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.
The Road Safety Monitor 2004

Drinking and Driving

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# Table of Contents

Executive Summary ........................................................................................................iii

The Road Safety Monitor .............................................................................................1
  Rationale ..................................................................................................................1
  Structure ..................................................................................................................1

Method ..........................................................................................................................3

Survey Results ..............................................................................................................5
  PUBLIC CONCERN .................................................................................................5
    Where does the issue of drinking and driving sit on the public agenda? .............5
    Is drinking and driving still a major road safety issue? ......................................5
  DRINKING AND DRIVING PRACTICES ...............................................................8
    How many Canadians drive after drinking? .........................................................8
    Trends: Is the problem getting better or worse? ..................................................10
    How often do Canadians drive after drinking? ...................................................12
    Summary of findings on drinking and driving practices .....................................13
  MARIJUANA USE AND DRIVING ......................................................................14
  TAKING ACTION AGAINST DRINKING AND DRIVING ..................................15
    Provincial BAC limits ............................................................................................16

Bibliography ................................................................................................................19
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 fourth 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 they believe it is the most important road safety issue they face – 85% believe it is a serious problem.

♦ The vast majority of Canadians (over 80%) say they have not driven after drinking at any time in the past month.

♦ On the other hand, at least 18% of Canadians -- an estimated 3.9 million -- said they have driven after drinking sometime in the past month.

♦ Teenage drivers are much less likely to have driven after drinking than other age groups.

♦ The vast majority of Canadians (nearly 95%) say that in the past year, they have not driven when they felt they were over the legal limit.

♦ On the other hand, 5.6%, or an estimated 1.2 million, said that they had done so, meaning there were over 4.2 million trips in the past year during which the driver felt they were over the legal limit.

♦ Teenage drivers account for only 5% of all the impaired driving trips; far less than any other age group.

♦ 88% of all the impaired driving trips are accounted for by a small (4%) group of drivers.

♦ Trends show that the reported prevalence of driving after drinking and the prevalence of “driving while impaired” have been declining.

♦ Driving within two hours of using marijuana remains an infrequent behaviour. Only 2.1% of drivers reported doing so.

♦ Canadian drivers support a variety of initiatives to deal effectively with drinking and driving, such as requiring drivers suspected of drinking to perform coordination tests, alcohol ignition interlocks, mandatory blood, urine, or saliva tests for drugs, and greater use of police spot checks.

♦ Only about one-third of drivers were aware of a lower alcohol limit in their province which can result in a 12- or 24-hour suspension.
The Road Safety Monitor

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 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.

Reports from the 2001, 2002, and 2003 editions of the Road Safety Monitor can be accessed at: www.trafficinjuryresearch.com/publications/publications.cfm. This, the fourth edition of the TIRF Road Safety Monitor, is being released in a series of reports. The first report (Beirness et al. 2004b) dealt with Young Drivers. The present report examines attitudes, perceptions, and practices related to driving after the consumption of alcohol. A forthcoming report will deal with Drowsy Driving.
This fourth edition of the TIRF Road Safety Monitor contained 102 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 survey required an average of approximately 20 minutes to complete.

The survey was administered by telephone to a random sample of Canadian drivers. Opinion Search Inc. conducted the interviews in May, 2004. Among the 5,666 households contacted in which a person was asked to participate, 3,735 (65%) refused, 68 (1.2%) terminated early, and 642 (11.3%) were not qualified.

A total of 1,209 drivers 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).
Survey Results

PUBLIC CONCERN

Where does the issue of drinking and driving sit on the public agenda?

Canadians continue to see drinking and driving as a major social issue. They express greater concern about it than they do about a variety of other social issues, such as the state of the health care system, airline safety, or the threat of a terrorist attack. Indeed, 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), 81% of Canadians said they were very concerned or extremely concerned. *Drinking and driving remains a priority issue for Canadians.*

Is drinking and driving still a major road safety issue?

Not only do Canadians regard drinking and driving as a serious societal issue, they also see it as the most serious road safety issue facing them today. Figure 1 shows the average rating of the perceived seriousness of a number of road safety issues – a rating of 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 road safety problem, topping the list of a variety of other issues, such as running red lights, speeding, sleepy drivers, drivers using cell phones, and distracted drivers.

