The Road Safety Monitor 2002

Drugs and Driving

TRAFFIC INJURY RESEARCH FOUNDATION
A DRIVING FORCE FOR SAFETY

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.

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The Road Safety Monitor 2002

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Table of Contents

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 drugs and driving.
- Results show that driving after the use of illegal drugs is second only to drinking and driving on the list of important road safety issues Canadians say they face today.
- Canadians distinguish between driving while impaired by illegal drugs and driving while impaired by prescription or over-the-counter medications. Driving while impaired by illegal drugs is viewed as a much more serious problem.
- The perceived seriousness of driving while impaired by prescription or over-the-counter drugs is highest in the Atlantic region and decreases as one moves west across the county.
- Driving while impaired by illegal drugs is seen as a more serious problem in the Atlantic region and Quebec than in the rest of Canada.
- Overall, 17.7% of drivers report driving a vehicle within two hours of using either prescription medications, over-the-counter remedies, marijuana, or other illicit drugs at some point in the past 12 months.
- In the past year, an estimated 3.7 million Canadians admit to driving after taking some type of medication or drug that could potentially affect their ability to drive safely.
- Driving after using over-the-counter medications is most common (15.9%). Considerably less frequent is driving after using prescription medications (2.3%), marijuana (1.5%), and illegal drugs (0.9%).
- Young males are most likely to report driving after using marijuana or other illegal drugs.
- Canadians' knowledge of impaired driving laws varies considerably. Whereas 86% are aware that a conviction for impaired driving results in a criminal record, two-thirds believe that the penalties for drug-impaired driving are less severe than those for alcohol-impaired driving – a belief which is incorrect because the penalties are the same.
- Over 80% of drivers agree with two countermeasures; requiring drivers suspected of being under the influence of drugs to submit to tests of physical coordination (sobriety tests) and setting limits for drugs similar to the alcohol limit for drivers.
- Canadians are somewhat less supportive of measures that require all drivers to provide blood samples if involved in a serious collision or if suspected of being under the influence of drugs. Only about 70% of drivers agree with these measures.

The Road Safety Monitor 2002

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 *Drugs and Driving,* examines attitudes, perceptions, and practices concerning the operation of a motor vehicle after using prescription and non-prescription medications, marijuana, and other illegal drugs.

The first report on the Road Safety Monitor 2002, entitled *Risky Driving*, was released in October 2002; a second report on *Drinking and Driving* was released in December 2002.

Method

The 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 select 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 drugs and driving and, where possible, 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).

Drugs and Driving

Background

Over the past half century, research has clearly established that the use of alcohol by drivers can impair their ability to operate a vehicle safely and increase their risk of being involved in a serious collision. As a consequence, it is a factor in a substantial proportion of fatal crashes. Legislative initiatives, enhanced enforcement activities, and public awareness programs over the past two decades have been instrumental in changing public attitudes about drinking and driving and reducing the frequency of the behaviour. As a result, the magnitude of the alcohol-crash problem is considerably smaller today than it was twenty years ago (Mayhew et al. 2002).

By contrast, much less is known about the prevalence of drug use by drivers and the contribution of drug-impaired driving to serious collisions (see Simpson 1985; 1986; Simpson and Vingilis 1991). There is an extensive body of experimental literature documenting the extent of impairment produced by a wide variety of prescription medications, over-the-counter remedies, and illegal drugs on a number of tasks related to the safe operation of a motor vehicle. But relatively little information is available on the frequency with which drivers use these drugs and the extent to which they are a factor in motor vehicle collisions.

One of the primary reasons for the discrepancy between the extent of our knowledge about the role of alcohol in crashes and that of the role of drugs in crashes is the difficulty in measuring drug use by drivers. Whereas alcohol can be easily detected and conveniently measured from breath samples, the detection and measurement of drugs is considerably more complex. First, with some notable exceptions, most drugs do not have a distinctive odour that can be used to assist in the identification of drivers who may be under the influence of drugs. Second, reliable and accurate measurement of drugs requires sophisticated and expensive testing procedures using samples of blood[1].

[1] Saliva is increasingly being used a medium to measure drugs. Although more convenient than collecting blood samples, testing saliva for the presence and amount of drugs remains complex and expensive.

A further complication is the vast number of drugs that have the potential to impair the ability to drive safely – including illegal drugs, prescription medications, and over-the-counter remedies -- each of which requires a specific test.

