The Road Safety Monitor 2002

Drinking and Driving
The Traffic Injury Research Foundation

The mission of the Traffic Injury Research Foundation (TIRF) is to reduce traffic-related deaths and injuries.

TIRF is a national, independent, charitable road safety institute. Since its inception in 1964, TIRF has become internationally recognized for its accomplishments in a wide range of subject areas related to identifying the causes of road crashes and developing programs and policies to address them effectively.

Traffic Injury Research Foundation
171 Nepean Street, Suite 200
Ottawa, Ontario K2P 0B4
Ph: (613) 238-5235
Fax: (613) 238-5292
Email: tirf@trafficinjuryresearch.com
Website: www.trafficinjuryresearch.com

December 2002
The Road Safety Monitor 2002

Drinking and Driving

Douglas J. Beirness
Herb M. Simpson
Katharine Desmond
Financial support provided by:

Primary sponsors:

Transport Canada

Brewers Association of Canada

Secondary sponsors:

Royal & SunAlliance

Young Drivers of Canada

Additional support provided by:

Canada Safety Council

Affiliated Computer Services
# Table of Contents

## Executive Summary

--- ii

## The Road Safety Monitor

- Rationale ................................................................. 1
- Structure ................................................................. 1

## Method

--- 3

## Drinking and Driving

- Background ........................................................... 5

## Survey Results

- PUBLIC CONCERN .................................................... 9
  - Does the public view drinking and driving as a major social issue? 9
  - Does the public view drinking and driving as a major road safety issue? 9
    - Demographic differences ........................................ 10
    - Regional differences ........................................... 10

- DRINKING AND DRIVING PRACTICES ......................... 11
  - How Many Canadians Drive after Drinking? ............... 11
  - How Often Do Canadians Drive after Drinking? .......... 11
  - Who Drives after Drinking? .................................. 12
    - Gender ................................................................ 12
    - Age .................................................................... 13
    - Other factors .................................................... 14
    - Regional differences .......................................... 14

- TAKING ACTION AGAINST DRINKING AND DRIVING ...... 15
  - Demographic differences ....................................... 17
  - Regional differences ............................................ 18
  - The BAC limit for drivers ..................................... 18

## Bibliography

--- 21
Executive Summary

- The Road Safety Monitor is an annual public opinion survey by the Traffic Injury Research Foundation (TIRF) that takes the pulse of the nation on key road safety issues by means of a comprehensive telephone survey of a random, representative sample of Canadian drivers.

- The results from this second edition of the Road Safety Monitor are being released in a series of reports that cover several key issues – the present report focuses on drinking and driving.

- Results show that drinking and driving is a priority social issue for Canadians and the most important road safety issue they face – 86% believe it is a serious problem.

- Drivers in British Columbia see drinking and driving as a less serious problem than do drivers in other regions of the country.

- 16.1% of drivers report driving a vehicle within two hours of consuming alcohol in the past 30 days – a slight decrease from the 16.7% who reported doing so in the 2001 Road Safety Monitor.

- However, this means that an estimated 3.4 million Canadian drivers admit to driving after drinking at some time during the past 30 days.

- 7.9% of drivers say that they have driven at some time during the past year when they thought they were over the legal limit – a slight but not statistically significant increase from the 7.3% who reported doing so last year.

- This means that in the past year, an estimated 1.7 million Canadians drove when they thought they were impaired.

- It is estimated that there were over 8 million impaired driving trips in the past year. However, less than 3% of drivers account for over 80% of all impaired driving trips.

- There has been a substantial increase in the percentage of women who report driving when they thought they were over the legal limit. Those who do so are doing it more often. Men show the opposite trend.

- Young drivers (age 16 to 18) and older driver (age 65 and over) are least likely to drive after drinking. Drivers between 19 and 34 are most likely to report driving after drinking.

- Drivers in Atlantic Canada are least likely to report driving after drinking. Drivers in British Columbia and the Prairie provinces are most likely to report doing so.

- Canadian drivers support initiatives to deal effectively with drinking and driving including: requiring drivers suspected of drinking to perform sobriety tests, mandatory breath testing of drivers involved in collisions, alcohol ignition interlocks, immediate impoundment of vehicles driven by impaired drivers, a zero BAC restriction for convicted offenders, and greater use of police spot checks.
The Road Safety Monitor is an annual public opinion survey developed by the Traffic Injury Research Foundation (TIRF) to take the pulse of the nation on key road safety issues.