Consistent with this perception, Canadians also see the issue of young drivers who are impaired by alcohol or drugs as extremely serious. By contrast, and as highlighted in a previous report from the Road Safety Monitor (Beirness et al. 2004), Canadians are, however, relatively unconcerned about the general problem of young drivers. As illustrated in Figure 1, the issue of young drivers was rated quite low in terms of its...
perceived seriousness. The public’s concern about young drivers appears to be limited almost exclusively to their use of alcohol or drugs. The public does not see the broader problem of young drivers as a particularly serious road safety issue despite the fact that road crashes are the leading cause of death to teens in Canada. They only regard it as serious in the context of impairment by alcohol or drugs.

**Figure 1: Perceived Seriousness of Traffic Safety Issues 2004**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking Drivers</td>
<td>5.5</td>
</tr>
<tr>
<td>Young Impaired Drivers</td>
<td>5.4</td>
</tr>
<tr>
<td>Red Light Running</td>
<td>5.0</td>
</tr>
<tr>
<td>Speeding</td>
<td>4.8</td>
</tr>
<tr>
<td>Drivers Using Cell Phones</td>
<td>4.7</td>
</tr>
<tr>
<td>Drowsy Drivers</td>
<td>4.6</td>
</tr>
<tr>
<td>Distracted Drivers</td>
<td>3.7</td>
</tr>
<tr>
<td>Young Drivers</td>
<td>3.6</td>
</tr>
</tbody>
</table>

These perspectives are shared by teenage drivers themselves. Figure 2 presents the average rating of the perceived seriousness of the same road safety issues as presented in Figure 1, separately for teen drivers and all older drivers. Similar to older drivers, teens view as very serious the problems of drinking and driving, and young drivers impaired by alcohol or drugs. They also see the general problem of young driver safety as much less serious -- indeed, even less so than older drivers -- suggesting again that the problem of young driver safety appears almost synonymous with alcohol and drug use.
The perception of the seriousness of the problem of young impaired drivers is certainly not inconsistent with research that shows young drivers are at increased risk of involvement in a fatal crash at all blood alcohol levels, including those below the legal limit of .08% (Mayhew et al., 1986; Zador 1991). On the other hand, it does not appear to recognize that alcohol is involved in the crashes of teens much less often than it is in collisions involving older drivers. For example, teen drivers killed in road crashes are less likely than older drivers to have been drinking. This is illustrated in Figure 3, which
shows the percent of driver fatalities who had a positive blood alcohol concentration (BAC) each year from 1995 through 2002 for two age groups -- drivers age 16 to 19, and those age 20 to 44.

It is apparent that the percent of driver fatalities who had been drinking has shown an overall decrease in both age groups. For example, in 1995, 38.5% of the 16-19 year-old drivers who were killed had been drinking; in 2002 (the most recent year for which published data are available, (Mayhew et al. 2004) the figure was 32.5%, representing a decrease of 15% over the 8-year period. Second, the percent of teenage driver fatalities who had been drinking is considerably lower than that of older drivers in each year. For example, in 2002, the percent of teen drivers who tested positive for alcohol was three-quarters of that among 20 to 44 year-olds (32.5% of fatally injured teenage drivers tested positive for alcohol, compared to 44.2% of drivers age 20 to 44).

It is evident that alcohol remains a leading contributor to serious road crashes involving young drivers but also that progress has been made in dealing with the problem. At the same time, the data indicate that at least two-thirds of young driver fatalities do not involve alcohol. Teens are vulnerable road users because of their inexperience and risky driving practices, in addition to their use of alcohol. Yet, the broader problem of teen drivers does not appear to be acknowledged by the public or by teens themselves.

**DRINKING AND DRIVING PRACTICES**

**How many Canadians drive after drinking?**

As the survey revealed, most Canadians are extremely concerned about the problem of driving after drinking and, consistent with this concern, most say they do not engage in the behaviour. Indeed, when asked about their own personal practices, 82.2% of all the drivers who were surveyed had not driven a vehicle within two hours of consuming alcohol sometime during the past 30 days.

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1 Data are from the TIRF Fatality Database, which is supported by Transport Canada and the Canadian Council of Motor Transport Administrators.
On the other hand, it is evident that some Canadians still drink and drive. The survey revealed that 17.8% of the drivers surveyed said they had driven a vehicle within two hours of consuming alcohol sometime during the past 30 days. Given public sensitivities and expectations surrounding such questions, this must be regarded as a conservative estimate.

Even at that, it translates into a problem that is anything but insignificant. When applied to the entire population of licensed drivers, it indicates that an estimated 3.9 million Canadians have driven within two hours of consuming alcohol in the past month.