Despite these difficulties, a small number of special studies have been conducted in Canada to determine the incidence of drug use among drivers. For example, in the early 1980s, TIRF, in partnership with the Office of Chief Coroner and the Centre for Forensic Sciences (Cimbura 1982), examined 401 fatally injured drivers in Ontario for the presence of alcohol as well as nearly 100 different drugs. Alcohol was found in 57% of cases; at least one drug was detected in 26%. Cannabis (marijuana) and diazepam (a common prescription medication to treat anxiety or insomnia) were the most commonly detected drugs.

However, in only about one-third of all the drug-positive cases – 9.5% of all cases – was the type and/or level of drug considered sufficient to cause adverse effects on driving ability. In addition, over half of all drivers who tested positive for drugs were also found to have been drinking.

A subsequent study, again involving the same research partners, focussed exclusively on the incidence of cannabis and alcohol in over 1,100 fatally injured drivers in Ontario (Cimbura et al. 1990). Cannabis was found in 11% of the cases; alcohol was found in 57% of the cases. The joint occurrence of the two substances was substantial – 84% of cases that tested positive for cannabis also tested positive for alcohol. Male drivers under 25 years of age accounted for about 70% of all cases that tested positive for cannabis.

About the same time, researchers in British Columbia examined 227 drivers killed in crashes in 1990 and 1991 for the presence of alcohol and drugs (Jeffery et al. 1995). Just under half (48%) of all cases tested positive for alcohol. Drugs were found in 20% of the cases. The most commonly found drugs were cannabis (13% -- as noted above, the Ontario study found a highly comparable 11% of cases positive for cannabis), benzodiazepines (5%) and cocaine (4%). Over half of drivers who tested positive for drugs were also found to have been drinking (this is also very comparable to the results of the Ontario studies).

A recent unique study in Quebec examined alcohol and drugs in fatally injured drivers as well as in a random sample of active drivers selected from the traffic flow (Dussault et al. 2002). Overall, alcohol was found in 35% of fatally injured drivers and drugs were found in 30.2%. Cannabis was the drug most frequently detected (19.5%), followed by benzodiazepines (8.5%) and cocaine (6.8%). Alcohol was also found in 41% of all drug-positive cases.

In the roadside sample, drugs were found in 11.8% of drivers; alcohol was detected in 5.1%. Both alcohol and drugs were found together in 5.9% of drug-positive cases. The most commonly detected drugs were cannabis (6.7%), benzodiazepines (3.6%), opiates (1.2%), and cocaine (1.1%). A comparison of the incidence of drugs found in the roadside sample with those from the fatality sample show that drugs were overrepresented among fatally injured drivers and are, therefore, a risk factor for fatal crash involvement.

The results of these studies indicate that the use of drugs known to have adverse effects on driving is not uncommon among drivers and that drugs are found in a substantial proportion of fatal crashes. These studies also confirm the fact that alcohol remains the substance of greatest concern on Canada's highways. However, in recent years, as the magnitude of the alcohol-crash problem has continued to decrease, the issue of drugs and driving has become increasingly prominent.

Accordingly, it is timely to tap public opinion and practices on this important traffic safety issue. For this reason, *Drugs and Driving* was selected as the special issue for the 2002 Road Safety Monitor, which was designed to assess:

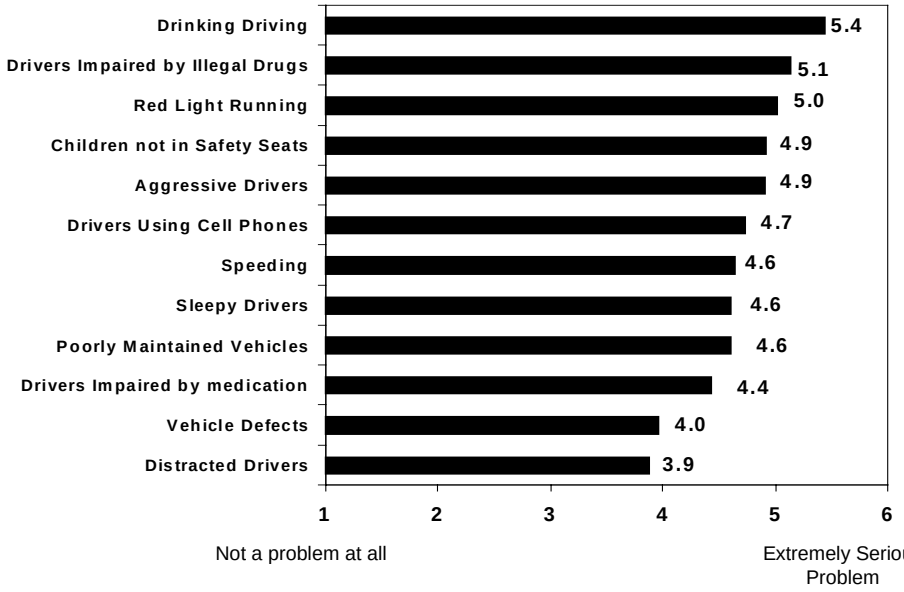
- the level of public concern about drugs and driving;
- the extent to which Canadians drive after the use of drugs or medications; and
- the level of public support for various countermeasure options to deal with the problem of drug-impaired drivers.