The survey examines:

♦ what Canadians see as priority road safety issues and how concerned they are about them;
♦ their views about how to deal with these problems;
♦ how they behave on the highways; and
♦ what they know and don’t know about safe driving practices.

Rationale

Information on public knowledge about road safety issues is valuable for determining the specific areas where awareness needs to be heightened and knowledge needs to be improved. Information on public attitudes toward road safety and information about driving habits and safety practices is valuable for guiding program development and policy decisions.

Annual monitoring in these areas permits an assessment of changes in knowledge and awareness as well as changes in safety practices and in the level of concern about persisting problems; it also helps identify new and emerging issues.

Structure

The TIRF Road Safety Monitor is designed to assess public opinion, awareness, knowledge, and practices on a broad range of important traffic safety issues. It includes a core set of questions that are asked each year to provide information on trends in
attitudes, opinions and behaviours. This is supplemented by a set of questions that probe more deeply into special, topical, and emerging issues.

This is the second edition of the TIRF Road Safety Monitor, and the findings are being released in a series of reports. The present one, entitled *Drinking and Driving*, examines attitudes, perceptions, and practices concerning the operation of a motor vehicle after the consumption of alcohol. In particular, it monitors trends in these problems over the past year.

The first report on the Road Safety Monitor 2002, entitled *Risky Driving*, was released in October 2002. A subsequent report will deal with *Drugs and Driving*, a behaviour of growing concern.
This second edition of the TIRF Road Safety Monitor contained 107 items designed to probe the knowledge, attitudes, and concerns of Canadians with respect to a range of road safety issues and to obtain information on their driving practices. The use of a branching format and the procedure of randomly asking a selected number of alternative items allowed the entire survey to be completed in approximately 21 minutes.

The survey was administered by telephone to a random sample of Canadian drivers. Opinion Search Inc. conducted the interviews in April, 2002. Among the 4,670 households contacted in which a person was asked to participate, 2,722 (58%) refused, 120 (2.6%) terminated early, 579 (12%) were not qualified, 35 (<1%) were qualified but the quota was full, and 1,214 (26%) completed the interview.

The data were weighted to ensure the results were representative of the national population. Based on a sample of this size, the results can be considered accurate within 2.8%, 19 times out of 20 (most conservative estimate).

This report examines the results from the 2002 Road Safety Monitor on issues related to drinking and driving and compares them with the findings from the 2001 Road Safety Monitor. The methods used in the two surveys were virtually identical, differing only in the content of some of the questions. In 2001, the sample consisted of 1,207 completed interviews (Beirness et al. 2001a;b; 2002a;b).
Background

During the 1980s, public concern about drinking and driving reached unprecedented levels. In response to this concern, action was taken on many fronts. Education and awareness programs proliferated, laws were strengthened, and enforcement efforts became prominent and commonplace. Consistent with this heightened attention, significant and unparalleled decreases occurred in the magnitude of the problem. In particular, between 1981 and 1988, the prevalence of drivers on the road at night in Canada with blood alcohol concentrations (BACs) over the legal limit (i.e., 80 mg alcohol/100 ml blood) dropped by 33% (Mayhew et al. 1996a). This decrease in the number of impaired drivers on the road at night was associated with a substantial decline in the proportion of fatal crashes that involved alcohol. Between 1981 and 1988, the percent of fatally injured drivers with BACs in excess of the legal limit dropped by 27% (Mayhew et al. 1996b).

In the 1990s, although progress continued, it was much less dramatic. For example, the proportion of fatally injured drivers with BACs in excess of the legal limit decreased by less than 5% between 1990 and 1996.

A major reason why the substantial declines of the 1980s were not replicated in the 1990s is that the characteristics of the problem had changed. It appears that the successful countermeasure programs implemented during the 1980s served to change the drinking and driving behaviour of responsible, social drinkers but these same measures had less impact on that group of heavier drinkers who frequently drive after drinking and often with high BACs (Simpson and Mayhew 1991). This “hard core” group of drinking drivers was relatively unaffected by general deterrence and it is this group that now accounts for a very significant part of the problem (Beirness et al. 1997).

