 in the 2011-2014 period.

Figure 13-2
Number and Percent of Deaths Involving a Drinking
Driver: Newfoundland and Labrador, 1996-2014



13.5.2 Alcohol use among fatally injured drivers. Data on alcohol use among fatally injured drivers of highway vehicles over the 19-year period from 1996-2014 are shown in Table 13-6. Trends are illustrated in Figure 13-3 which shows changes in the percent of fatally injured drivers who: (1) showed no evidence of alcohol (represented by the white area); (2) had BACs below the legal limit (shown by the light grey area); and (3) had BACs over the legal limit (the dark grey area). The data reported here are restricted to drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2).

As can be seen, the percentage of fatally injured drivers with BACs over the legal limit decreased from 1996 (50.0%) to 1998 (31.3%), peaked in 1999 (57.1%), fell to a low in 2009 (14.3%), and generally increased until 2014 (31.6%). The percent of fatally injured drivers with zero BACs increased from 1996 (41.7%) until 2000 (85.7%), fell to 13.3% in 2007, rose until 2009 (85.7%), decreased until 2013 (59.1%), and rose in 2014 (63.2%). The percentage of fatally injured drivers with BACs from 1-80 mg% was 8.3% in 1996, peaked in 2007 (40.0%), decreased to 0.0% from 2009 until 2011, rose to 9.1% in 2013, and decreased again in 2014 (5.3%).

When compared to the 2006-2010 baseline period, the percentage of fatally injured drivers with zero BACs in the 2011-2014 period increased by 29.7% (from 52.6% to 68.2%). Among drivers with BACs from 1-80 mg%, there was a 57.1% decrease (from 10.5% to 4.5%). And among drivers with BACs over 80 mg%, there was a 25.8% decrease (from 36.8% to 27.3%).

Table 13-6
Alcohol Use Among Fatally Injured Drivers of Highway Vehicles:
Newfoundland and Labrador, 1996-2014

Year	Number of Drivers*	Drivers Tested		Drivers Grouped by BAC (mg%)					
		No.	(% Total)	Zero	(% Tested)	1-80	(% Tested)	>80	(% Tested)
1996	17	12	70.6	5	41.7	1	8.3	6	50.0
1997	17	17	100.0	8	47.1	3	17.6	6	35.3
1998	19	16	84.2	9	56.3	2	12.5	5	31.3
1999	18	14	77.8	5	35.7	1	7.1	8	57.1
2000	24	21	87.5	18	85.7	0	0.0	3	14.3
2001	17	15	88.2	8	53.3	3	20.0	4	26.7
2002	20	18	90.0	12	66.7	2	11.1	4	22.2
2003	18	18	100.0	11	61.1	3	16.7	4	22.2
2004	16	14	87.5	8	57.1	1	7.1	5	35.7
2005	18	16	88.9	7	43.8	4	25.0	5	31.3
2006	22	19	86.4	13	68.4	0	0.0	6	31.6
2007	18	15	83.3	2	13.3	6	40.0	7	46.7
2008	23	22	95.7	6	27.3	6	27.3	10	45.5
2009	23	21	91.3	18	85.7	0	0.0	3	14.3
2010	18	18	100.0	12	66.7	0	0.0	6	33.3
2011	29	25	86.2	20	80.0	0	0.0	5	20.0
2012	25	23	92.0	16	69.6	1	4.3	6	26.1
2013	22	22	100.0	13	59.1	2	9.1	7	31.8
2014	21	19	90.5	12	63.2	1	5.3	6	31.6
2006-2010 baseline	21	19	(90.5)	10	(52.6)	2	(10.5)	7	(36.8)
2011-2014 period	24	22	(91.7)	15	(68.2)	1	(4.5)	6	(27.3)

* Dying within 30 days in collisions which occurred on public roadways.

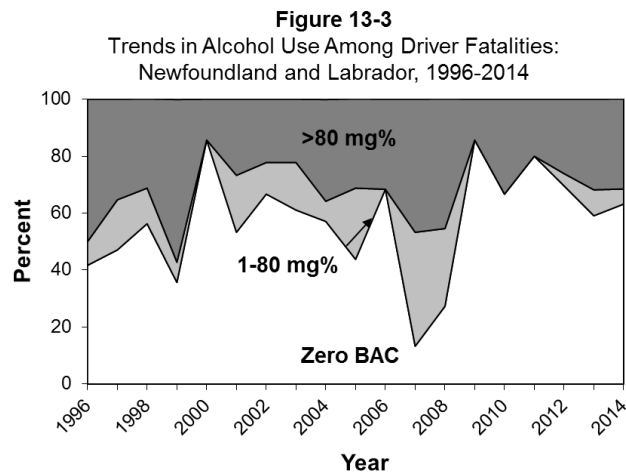


Table 13-7 and Figure 13-4 also show data on alcohol use among fatally injured drivers from 1996 to 2014. Once again, these data are for drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.2). However, these results differ from those reported above for two reasons. First, the number of drivers is extrapolated to reflect the BAC

distribution of drivers tested for alcohol (see Figure 13-1). Second, drivers are grouped in only two BAC categories: zero and positive.