Survey Results

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

Canadians view driving while impaired by illegal drugs as one of the most serious road safety problems 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 rank the problem of driving while impaired by illegal drugs to be second only to drinking and driving in terms of serious road safety problems.

Figure 1: Perceived Seriousness of Traffic Safety Issues



However, Canadians distinguish between driving while impaired by illegal drugs and driving while impaired by prescription or over-the-counter medications. Driving while impaired by illegal drugs is viewed as a more serious road safety problem than driving while

Driving while impaired by illegal drugs is viewed as a more serious problem than driving while impaired by medications.

impaired by prescription or over-the-counter medications. As illustrated in Figure 1, driving while impaired by prescription or over-the-counter medications was rated among the least serious of road safety problems, ranking just below poorly maintained vehicles.

The rating of perceived seriousness of driving while impaired by illegal drugs did not change between the 2001 and 2002 Road Safety Monitor. However, the perceived seriousness of driving while impaired by prescription or over-the-counter medications decreased significantly in 2002 compared to 2001[2] -- from an average seriousness rating of 4.7 in 2001 to 4.4 in 2002.

Demographic differences. Women are more inclined than men to view driving while impaired by illegal drugs as a serious problem – 78% of women, compared to 72% of men, rate driving while impaired by illegal drugs as a serious or extremely serious problem.

Women also perceive driving while impaired by prescription or over-the-counter medications as a more serious problem than men – 58% of women, compared to 47% of men, see driving while impaired by prescription or over-the-counter medication as a very serious or extremely serious problem.

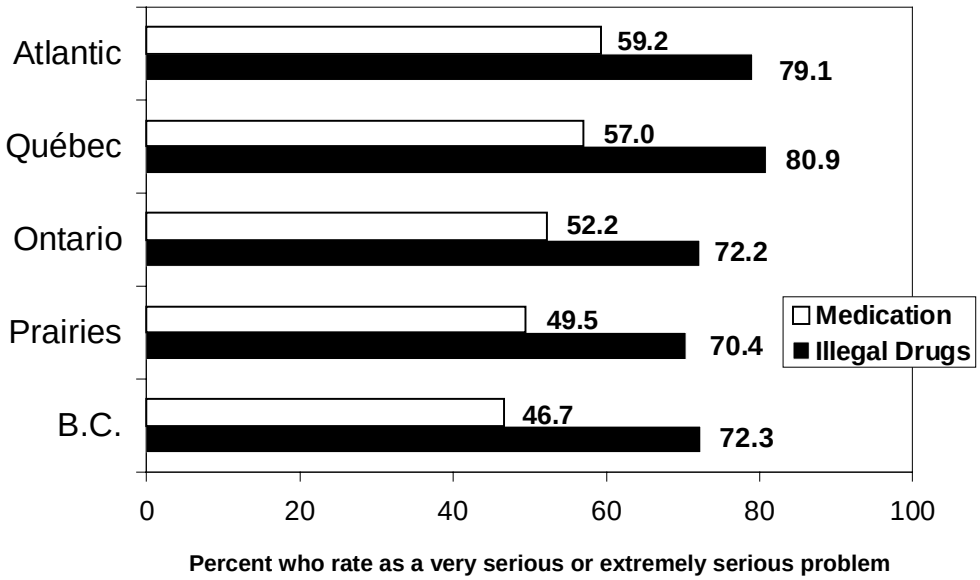
Older drivers are more inclined than those under 30 years of age to perceive driving while impaired by illegal drugs as a serious problem. Drivers of all ages are similar in the extent to which they view the seriousness of driving while impaired by prescription or over-the-counter medications.