---

1 Data are from the TIRF National Fatality Database, which is supported by Transport Canada and the Canadian Council of Motor Transport Administrators.
Simpson et al. 1996). As a consequence, continued gains in the magnitude of the problem have been more difficult to achieve. The importance of dealing effectively with this group to make further progress has been acknowledged by virtually every government agency and research organization in North America.

In response to this problem, countermeasure initiatives directed primarily at impaired driving offenders – particularly repeat offenders – began to be implemented across Canada. Vehicle impoundment, administrative licence suspension, assessment and treatment of offenders are among the programs that have been demonstrated to be effective (Beirness et al. 1997; Voas et al. 1999; Wells-Parker et al. 1995). As these types of programs have become commonplace and widespread, their collective influence is being felt. For example, following several years of small and slow declines in the magnitude of the alcohol-crash problem, since 1996, the percent of fatally injured drivers with BACs in excess of 80 mg/dl has decreased by 16%.

Despite these gains, the problem remains. In 2000 (the most recent year for which data are available), just under 30% of fatally injured drivers in Canada had a BAC in excess of the legal limit. In total, an estimated 864 people were killed in road crashes that involved a driver who had been drinking. In addition, based on police-reported alcohol involvement, approximately 3,400 drivers were involved in alcohol-related serious injury crashes in Canada2 (Mayhew et al. 2002). The total number of people who sustained injuries in crashes involving a drinking driver is not known.

An additional explanation that has been offered for the slowing of progress in the 1990s is that the public has become increasingly complacent and indifferent. In some respects, the much-heralded decreases in the magnitude of the drinking-driving problem during the 1980s may have created the mistaken impression that it had been solved (Simpson 1993). This belief could lead to a waning of public concern about the problem, with an attendant reduction in government and personal action.

However, results from last year’s Road Safety Monitor do not support the contention that the public is indifferent. Results showed that the public was very concerned about

---

2 British Columbia data are not included in this estimate because the severity of injuries sustained in crashes is not reported.
drinking-driving problem. In fact, it was ranked as the most serious road safety problem facing Canadians. If public concern does diminish, it can have profound implications for the effectiveness of existing countermeasures as well as for the impact of new ones. Accordingly, it is essential to monitor the pulse of the nation on this most important traffic safety issue. This was a primary purpose of this edition of the Road Safety Monitor, which was designed to assess:

- the level of public concern about drinking and driving;
- the drinking and driving practices of Canadians; and
- the level of public support for various countermeasure options.
PUBLIC CONCERN

Does the public view drinking and driving as a major social issue?

Canadians continue to be very concerned about drinking and driving. In fact, they see it as a major social issue, expressing greater concern about drinking and driving than they do about a variety of other social issues, such as school violence, the state of the health care system, the amount of taxes they pay, the safety of their drinking water, or the threat of a terrorist attack. When asked to rate their level of concern about drinking and driving on a scale from 1 (not at all concerned) to 6 (extremely concerned), 85% of Canadians said they were very concerned or extremely concerned – virtually unchanged from the 83% who expressed a similar level of concern in last year’s Road Safety Monitor. Drinking and driving remains a priority social issue for Canadians.

Does the public view drinking and driving as a major road safety issue?

Canadians see drinking and driving as the most serious road safety issue facing them today. Figure 1 shows the average ratings of the perceived seriousness of a number of road safety issues – 1 represents “not a problem at all” and 6 represents “an extremely serious problem”. As can be seen, Canadians feel that drinking and driving is the most serious problem, topping the list of a variety of other road safety issues, such as aggressive drivers (see Road Safety Monitor: Risky Driving, November 2002), sleepy drivers, drivers using cell phones, and vehicle defects. There was no change in the ratings between the 2001 and 2002 Road Safety Monitor. Concern over drinking and driving has not diminished.
Demographic differences. Women are more inclined to see drinking and driving as a serious problem – 89% of women, compared to 81% of men, rate drinking and driving as a serious or extremely serious problem³. Despite these differences, the vast majority of both men and women believe drinking and driving is an extremely serious problem.

Over 80% of drivers in all age groups see drinking and driving as an extremely serious problem.