As can be seen at the bottom of Table 13-7, the percentage of fatally injured drivers testing positive for alcohol from 2006-2010, the baseline period, is 47.6%. In the 2011-2014 period, 33.3% of fatally injured drivers tested positive for alcohol, a 30.0% decrease from the baseline period.

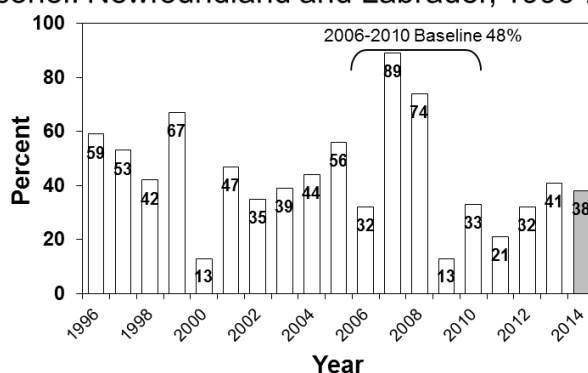
Table 13-7
Alcohol Use* Among Fatally Injured Drivers of Highway Vehicles:
Newfoundland and Labrador, 1996-2014

Year	Number of Drivers**	Drivers Grouped by BAC (mg%)			
		Zero	(% Tested)	Positive	(% Tested)
1996	17	7	(41.2)	10	(58.8)
1997	17	8	(47.1)	9	(52.9)
1998	19	11	(57.9)	8	(42.1)
1999	18	6	(33.3)	12	(66.7)
2000	24	21	(87.5)	3	(12.5)
2001	17	9	(52.9)	8	(47.1)
2002	20	13	(65.0)	7	(35.0)
2003	18	11	(61.1)	7	(38.9)
2004	16	9	(56.3)	7	(43.8)
2005	18	8	(44.4)	10	(55.6)
2006	22	15	(68.2)	7	(31.8)
2007	18	2	(11.1)	16	(88.9)
2008	23	6	(26.1)	17	(73.9)
2009	23	20	(87.0)	3	(13.0)
2010	18	12	(66.7)	6	(33.3)
2011	29	23	(79.3)	6	(20.7)
2012	25	17	(68.0)	8	(32.0)
2013	22	13	(59.1)	9	(40.9)
2014	21	13	(61.9)	8	(38.1)
2006-2010 baseline	21	11	(52.4)	10	(47.6)
2011-2014 period	24	16	(66.7)	8	(33.3)

* Numbers are estimates based on the BAC distribution of drivers tested for alcohol.

** Dying within 30 days in collisions which occurred on public roadways.

Figure 13-4
Percent of Fatally Injured Drivers* Positive for
Alcohol: Newfoundland and Labrador, 1996-2014



13.5.3 Drivers in serious injury crashes. Collision data from 2009 to 2011 for Newfoundland and Labrador were not available at the time this report was being prepared. For this reason, the comparative baseline in the serious-injury trend tables and figures in this sub-section will only report data from 2006 to 2008. These data will be compared with the 2012-2014 period. Table 13-8 and Figure 13-5 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. The percentage of drivers in serious-injury crashes that involved alcohol generally increased from 1996 (20.9%) to 1999 (25.2%), dropped to 15.7% in 2000, generally rose to 23.3% in 2004, remained relatively stable until 2008 (21.7%), and decreased to a low of 7.4% in 2014.

As shown in Table 13-8, in the baseline period (2006-2008), an average of 22.3% of drivers in serious injury crashes were in an alcohol-involved crash. In the 2012-2014 period, the incidence of drivers in alcohol-involved crashes was 14.5%, representing a 35.0% decrease.