Regional differences. There is a general consensus in Canada that driving while impaired by illegal drugs is a more serious problem than driving while impaired by prescription or over-the-counter medications. But the perceived seriousness of driving while impaired by illicit and licit drugs differs across the country. Figure 2 shows the percent of drivers in each of five major regions of Canada who rate driving while

[2] In reporting the findings of the survey, unless stated otherwise, only those differences found to be statistically significant ($p<.05$) are presented.

impaired by illegal drugs and driving while impaired by prescription or over-the-counter medications as a very serious or extremely serious problem. As can be seen, the perceived seriousness is greater in the east than in the west. For example, survey respondents in British Columbia are less likely to view driving while impaired by prescription or over-the-counter medications as a very serious or extremely serious problem (46.7%) than drivers in Atlantic Canada (59.2%).

Figure 2: Perceived Seriousness of Driving while Impaired by Medication or Illegal Drugs by Region

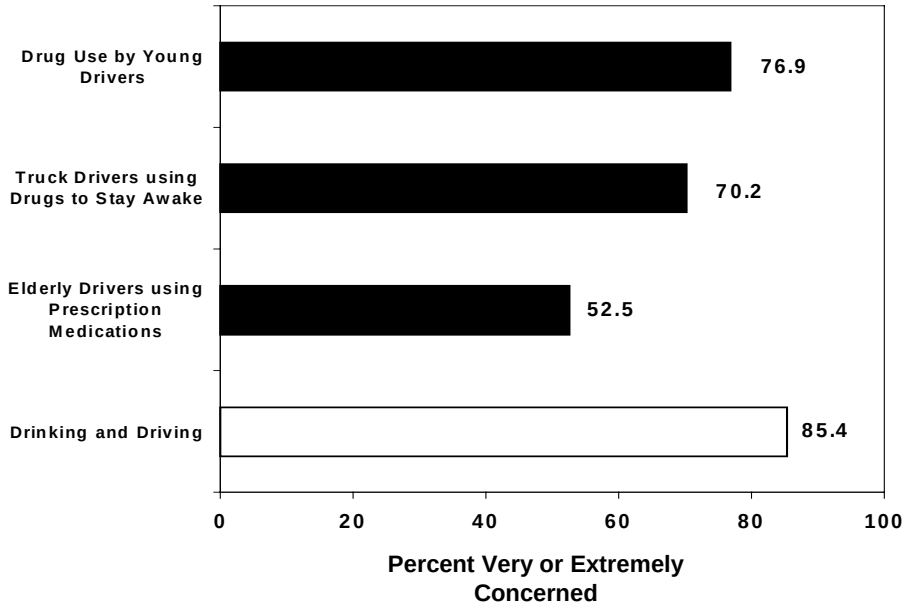


Concern about specific groups who use drugs and drive

Drugs and driving is a complex problem that involves a number of specific groups within the population. Although Canadians view driving while impaired by drugs as a serious problem, the extent of their concern varies according to who is using the drugs. Respondents were asked to rate their level of concern about the use of drugs by three groups of drivers – young driver, elderly drivers, and truck drivers -- who might use drugs, on a scale from 1 (not at all concerned) to 6 (extremely concerned). Figure 3 shows the percent of survey respondents who say they are very concerned or extremely concerned about group. The greatest concern was for drug use by young drivers, where 77% of survey respondents are either very concerned or extremely concerned about this issue. This is followed by concern about truck drivers using drugs to stay awake on long trips (70%), and the use of prescription medications by elderly drivers (52%). For

comparison, Figure 3 also shows the percent of survey respondents (85%) who are very concerned or extremely concerned about drinking and driving.