Regional differences. Although there is a general consensus in Canada that drinking and driving is a serious problem, there are differences across the country. Figure 2 shows the percent of drivers in each of five major regions of Canada who rate drinking and driving as a very serious or extremely serious problem. As can be seen, drivers in British Columbia are less likely to view drinking and driving as a very serious or extremely serious problem (80%) and drivers in Quebec are most likely to rate the problem as very or extremely serious (90%). There was no change in these ratings from 2001 to 2002.

³In reporting the findings of the survey, unless stated otherwise, only those differences found to be statistically significant (p<.05) are presented.
DRINKING AND DRIVING PRACTICES

How many Canadians drive after drinking?

Most Canadians are extremely concerned about driving after drinking, but some still do it. When asked about their own personal practices, 16.1% of all drivers indicated that they had driven a vehicle within two hours of consuming alcohol sometime during the past 30 days. This represents a slight (but not statistically significant) decrease from the 16.7% who reported driving after drinking last year. Although this might be viewed as a relatively small proportion, when applied to the entire population of licensed drivers, it indicates that an estimated 3.4 million Canadians admit to driving after drinking in the past month. In these terms, the behaviour is anything but uncommon.

More disconcerting is the fact that 7.9% of all drivers say they have driven at some time during the past year when they were probably over the legal limit. This represents a slight (but not statistically significant) increase from the 2001 survey, in which 7.3% of drivers reported having driven when over the legal limit. When applied to the population of licensed drivers in Canada, it means that approximately 1.7 million Canadians drove in the past year when they thought they were over the legal limit!

Although not statistically significant, the pattern of these changes – i.e., a decrease in the prevalence of self-reported driving after drinking but an increase in “impaired” driving -- warrants comment and bears monitoring. It suggests that fewer Canadians are driving after consuming a small amount of alcohol but more are driving when they have had too much to drink.

How often do Canadians drive after drinking?

Although 16% of Canadians admit to driving after drinking, most do so infrequently. Among those respondents who say they have driven within two hours of drinking, two-
thirds said they had done so only once or twice in the previous month. Less than 15% said they had done so more than four times.

Among those respondents who admit that during the past year they drove when they thought they were over the legal limit, 37% said they had done it only once; 23% said they had done it four or more times. On this basis, it can be estimated that in the past year there were over 8 million trips during which people drove when they thought they had too much to drink.

Despite the considerable prevalence of the behaviour, a small minority of drivers accounts for most of the “impaired driving”. Indeed, less than 3% of licensed drivers account for more than 80% of all the “impaired” driving trips. This latter finding is consistent with a large body of research which has consistently shown that a small minority of individuals accounts for most of the impaired driving and most of the damage on the road (Beirness et al. 1997; Simpson and Mayhew 1991; Simpson et al. 1996; Sweedler 1995).

In summary:

- 1.7 million Canadians drove when they thought they were over the legal limit.
- there were more than 8 million such trips in the past year.
- less than 3% of drivers account for more than 80% of these trips.

**Who drives after drinking?**

**Gender.** Men continue to be considerably more likely than women to drive after drinking and to drive when they thought they were over the legal limit. The percent of men who report driving after drinking in 2002 (25.7%) was virtually unchanged from the 24.5% who reported doing so in 2001. The percent of women who report driving after drinking (7.4%) in 2002 represents a small (but not statistically significant) decrease from the 9.9% who reported doing so last year.

The prevalence of driving when over the limit also did not change significantly among men (12.2% in 2001 to 10.9% in 2002). However, the percent of women who reported
driving when they thought they were over the legal limit almost doubled, from 2.8% in 2001 to 5.2% in 2002. Not only are more women driving when they were over the limit, they are doing so more frequently. For example, in 2001, less than 40% of women reported driving when over the limit more than once in the past year; in 2002, close to 70% said they did so.

In light of the overall downward trend in the drinking-driving problem, the increase in impaired driving among women is striking. The increase also seems inconsistent with the greater level of concern about the problem expressed by women and their traditionally more cautious and reserved driving behaviour. Nevertheless, there are other indicators that suggest there is a trend toward increased impaired driving among women. For example, heavy drinking (5 or more drinks at least 12 times a year) among women has almost doubled since 1994 (Statistics Canada 2002); women are accounting for a greater proportion of drinking driver fatalities (Mayhew et al. 2002); and, women comprise an increasing proportion of all drivers charged with an impaired driving offence (Canadian Centre for Justice Statistics 2002). Nevertheless, despite the troubling increase in impaired driving among women, men remain considerably more likely than women to drive after drinking and to drive when over the legal limit.