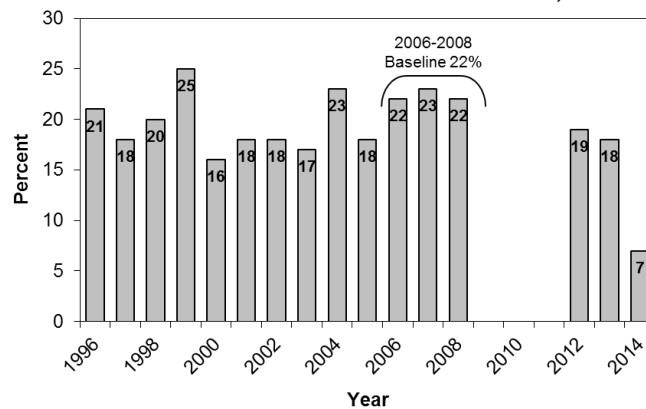
Table 13-8

Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Newfoundland and Labrador, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	296	62	(20.9)
1997	262	46	(17.6)
1998	243	48	(19.8)
1999	230	58	(25.2)
2000	249	39	(15.7)
2001	223	40	(17.9)
2002	191	34	(17.8)
2003	197	34	(17.3)
2004	163	38	(23.3)
2005	136	25	(18.4)
2006	131	29	(22.1)
2007	129	29	(22.5)
2008	129	28	(21.7)
2009			
2010			
2011			
2012	156	29	(18.6)
2013	151	27	(17.9)
2014	149	11	(7.4)
2006-2008 baseline	130	29	(22.3)
2012-2014 period	152	22	(14.5)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 13-5
Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Newfoundland and Labrador, 1996-2014



13.5.4 Drug use among fatally injured drivers. Table 13-9 and Figure 13-6 show data on drug use among fatally injured drivers of highway vehicles over a 15-year period (2000-2014). Similar to Table 13-6, these results are based on fatally injured drivers of highway vehicles who died within 30 days in collisions which occurred on public roadways (see Section 2.2.5).

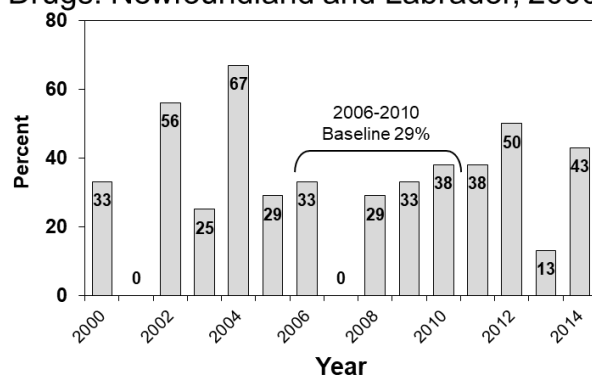
As can be seen at the bottom of Table 13-9, the percentage of fatally injured drivers testing positive for drugs from 2006-2010, the baseline period, is 28.6%. The percentage of fatally injured drivers testing positive for drugs was 37.5% in 2011, 50.0% in 2012, 12.5% in 2013, and 42.9% in 2014. From 2011 to 2014, the average percentage of fatally injured drivers testing positive for drugs was 33.3%, a 16.4% increase from the baseline period.

Table 13-9
Drug Use Among Fatally Injured Drivers of Highway Vehicles:
Newfoundland and Labrador, 2000-2014

YEAR	Number of Drivers*	Drivers Tested	(% Total)	Drivers Tested for Drugs			
				Negative	(% Tested)	Positive	(% Tested)
2000	24	6	25.0	4	66.7	2	33.3
2001	17	6	35.3	6	100.0	0	0.0
2002	20	9	45.0	4	44.4	5	55.6
2003	18	4	22.2	3	75.0	1	25.0
2004	16	6	37.5	2	33.3	4	66.7
2005	18	7	38.9	5	71.4	2	28.6
2006	22	9	40.9	6	66.7	3	33.3
2007	18	4	22.2	4	100.0	0	0.0
2008	23	7	30.4	5	71.4	2	28.6
2009	23	9	39.1	6	66.7	3	33.3
2010	18	8	44.4	5	62.5	3	37.5
2011	29	8	27.6	5	62.5	3	37.5
2012	25	12	48.0	6	50.0	6	50.0
2013	22	8	36.4	7	87.5	1	12.5
2014	21	7	33.3	4	57.1	3	42.9
2006-2010 baseline	21	7	33.3	5	71.4	2	28.6
2011-2014 period	24	9	37.5	6	66.7	3	33.3

* Dying within 30 days in collisions which occurred on public roadways.