Figure 3: Concern about Specific Groups Who Use Drugs and Drive



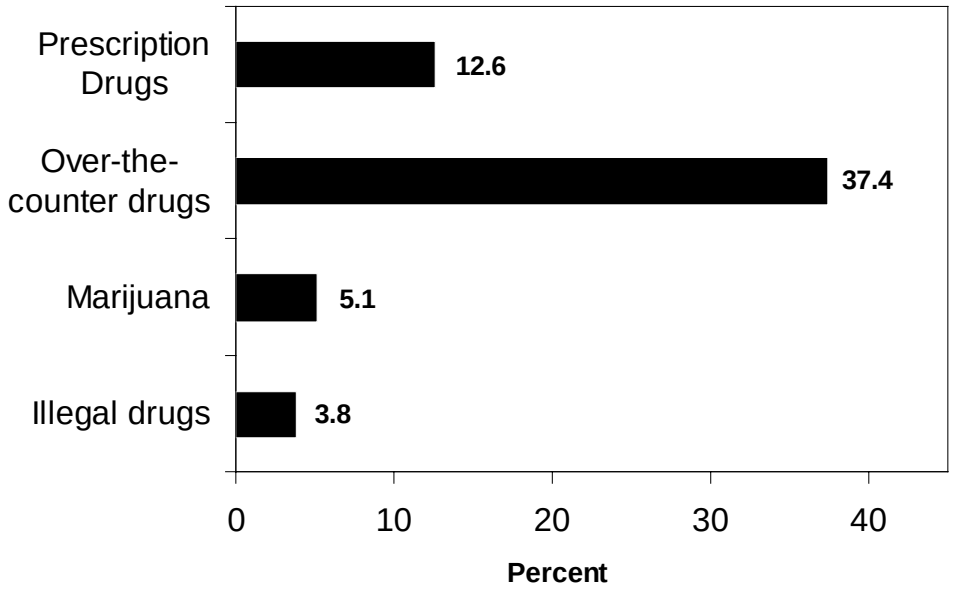
Demographic differences. Women express greater concern than men about the use of drugs by all three groups of drivers. Concern about young drivers using drugs and truck drivers using drugs to help them stay awake on long trips increases progressively with the age of surveys respondents. Concern about the use of prescription medications by elderly drivers increased among respondents up to age 59; however, respondents who were 60 years of age or over are less concerned about their use of prescription drugs than even the youngest group of drivers.

How many Canadian drivers report using drugs?

Canadians view driving while impaired by drugs as a serious road safety problem but the use of drugs and medications that could affect driving is quite common and many admit operating a vehicle after using these types of drugs. As shown in Figure 4, when asked about their own personal practices, 12.6% of all survey respondents indicate that in the past twelve months they have taken a prescription medication that could affect their

ability to drive safely; 37.4% said they have taken over-the-counter drugs such as allergy or hay fever medications, or drugs to relieve colds, flu, cough or insomnia – many of which can impair the ability to drive safely. The use of marijuana and other illegal drugs is much less common. Only 5.1% of respondents indicate that they have used marijuana and 3.8% say they have used other illegal drugs in the past twelve months.

Figure 4: Percent Reporting Use of Medications and Drugs



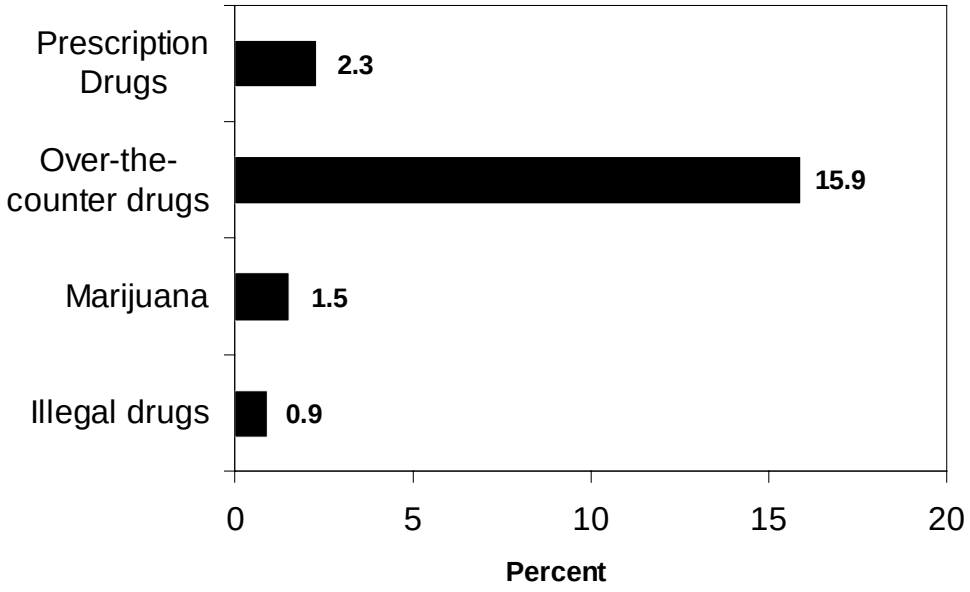
How many Canadians drive after using drugs?