**Age.** Young drivers are often targeted for drinking-driving educational and awareness programs. This focus often arises from a persistent misperception about youth, who are often seen as a major cause of drinking-driving collisions. However, it has been shown that young drivers are the least likely to drive after drinking, and the least likely to be involved in an alcohol-related collision (e.g., Mayhew et al. 1996a;b). Data from the Road Safety Monitor 2002 support this observation. Figure 3 shows the percent of drivers in seven age groups who report driving within two hours of consuming alcohol. Only 10% the drivers between 16 and 18 years of age report driving after drinking. However, this is not to suggest that drinking and driving by young people should not be a concern; research has shown that those young people who do drink and drive are at elevated risk of collision, even at low BACs (Mayhew et al. 1986; Zador 1991).
Drivers age 19 to 24 and 25 to 34 are most likely to report driving after drinking (22.3% and 22.7%, respectively). About 1 in 6 drivers in the three age groups between 35 and 64 years of age report doing so. This drops to less than 1 in 12 among drivers 60 years of age and over. These data indicate that drinking and driving spans all age groups but is least frequent among the oldest and youngest age groups of drivers.

Other factors. Drivers in urban areas are significantly more likely than rural drivers to report driving after drinking (18.0% and 10.0%, respectively). However, there is no significant difference in the percent of urban and rural drivers who report driving when they are over the legal BAC limit (7.8% and 8.6%, respectively).

As might be expected, those who report driving after drinking report drinking more frequently and consuming larger quantities of alcohol when they do drink. In addition, drinking drivers are more likely to have received a traffic ticket, to be single, separated or divorced, and to have driven more kilometres in the past month.

Regional differences. Although drinking and driving is a nation-wide problem, the prevalence of the behaviour varies somewhat according to region. Figure 4 shows the percent of drivers, in five major regions of Canada, who report driving within two hours of consuming alcohol in the past 30 days. Drivers in the Atlantic region are least
likely to report driving after drinking (12.4%). The highest rate of drinking and driving is reported by drivers in British Columbia (18.1%), who, as noted earlier also view the problem less seriously than drivers in other regions of the country. In all regions except Ontario, a lower proportion of drivers reported driving after drinking in 2002 than in 2001, but none of the differences was, however, statistically significant.

The prevalence of “impaired driving” also varies by regions. Figure 5 displays the percent of drivers, in the five major regions of Canada, who report having driven when they thought they were over the legal limit at some point in the past 12 months. This behaviour is most often reported by drivers in Quebec (11.4%) and British Columbia (11.3%) drivers and least often by drivers in Ontario (5.4%). No region showed a significant change in the percent of impaired drivers from the 2001 to 2002.

**TAKING ACTION AGAINST DRINKING AND DRIVING**

Survey respondents were asked to indicate, on a scale of 1 (strongly disagree) to 6 (strongly agree), the extent to which they support a number of approaches to deal with drinking and driving. They were asked to indicate their level of support for six different tactics for dealing with drinking and driving – more police spot checks, immediate
Impoundment of the vehicles of drivers who fail a breath test, alcohol ignition interlocks for those convicted of a drinking and driving offence, requiring drivers suspected of being under the influence of alcohol to perform tests of physical coordination, mandatory breath alcohol tests for all drivers involved in serious collisions, and restricting convicted offenders to a zero BAC limit when they get their licences back. The results are shown in Figure 6.

**Figure 5: Self-reported Driving While Impaired According to Region**

- Atlantic: 6.2%
- Quebec: 11.4%
- Ontario: 5.4%
- Prairies: 6.3%
- BC: 11.3%

**Figure 6: Percent Who Agree with Countermeasure Options**

- Test Drivers in Crashes: 80%
- Sobriety Tests: 82%
- Zero BAC: 81%
- Interlocks: 75%
- Impoundment: 74%
- Spot Checks: 67%
Police spot checks have become a stable feature of enforcement efforts to deal with the drinking and driving problem. Interestingly, although most Canadians are familiar with police spot checks, and two-thirds of drivers agree that the police should conduct more spot checks for drinking drivers, this option received the lowest level of support among the six countermeasures considered.