Figure 13-6
Percent of Fatally Injured Drivers Positive for
Drugs: Newfoundland and Labrador, 2000-2014



14.0 YUKON

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in the Yukon during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 14.1);
- > alcohol use among fatally injured drivers (Section 14.2);
- > drivers involved in alcohol-related serious injury crashes (Section 14.3);
- > drug use among fatally injured drivers (Section 14.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 14.5).

Detailed results are not provided in Sections 14.1, 14.2 and 14.4 because the small number of deaths in alcohol-related crashes – only two – and drivers fatally injured – only one – makes the results unreliable.

14.1 Deaths in alcohol-related crashes

This section specifically reports upon persons who died within 30 days of a motor vehicle collision which occurred on a public road that involved at least one highway vehicle. A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.

During 2014, four persons died in motor vehicle crashes in the Yukon. And, in all of these cases (100.0%), it was possible to determine if alcohol was a factor in the crash. Of these cases, two (50.0%) involved alcohol.

14.2 Alcohol in fatally injured drivers

This section presents information on the presence of alcohol, exclusively among drivers fatally injured in the Yukon during 2014. It reports upon drivers of highway vehicles who died within 30 days of a crash which occurred on a public roadway (see Section 2.2.2).

The Yukon had only one fatally injured driver in 2014. This driver was tested for alcohol and had a negative BAC.

14.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in the Yukon. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for

alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 14-1 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol are shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, 27 drivers were involved in crashes in which someone was seriously injured, and among these 25.9% were alcohol-related crashes.

Table 14-1
Drivers* in Alcohol-Related Serious Injury Crashes:
Yukon, 2014

Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
16-25**	4	3	75.0	42.9
26-35	5	1	20.0	14.3
36-45	3	1	33.3	14.3
46-55	4	1	25.0	14.3
>55	11	1	9.1	14.3
<u>Gender</u>				
Male	15	2	13.3	28.6
Female	12	5	41.7	71.4
<u>Vehicle Type</u>				
Auto	14	3	21.4	42.9
Truck/Van	12	4	33.3	57.1
Motorcycle	1	0	0.0	0.0
<u>Collision Type</u>				
Single-Vehicle	18	7	38.9	100.0
Multiple-Vehicle	9	0	0.0	0.0
TOTAL	27	7	25.9	100.0

* excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

** Drivers in two age groups have been aggregated to ensure that an individual will not be identified.

14.3.1 Driver age. Drivers aged 16-19 and 20-25 have been regrouped (16-25 age group) to ensure that individuals cannot be identified. Of all the drivers involved in alcohol-related serious injury crashes, 42.9% were aged 16-25; and 14.3% were aged 26-35, 36-45, 46-55 and over 55.

Within each of the age groups, 75.0% of the drivers aged 16-25 were involved in alcohol-related serious injury crashes. The lowest incidence of involvement in alcohol-related crashes was found for those aged over 55 (9.1%).

14.3.2 Driver gender. Of all the drivers involved in alcohol-related serious injury crashes, 71.4% were females. The incidence of involvement in alcohol-related serious injury crashes was greater for females than for males (41.7% and 13.3%, respectively).

14.3.3 Type of vehicle driven. Of all the drivers involved in alcohol-related serious injury crashes, 57.1% were truck/van drivers and 42.9% were automobile drivers.

The highest incidence of involvement in alcohol-related serious injury crashes was found for truck/van drivers – 33.3% of these drivers were in crashes that involved alcohol, compared to 21.4% for automobile drivers and 0.0% for motorcyclists.

14.3.4 Type of collision. Of all the drivers involved in alcohol-related serious injury crashes, 100.0% of them were in single-vehicle crashes. The highest incidence of involvement in alcohol-related serious injury crashes was also found among drivers in multiple-vehicle crashes (38.9%), compared to 0.0% for drivers involved in single-vehicle crashes.

14.4 Drug use among fatally injured drivers

The Yukon had only one fatally injured driver of a highway vehicle in 2014.

14.5 Trends in alcohol and drug-impaired driving

Sections 14.1 through 14.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 14.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

14.5.1 Deaths involving drinking drivers: 1996-2014. Table 14-2 and Figure 14-1 show the number and percent of people who died in crashes involving a drinking driver from 1996 to 2014. These results differ slightly from those in Section 14.1. In this section, deaths that occur in crashes that involve a drinking pedestrian are not necessarily classified as alcohol-related deaths. The focus here is more restrictive, on deaths that occur in crashes involving at least one drinking driver (see Section 2.2.1).