However, there are substantial differences as a function of age, as shown in Figure 4. Less than 12% of teenage drivers report having driven within two hours of consuming alcohol during the 30 days prior to the survey. Drivers between the ages of 25 and 34 report they are nearly three times more likely to drive after drinking (27.8% report doing so). Only drivers 65 years of age and over are less likely than teenage drivers to drive after drinking.

Survey respondents were also asked if they had driven at some time during the past 12 months when they thought they were probably over the legal limit -- 5.6% responded
affirmatively. When applied to the population of licensed drivers in Canada, it means that approximately 1.2 million Canadians drove in the past year when they thought they were over the legal limit!

Again, this behaviour varies as a function of age. Figure 5 displays the percent of drivers who report having driven when they thought they were over the legal limit at least once in the previous 12 months, according to age group. The age distribution of driving when over the legal limit in Figure 5 differs from that of driving after drinking presented in Figure 4. Whereas teenage drivers are among the least likely to report driving after drinking, they are second only to drivers age 20 to 24 to report driving when they thought they were over the legal limit. In interpreting these findings, it should be remembered that for most young drivers in Canada, probationary or graduated licensing systems restrict them to zero BAC. Hence, young drivers’ perceptions of being “over the legal limit” may differ considerably from that of older drivers.

![Figure 5: Percent Who Report Driving when Over the Limit in Past 12 Months by Age](image)

**Trends: Is the problem getting better or worse?**

This is the fourth consecutive year in which the Road Safety Monitor has examined drinking and driving and impaired driving behaviour among Canadians, so the data can be examined to determine if there have been changes over time. Figure 6 shows the percent of Canadians who reported driving within two hours of consuming alcohol in the
past 30 days in each year, from 2001 to 2004. Also included is the percent of drinking drivers identified in the National Opinion Poll on Drinking and Driving – a precursor to the Road Safety Monitor -- conducted in 1998 (Simpson et al. 1999). As can be seen, the percent of respondents who reported driving within two hours of consuming alcohol in the past 30 days declined from 1998 through 2003. The apparent increase in 2004 is not statistically significant.

![Figure 6: Percent Who Report Driving Within Two Hours of Drinking in Past 30 Days](image)

*Includes only drivers 18 years and over*

Changes in the percent of Canadians who reported driving in the previous 12 months when they thought they were over the legal limit is shown for each year in Figure 7. Again, there has been an overall downward trend in the prevalence of the behaviour.

![Figure 7: Percent Who Report Driving When Over the Limit in Past 12 Months](image)

*Includes only drivers 18 years and over*
How often do Canadians drive after drinking?

As shown in the previous section, almost 18% of Canadians admit to driving after drinking. But most of them 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 17% of drinking drivers (about 3% of all drivers) said they had done so more than four times.

Among respondents who admit that during the past year they drove when they thought they were over the legal limit, 38% said they had done it only once; 10% said they had done it four or more times. Using the reported frequency of the behaviour, it can be estimated that in the past year there were over 4.2 million trips during which the driver thought they had too much to drink.

The frequency of reported driving when over the legal limit also varies as a function of age. As noted earlier, 10% of teenage drivers said that during the past year they had driven when they thought they were over the legal limit. However, they do so infrequently -- teens account for only about 5% of all the “impaired” driving trips. Drivers age 20 to 24, 25 to 34, and 35 to 44 each account for about 25% of all “impaired” driving trips.

Despite the considerable prevalence of the behaviour, a small proportion of drivers accounts for most of the “impaired” driving trips. Indeed, 88% of all the “impaired” driving trips are accounted for by less than 4% of licensed drivers. This latter finding is consistent with a large body of research which has consistently shown that a small group of individuals accounts for most of the impaired driving and most of the resultant damage on the road (Beirness et al. 1997; Simpson and Mayhew 1991; Simpson et al. 1996; 2004; Sweedler 1995).
Summary of findings on drinking and driving practices

This survey provides insights into the drinking and driving practices of Canadians and paints a mixed picture containing some encouraging findings and areas where substantial improvements are still needed.