Although Canadians believe drugs and driving is serious problem, many admit to driving after using some type of drug. Overall, 17.7% of survey respondents indicate that they had driven within two hours of taking some type of drug during the past 12 months. When applied to the entire population of licensed drivers, it suggests that an estimated *3.7 million Canadians admit to driving after having taken some type of potentially impairing drug at least once in the past 12 months.* In these terms, the behaviour is anything but uncommon.

3.7 million Canadians drove in the past year within 2 hours of taking drugs. medications.

The extent of driving after drug use varies considerably according to the type of drug. Figure 5 shows the percent who admit driving within two hours of taking various types of drugs in the past 12 months. Driving after taking over-the-counter drugs for allergies, hay fever, colds, flu, cough or insomnia is most common – 15.9% of drivers indicate having done so at least once in the past year. Driving after using prescription medications (2.2%), marijuana (1.5%), and illegal drugs (0.9%) is much less common.

Figure 5: Percent Who Report Driving After Use of Medications or Drugs



Who drives after using drugs?

To some extent, who drives after using drugs depends on the type of drug. For example, those who report driving after taking prescription medications are equally likely to be men or women, young or old. There are also no regional differences in terms of the likelihood of driving after using prescription medications.

Among those who report driving within two hours of using over-the-counter medications, men are more likely than women to do so (19.2%, compared to 13.0%, respectively). Younger drivers are also more likely to do so than older drivers (e.g., 22.7% of those age 16 to 24, compared to only 5.8% of those age 65 and over).

Despite the small number of survey respondents who report driving after the use of marijuana or other illegal drugs, it is evident that men are more likely than women to do so. By far the majority of those who drive after using marijuana or other illegal drugs are under 30 years of age.

There is also a strong tendency for those who report driving after using over-the-counter medications, marijuana, or other illegal drugs to be more likely than others to drive after consuming alcohol. For example, about one-third of those who report driving after using marijuana also report driving after drinking.

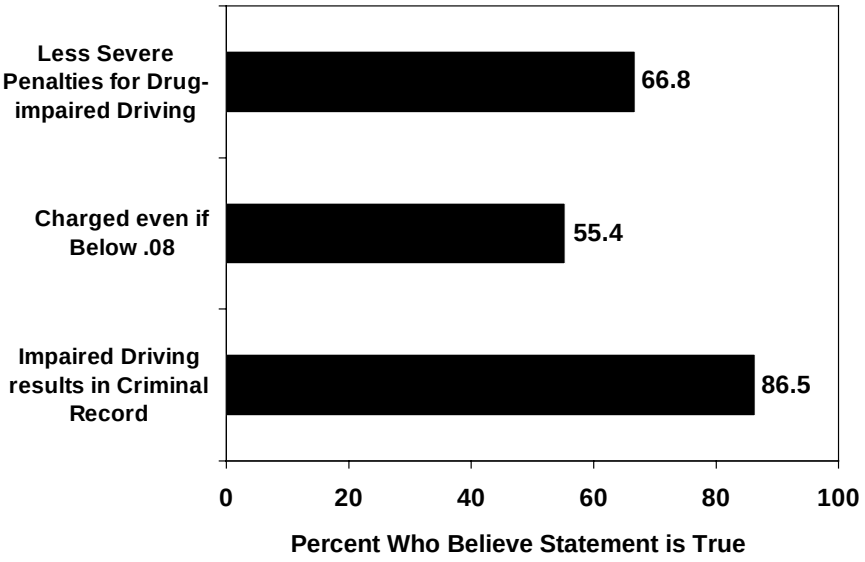
Other factors. There are no differences across the five regions of Canada in terms of driving after the use of any type of drug nor are there differences in the incidence of driving after using drugs among urban and rural residents.

Knowledge of the law

In Canada, it is a criminal offence to operate or have care or control of a motor vehicle while one's abilities are impaired by alcohol or drugs. Demonstrating impairment does not require a breath alcohol test reading of over .08% or a particular level of drug in the driver's blood. And, the penalties are the same for impaired driving whether the impairment is caused by alcohol or drugs.