As shown in the figure, the number of deaths in crashes that involved a drinking driver generally increased from four to seven between 1996 and 1998, fell to zero in 2001, rose to six in 2002, remained relatively stable until 2013 and rose to two in 2014. The percentage of alcohol-related fatalities generally decreased from 1996 (66.7%) to 2001 (0.0%), peaked in 2010 (75.0%), decreased to 25.0% in 2013, and rose again in 2014 (50.0%).

It can be seen that during the 2006-2010 baseline period that there was an average of three fatalities involving a drinking driver and they accounted for 42.9% of all fatalities. This means that the percent of fatalities involving a drinking driver increased by 16.6% from 42.9% in the baseline period (2006-2010) to 50.0% in the 2011-2014 period. In terms of the number of persons killed in crashes involving a drinking driver, there was a 33.3% decrease from an average of three in the baseline period (2006-2010) to two in the 2011-2014 period.

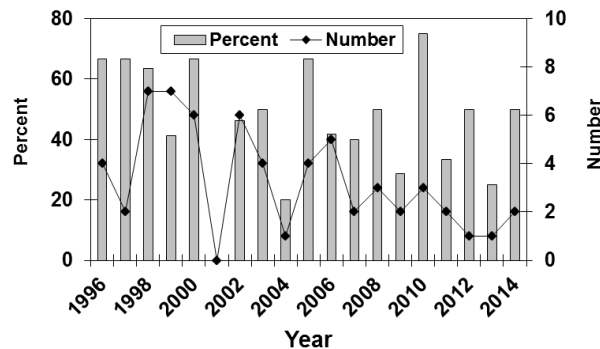
Table 14-2
Number* and Percent of Motor Vehicle Deaths Involving**
a Drinking Driver: Yukon, 1996-2014

Year of Death	Number of Deaths	Alcohol-Related Deaths	
		Number	% of total
1996	6	4	66.7
1997	3	2	66.7
1998	11	7	63.6
1999	17	7	41.2
2000	9	6	66.7
2001	4	0	0.0
2002	13	6	46.2
2003	8	4	50.0
2004	5	1	20.0
2005	6	4	66.7
2006	12	5	41.7
2007	5	2	40.0
2008	6	3	50.0
2009	7	2	28.6
2010	4	3	75.0
2011	6	2	33.3
2012	2	1	50.0
2013	4	1	25.0
2014	4	2	50.0
2006-2010 baseline	7	3	42.9
2011-2014 period	4	2	50.0

* numbers are estimates based on the percent of deaths for which information was available to determine alcohol use.

** persons dying within 30 days of collisions which occur on public roadways involving at least one principal vehicle type.

Figure 14-1
Number and Percent of Deaths Involving
a Drinking Driver: Yukon, 1996-2014



14.5.2 Alcohol use among fatally injured drivers. Due to the small number of cases – e.g., one fatally injured driver in 2014 – any trends would be unreliable, and therefore, are not presented in tables and figures.

14.5.3 Drivers in serious injury crashes. In the Yukon, data are only available since 1998 to indicate the degree of injury severity for collision victims. Thus trend tables in this section include data from 1998 to 2014, as opposed to the 1996-2014 period reported for serious injury collisions in most other jurisdictions. Table 14-3 and Figure 14-2 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. Between 1998 (40.0%) and 2003 (24.1%) the percentage of all drivers in injury crashes that involved alcohol fluctuated, peaked in 2005 (51.2%), dropped to a low of 15.8% in 2012, rose in 2013 (26.1%), and decreased slightly in 2014 (25.9%).

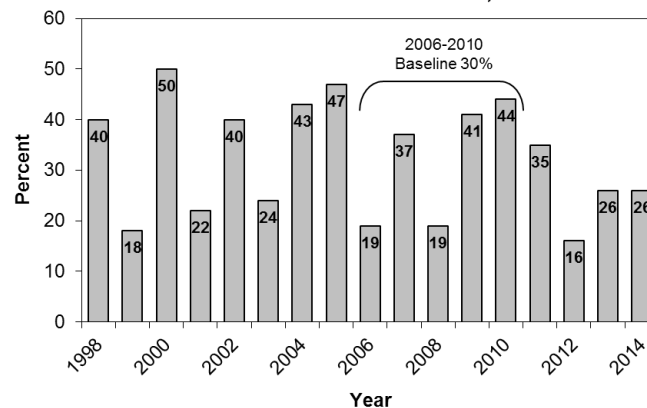
As shown in Table 14-3, in the baseline period (2006-2010), an average of 29.6% of drivers in injury crashes were in an alcohol-involved crash. In the 2011-2014 period, the incidence of drivers in alcohol-involved crashes was 25.0%, representing a 15.5% decrease.