Three measures — restricting convicted drinking drivers to a zero BAC after they have completed their licence suspension, mandatory breath or blood tests for drivers involved in serious crashes, and requiring tests of physical coordination of drivers suspected of drinking — all received the support of at least 80% of drivers. Mandatory alcohol ignition interlocks for convicted drinking drivers was supported by about 75% of drivers. Immediate impoundment of the vehicles of drivers who fail a breath test found support among 74% of survey respondents.

The pattern of results suggests that Canadian drivers are more willing to support countermeasure options intended to have an impact on those who are suspected of, arrested for, or convicted of an impaired driving offence, rather than measures that could affect all drivers. Measures such as zero BAC for convicted offenders, interlocks, and immediate vehicle impoundment, and sobriety tests apply directly to those who are at least suspected of impaired driving but have no impact at all on other road users. Because most people don’t believe they will ever be involved in a serious road crash, even requiring breath or blood tests of drivers involved in serious crashes is also a measure that is often considered applicable only to a specific subset of drivers. More frequent spot checks, however, increase the probability of even non-drinking drivers being stopped and questioned by the police.

Alternatively, or in addition, drivers may recognize that further reductions in the problem will be better achieved by focussing more on those drivers who persist in driving after drinking, particularly those who drive at high BACs.

Demographic differences. Support for the various countermeasure options differs according to the characteristics of drivers. In particular, support for all six measures is strongest among women and drivers 55 years of age and over. Canadians who report driving less are also more supportive of the various countermeasures. Not
surprisingly, drinking drivers and those who have been issued a traffic ticket in the past twelve months are somewhat less supportive of the various countermeasure options.

Regional differences. Canadians from different regions of the country vary in their level of support for different tactics to deal with the drinking-driving problem. For example, drivers in the Atlantic provinces and Quebec are most supportive of the police doing more spot checks for drinking drivers – 58% and 55%, respectively, strongly agreed with more spot checks. The lowest level of support for spot checks (less than 40% strongly agreed) is reported by drivers in British Columbia, where the police have been engaged in a very intensive spot check program for the past several years.

Overall, about two-thirds of drivers strongly agree with the mandatory use of alcohol interlocks by convicted impaired drivers to prevent the operation of the vehicle by a person who has consumed too much alcohol. The strongest support for alcohol interlock programs is found in the Atlantic provinces and Quebec where approximately two-thirds of drivers report strong agreement with this approach. Quebec has operated an interlock program for several years. In Ontario, where interlock program participation will be mandatory for all convicted impaired drivers as of December 2002, 61% of drivers strongly agree with interlock programs. Interlock programs are also operational in Alberta and Saskatchewan. In the Prairie region, which includes Manitoba as well as Saskatchewan and Alberta, 57% of drivers strongly agree with the use of interlocks for convicted offenders. The lowest level of support for interlocks is in British Columbia, where strongly agreement with interlock programs is found among only 52% of drivers.

The BAC limit for drivers. In Canada, the maximum allowable BAC for drivers specified in the Criminal Code is 80 mg of alcohol per 100 ml of blood (80 mg/dl or .08%). Most provinces also have a lower limit (between 40 mg/dl and 60 mg/dl) that is used by police officers to issue immediate short-term suspensions (12 or 24 hours) at the side of the road. Periodically over the past two decades, the issue of lowering the BAC limit for drivers in the Criminal Code from its current level of 80 mg/dl to 50 mg/dl has been raised as a countermeasure option. The discussion has focussed on the limit stipulated in the Criminal Code, because lower limits already exist in most regions of Canada.
As part of the Road Safety Monitor 2002, respondents were asked whether the current blood alcohol limit of 80 mg/dl was appropriate. Just over two-thirds of drivers agree with this limit. Of the one-third who think it is not appropriate, 80% believe it should be lower; 20% believe it should be higher. In total, this means that only about one-quarter of Canadian drivers believe the current BAC limit of 80 mg/dl in the Criminal Code should be lower.

Support for a lower BAC limit in the Criminal Code is weakest in Ontario, where only 21% believe the limit should be lower. Drivers in British Columbia were most supportive of a lower BAC limit -- 36% think the limit should be lower.
Bibliography