As part of the Road Safety Monitor, drivers were asked to respond either "true" or "false" to each of three statements about impaired driving laws in Canada. Figure 6 presents the percent of respondents who answered "true" to each of the three statements. The majority of drivers (86.5%) are aware that impaired driving is a criminal offence and a conviction results in a criminal record. However, only slightly more than half (55.4%) know that you can be charged with impaired driving even if your blood alcohol level is below .08%. And of particular interest, two-thirds believe that the penalties for drug-impaired driving are less severe than those for alcohol-impaired driving – a belief which is incorrect because the penalties are the same.

Figure 6: Knowledge of Impaired Driving Laws



Demographic differences. Women are more likely than men to believe that the penalties for drug-impaired driving are less severe than those for alcohol-impaired driving (70.8%, compared with 63.0%, respectively). Younger drivers (16 to 24 years of age) and older drivers (65 and over), and those who had received a traffic ticket in the past year are less likely than others to believe that the penalties for drug-impaired driving are less severe. Drivers who report driving after taking any type of drug are no more likely than those who do not drive after taking drugs to correctly answer any of the three questions.

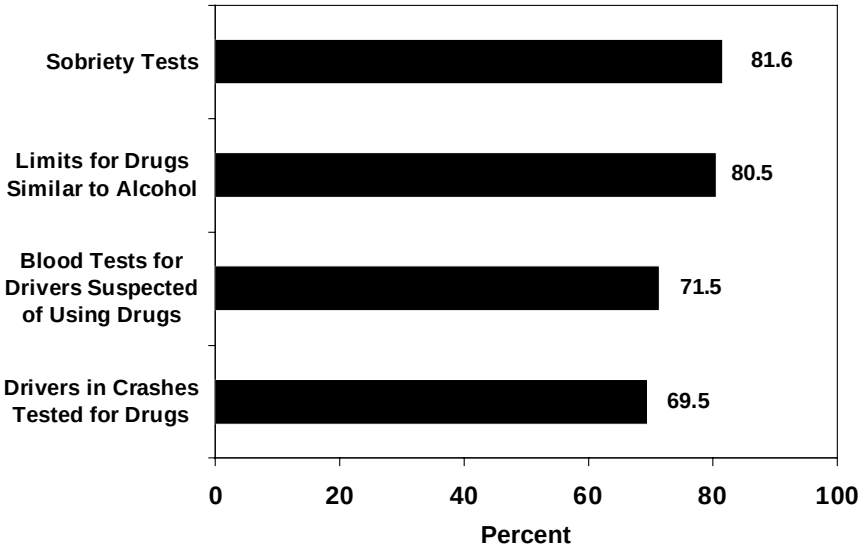
Regional differences. Drivers in various regions of Canada do not differ in the extent to which they know that an impaired driving conviction results in a criminal record. However, only 35% of drivers in Quebec are aware that you can be charged with impaired driving even if your blood alcohol level is below .08%. This compares with 75% of drivers in British Columbia who correctly answered this question.

Drivers in Atlantic Canada are most likely to believe that the penalties for drug-impaired driving are less severe than those for alcohol-impaired driving (81.7%). Drivers in Ontario are least likely to hold this belief (60.5%).

Taking action against drugs 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 drugs and driving. They were asked to indicate their level of support for four different tactics for dealing with drugs and driving – requiring drivers suspected of being under the influence of alcohol or drugs to perform tests of physical coordination (i.e., sobriety tests), mandatory blood testing for drugs among all drivers involved in serious collisions, mandatory blood tests for drivers suspected of being under the influence of drugs, and setting limits for drugs similar to the alcohol limit for drivers. The results are shown in Figure 7.

Figure 7: Percent Who Agree with Countermeasure Options



Two measures – requiring tests of physical coordination of drivers suspected of being under the influence of alcohol or drugs and setting absolute limits for drugs similar to the alcohol limit for drivers –received the support of at least 80% of drivers. Canadians are somewhat less enthusiastic about measures that involve drivers being required to provide blood samples. Mandatory blood tests for drugs among all drivers involved in serious collisions and mandatory blood tests for drivers suspected of being under the influence of drugs were supported by about 70% of Canadians.

Demographic differences. Support for the various countermeasure options differs according to the characteristics of drivers. In particular, women express stronger support for all four measures than men. Support for mandatory blood tests for drivers involved in serious crashes and those suspected of being under the influence of drugs increases progressively with age. Canadians who report driving more kilometres each month are also less supportive of mandatory blood tests for drivers suspected of being under the influence of drugs.

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