Table 14-3
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Yukon, 1998-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1998	35	14	(40.0)
1999	57	10	(17.5)
2000	34	17	(50.0)
2001	36	8	(22.2)
2002	43	17	(39.5)
2003	29	7	(24.1)
2004	21	9	(42.9)
2005	36	17	(47.2)
2006	27	5	(18.5)
2007	27	10	(37.0)
2008	27	5	(18.5)
2009	27	11	(40.7)
2010	25	11	(44.0)
2011	26	9	(34.6)
2012	19	3	(15.8)
2013	23	6	(26.1)
2014	27	7	(25.9)
2006-2010 baseline	27	8	(29.6)
2011-2014 period	24	6	(25.0)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 14-2
Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Yukon, 1998-2014



14.5.4 Drug use among fatally injured drivers. Due to the small number of cases – e.g., one fatally injured driver in 2014 – any trends would be unreliable, and therefore, are not presented in tables and figures.

15.0 NORTHWEST TERRITORIES

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in the Northwest Territories during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 15.1);
- > alcohol use among fatally injured drivers (Section 15.2);
- > drivers involved in alcohol-related serious injury crashes (Section 15.3);
- > drug use among fatally injured drivers (Section 15.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 15.5).

Detailed results are not provided in Sections 15.1, 15.2 and 15.4 because the small number of deaths – only four – and drivers fatally injured – two – makes the results unreliable.

15.1 Deaths in alcohol-related crashes

This section specifically reports upon persons who died within 30 days of a motor vehicle collision which occurred on a public road that involved at least one highway vehicle. A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash.

During 2014, four persons died in motor vehicle crashes in the Northwest Territories. And, in all of these cases (100.0%), it was possible to determine if alcohol was a factor in the crash. Of these cases, two (50.0%) involved alcohol.

15.2 Alcohol use among fatally injured drivers

The Northwest Territories had two fatally injured drivers in 2014. Neither driver was tested for alcohol.

15.3 Drivers involved in alcohol-related serious injury crashes

This section presents information on drivers of highway vehicles involved in alcohol-related crashes in which someone was seriously injured in 2014 in the Northwest Territories. A “surrogate” or “indirect” measure is used to estimate alcohol involvement because drivers in serious injury crashes are seldom tested for alcohol. A driver is identified as having been involved in an alcohol-related serious injury crash if the crash in which someone was seriously injured involved a single vehicle at night (SVN), or if, in the case of a non-SVN serious injury crash, the police reported alcohol involvement – i.e., at least one drinking driver in the crash (see Section 2.2.4).

The results are shown in Table 15-1 for drivers grouped in terms of age, gender, type of vehicle driven (see Section 2.2.1), and type of collision. The first column shows the number of drivers of highway vehicles involved in serious injury crashes. The number and percent of drivers in such crashes that involved alcohol is shown in the next two columns. The final column expresses the number of drivers involved in alcohol-related serious injury crashes in any row as a percent of all drivers involved in alcohol-related serious injury crashes.

As shown, by the totals at the bottom of the table, seven drivers were involved in crashes in which someone was seriously injured, and among these none (0.0%) was an alcohol-related crash.

Table 15-1
Drivers* in Alcohol-Related Serious Injury Crashes:
Northwest Territories, 2014

Northwest Territories, 2014				
Category of Drivers	Number of Drivers	Alcohol-Related		
		Number	% of total	% of all drivers in alcohol-related crashes
<u>Age</u>				
26-35	2	0	0.0	0.0
36-45	1	0	0.0	0.0
46-55	2	0	0.0	0.0
>55	2	0	0.0	0.0
<u>Gender</u>				
Male	3	0	0.0	0.0
Female	4	0	0.0	0.0
<u>Vehicle Type</u>				
Auto	1	0	0.0	0.0
Truck/Van	4	0	0.0	0.0
Motorcycle	2	0	0.0	0.0
<u>Collision Type</u>				
Single-Vehicle	3	0	0.0	0.0
Multiple-Vehicle	4	0	0.0	0.0
TOTAL	7	0	0.0	0.0

* excludes operators of bicycles, snowmobiles, farm tractors, and other non-highway vehicles.

15.3.1 Driver age. Among drivers aged 26-35, 36-45, 46-55, and over 55, none were involved in an alcohol-related serious injury crash.