On the encouraging side:

- the vast majority of Canadians (over 80%) say they have not driven after drinking at any time in the past month;
- among those who say they have driven after drinking, the majority (66%) have done so infrequently;
- the vast majority (nearly 95%) say that in the past year, they have not driven when they felt they were over the legal limit;
- among the 5% who say that they have driven when they thought they were over the legal limit, only 10% had done so frequently – about half of 1% of all drivers say they have driven while impaired on four or more occasions during the past year;
- teenage drivers are much less likely to have driven after drinking than other age groups;
- teenage drivers account for a very small percentage (5%) of all the impaired driving trips each year, and,
- trends show that the reported prevalence of driving after drinking and the prevalence of “driving while impaired” have been declining.

On the discouraging side:

- at least 18% of Canadians -- an estimated 3.9 million -- say they have driven after drinking sometime in the past month;
5.6%, or an estimated 1.2 million, say that during the past year they drove when they thought they were over the legal limit; and,

collectively, drivers age 20 to 34 continue to show the highest prevalence of driving after drinking and “driving while impaired”.

MARIJUANA USE AND DRIVING

Respondents were also asked whether during the past year they had driven within two hours of using marijuana. The question was the same as that asked in a previous edition of the Road Safety Monitor (Beirness et al. 2003a) so the results can be compared.

A relatively small percent of respondents (2.1%) reported that they had, at some time during the past year, driven within two hours of using marijuana. This compares to 1.7% who reported doing so in 2002 -- not a statistically significant increase. These estimates are similar to those from surveys conducted in Ontario (Adlaf et al. 2003), which reported that 1.9% of drivers reported driving after cannabis use in 1996/97 and 2.9% did so in 2002.

Among those in the current survey who reported driving after marijuana use, 50% were under the age of 30; 88% were under 40 years of age.

Of some interest, and consistent with a substantial body of evidence, many of those who reported driving after using marijuana also reported driving within two hours of drinking (i.e., 44%). There is considerable overlap between those who drive after drinking and those who drive under the influence of marijuana. This has important safety implications because of the risks posed by such behaviour, and it has important implications for countermeasures as well.
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 impaired driving. They were asked to indicate their level of support for seven different tactics for dealing with impaired 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, mandatory breath alcohol tests for all drivers involved in serious collisions, requiring drivers suspected of being under the influence of alcohol to perform tests of physical coordination (i.e., to determine their degree of impairment), restricting convicted offenders to a zero BAC limit when they get their licences back; and requiring drivers to provide samples of blood, urine, or oral fluids to test for the presence of drugs. The results are shown in Figure 8.

Figure 8: Percent Who Agree with Countermeasure Options

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 countermeasures considered. These findings are consistent with those from previous editions of the Road Safety Monitor.
Two measures – restricting convicted drinking drivers to a zero BAC after they have completed their licence suspension, and requiring tests of physical coordination of drivers suspected of being impaired – both received the support of at least 80% of drivers. Alcohol ignition interlocks for convicted drinking drivers, mandatory blood or breath tests for drivers involved in collisions, and immediate impoundment of drinking drivers' vehicles were supported by over 75% of drivers surveyed. Again, these findings are consistent with those reported in previous editions of the Road Safety Monitor.

On the issue of drugs and driving, in the spring of 2004, the federal government introduced legislation that would require drivers suspected of being under the influence of drugs to provide a sample of blood, urine, or oral fluids to test for the presence, type, and amount of drugs. Overall, 72% of Canadian drivers said they support this measure.

The pattern of results suggests that Canadian drivers express greater support for 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, immediate vehicle impoundment, and impairment tests apply directly to those who are at least suspected of impaired driving but have no impact at all on other road users. More frequent spot checks, however, increase the probability of even non-drinking drivers being stopped and questioned by the police.

**Provincial BAC limits**

Most provinces and territories in Canada enforce a BAC limit for drivers that is lower than the 80 mg/dl in the *Criminal Code* (i.e., 50 or 40 mg/dl). The police can issue an immediate 12- or 24-hour licence suspension for drivers who exceed this lower limit. Some jurisdictions require drivers who have received multiple such suspensions to attend an alcohol education program or an alcohol assessment and rehabilitation program.
Unfortunately, public awareness of these lower provincial BAC limits is not widespread. In provinces that enforce a lower BAC limit, only about one-third of respondents knew there was a lower alcohol limit in their province at which drivers could receive a short-term licence suspension. Awareness was greatest in Newfoundland, Manitoba, and Saskatchewan -- provinces that record such violations on the driver record and require repeat violators to complete an education and/or rehabilitation program. Clearly, if these laws are to have an impact on drinking and driving, there is a need to ensure that more drivers have a level of awareness and knowledge about the law.
Bibliography