15.3.2 Driver gender. Neither male nor female drivers were involved in an alcohol-related serious injury crash.

15.3.3 Type of vehicle driven. Among automobile drivers, truck/van drivers and motorcyclists, none were involved in alcohol-related serious injury crash.

15.3.4 Type of collision. No drivers in either single or multiple-vehicle crashes were involved in an alcohol-related serious injury crash.

15.4 Drug use among fatally injured drivers

The Northwest Territories had two fatally injured drivers in 2014. Neither driver was tested for drugs.

15.5 Trends in alcohol and drug-impaired driving

Sections 15.1 through 15.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 15.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

15.5.1 Deaths involving drinking drivers: 1996-2014. Due to the small number of fatalities in crashes on public roadways involving highway vehicles (e.g., four in 2014) any trends would be unreliable, and therefore are not reported.

15.5.2 Alcohol use among fatally injured drivers. Due to the small number of cases – e.g., two fatally injured drivers in 2014 – any trends would be unreliable, and therefore are not reported.

15.5.3 Drivers in serious injury crashes. Table 15-2 and Figure 15-1 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. Between 1996 and 2000 the percentage of all drivers in serious injury crashes that involved alcohol generally increased from 25.0% to its highest level (66.7%), fluctuated until 2010, decreased to 0.0% in 2011 and 2012, rose in 2013 (37.5%), and decreased again in 2014 (0.0%).

In the baseline period (2006-2010), an average of 33.3% of highway vehicle drivers in serious injury crashes were in an alcohol-involved crash. From 2011 to 2014, the average percentage of drivers in alcohol-involved crashes declined to 22.2%, a 33.3% decrease from the baseline period.

Table 15-2

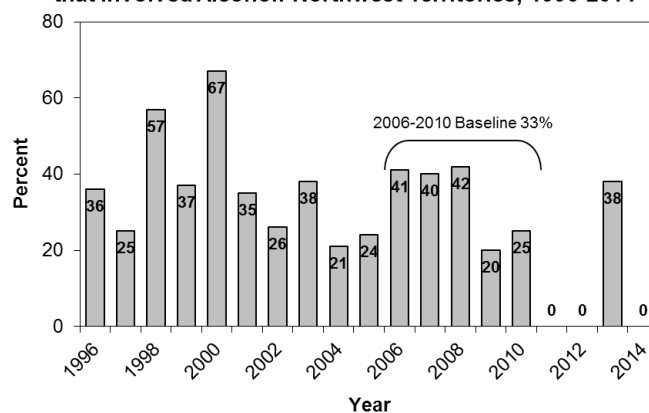
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Northwest Territories, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	14	5	(35.7)
1997	12	3	(25.0)
1998	14	8	(57.1)
1999	19	7	(36.8)
2000	6	4	(66.7)
2001	20	7	(35.0)
2002	19	5	(26.3)
2003	16	6	(37.5)
2004	14	3	(21.4)
2005	21	5	(23.8)
2006	17	7	(41.2)
2007	10	4	(40.0)
2008	12	5	(41.7)
2009	10	2	(20.0)
2010	12	3	(25.0)
2011	3	0	(0.0)
2012	8	0	(0.0)
2013	16	6	(37.5)
2014	7	0	(0.0)
2006-2010 baseline	12	4	(33.3)
2011-2014 period	9	2	(22.2)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 15-1

Percent of Drivers of Highway Vehicles in Serious Injury Crashes that Involved Alcohol: Northwest Territories, 1996-2014



15.5.4 Drug use among fatally injured drivers. Due to the small number of cases – e.g., two fatally injured drivers in 2014 – any trends would be unreliable, and therefore are not reported.

16.0 NUNAVUT

This section of the report reviews the major findings on alcohol involvement in fatal and serious injury motor vehicle collisions as well as drug involvement in fatal motor vehicle collisions in Nunavut during 2014. It describes data on:

- > people who were killed in alcohol-related crashes (Section 16.1);
- > alcohol use among fatally injured drivers (Section 16.2);
- > drivers involved in alcohol-related serious injury crashes (Section 16.3);
- > drug use among fatally injured drivers (Section 16.4); and,
- > trends in the alcohol-crash and drug-crash problems (Section 16.5).

Detailed results are not provided in Sections 16.1, 16.2 and 16.4 because the small number of deaths and drivers fatally injured – none – makes the results unreliable.

16.1 Deaths in alcohol-related crashes

A motor vehicle fatality was considered to be alcohol involved if there was at least one drinking driver or drinking pedestrian in the fatal crash. During 2014, there were no fatally injured victims of motor vehicle collisions which occurred on public roadways.

16.2 Alcohol in fatally injured drivers

Nunavut had no fatally injured drivers of highway vehicles in 2014.

16.3 Drivers involved in alcohol-related serious injury crashes

Nunavut had no drivers of highway vehicles involved in serious injury crashes in 2014.

16.4 Drug use among fatally injured drivers

Nunavut had no fatally injured drivers of highway vehicles in 2014.

16.5 Trends in alcohol and drug-impaired driving

Sections 16.1 through 16.3 examined three indicators of the alcohol-crash problem: (1) the number and percent of people who died in crashes that involved alcohol; (2) the number and percent of fatally injured drivers who had been drinking; and (3) the number and percent of drivers in serious injury crashes that involved alcohol. Section 16.4 examined drug use among fatally injured drivers in 2014. This section examines changes in these four indicators over time.

16.5.1 Deaths involving drinking drivers: 1996-2014. Due to the small number of crashes on public roadways involving highway vehicles (e.g., no deaths in 2014) any trends would be unreliable, and therefore are not reported.

16.5.2 Alcohol use among fatally injured drivers. Due to the small number of cases – e.g., no fatally injured drivers in 2014 – any trends would be unreliable, and therefore are not reported.

16.5.3 Drivers in serious injury crashes. Table 16-1 and Figure 16-1 show information on drivers of highway vehicles involved in alcohol-related serious injury crashes. Between 1996 and 1997 the percentage of all drivers in serious injury crashes that involved alcohol decreased from 50.0% to 0.0%. Since then, the incidence peaked at 75.0% in 1998, generally decreased to 0.0% in 2005, rose to 33.3% in 2006 and 2007, and dropped again to 0.0% from 2008 to 2010. Serious injury collision data were not available in 2011. In 2012 and 2013, none of the drivers involved in serious injury collisions were in an alcohol-related crash. And in 2014, there were no drivers of highway vehicles involved in serious injury crashes.

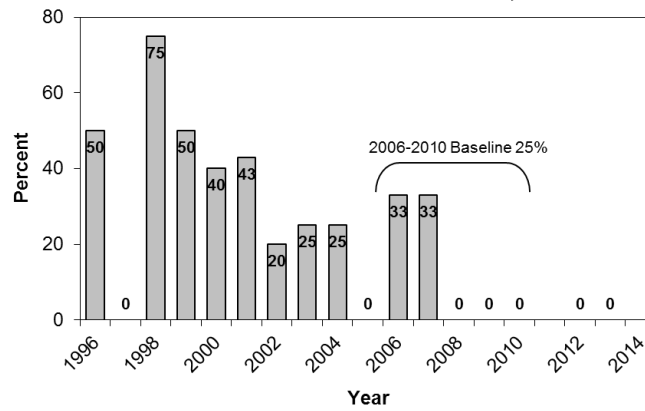
As shown in Table 16-1, in the baseline period (2006-2010), an average of 25.0% of drivers in serious injury crashes were in an alcohol-involved crash. From 2011 to 2014, the average percentage of drivers in alcohol-related serious injury collisions was 0.0%.

Table 16-1
Number and Percent of Drivers of Highway Vehicles in Serious Injury Crashes* that Involved Alcohol: Nunavut, 1996-2014

Year	Number of Drivers	Number in Alcohol-Involved Crashes	Percent
1996	2	1	(50.0)
1997	2	0	(0.0)
1998	4	3	(75.0)
1999	2	1	(50.0)
2000	5	2	(40.0)
2001	7	3	(42.9)
2002	5	1	(20.0)
2003	4	1	(25.0)
2004	4	1	(25.0)
2005	6	0	(0.0)
2006	9	3	(33.3)
2007	3	1	(33.3)
2008	2	0	(0.0)
2009	4	0	(0.0)
2010	1	0	(0.0)
2011			
2012	1	0	(0.0)
2013	2	0	(0.0)
2014	0	0	(0.0)
2006-2010 baseline	4	1	(25.0)
2011-2014 period	1	0	(0.0)

* single-vehicle nighttime crashes (SVN) as well as non-SVN crashes that have police-reported alcohol involvement

Figure 16-1
Percent of Drivers of Highway Vehicles in Serious Injury
Crashes that Involved Alcohol: Nunavut, 1996-2014



16.5.4 Drug use among fatally injured drivers. Due to the small number of cases – e.g., no fatally injured drivers in 2014 – any trends would be unreliable, and therefore are not reported.

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