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***Driver Attitude to Speeding and Speed Management: A  
Quantitative and Qualitative Study – Final Report***

**Prepared by:**

**EKOS Research Associates Inc.**

**November 2007**

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16. <b>Abstract</b> <p>With the abundance of evidence that clearly indicates the importance of driving at slower speeds, combined with the public's perception of the significance of the problem, the following questions arise: why do so many drivers continue to speed and what can be done to reduce the amount of speeding on Canadian roads?</p> <p>As part of a larger series of projects, Transport Canada and Natural Resources Canada commissioned EKOS Research Associates to conduct this joint quantitative/qualitative study on driver's attitudes to speeding. Specific issues examined in this study include:</p> <ul style="list-style-type: none"> <li>• overall perceptions of road safety;</li> <li>• extent to which speeding is perceived as a problem (e.g., as a cause of serious accidents);</li> <li>• extent to which drivers speed;</li> <li>• circumstances and reasons for speeding;</li> <li>• knowledge and awareness of the potential impacts of speeding (e.g., health, economic/financial, environmental);</li> <li>• reaction to and support for potential measures to reduce speeding; and communications (e.g., messaging, medium, target audiences).</li> </ul>					
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<b>16. Résumé</b> <p>Compte tenu de l'étendue des preuves qui établissent clairement l'importance de conduire à des vitesses moins élevées, ajoutée à la perception qu'a le public de l'importance du problème, les questions suivantes se posent : pourquoi autant de conducteurs continuent-ils de rouler à une vitesse excessive et que peut-on faire pour réduire le nombre de ces conducteurs sur les routes canadiennes?</p> <p>Dans le cadre d'un grand ensemble de projets, Transports Canada et Ressources naturelles Canada ont demandé à Les Associés de Recherches EKOS Inc de réaliser cette étude quantitative et qualitative mixte sur les attitudes des conducteurs à l'égard des excès de vitesse. Voici quelques-uns des aspects particuliers examinés au cours de l'étude :</p> <ul style="list-style-type: none"><li>• la perception générale de la sécurité routière;</li><li>• la mesure dans laquelle les excès de vitesse sont perçus comme un problème (p. ex. comme une cause d'accidents graves);</li><li>• la mesure dans laquelle les conducteurs font des excès de vitesse;</li><li>• les circonstances entourant la vitesse excessive et les raisons qui s'y rattachent;</li><li>• la connaissance et la prise de conscience des répercussions possibles des excès de vitesse (p. ex. conséquences économiques/financières, environnementales, sur la santé);</li><li>• la réaction face aux mesures possibles de réduction de la vitesse et le soutien qui y est accordé; les communications (p. ex. messages véhiculés, moyens de communication, auditoires cibles).</li></ul>					
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# Driver Attitudes to Speeding and Speed Management: A Quantitative and Qualitative Study

**FINAL REPORT**

Submitted to:

Transport Canada  
and  
Natural Resources Canada

**EKOS RESEARCH ASSOCIATES INC.**

May 2005

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# EXECUTIVE SUMMARY

This study, which was conducted during the months of March and April 2005, examines relatively broad aspects of drivers' attitudes to speeding. Specific issues explored in the study include overall perceptions of road safety; the extent to which drivers speed and why; knowledge and awareness of the potential impacts of speeding; as well as drivers' reaction to support for potential measures aimed at reducing speeding on Canada's roads.

The research methodology for this study was two-fold. The first component of the study involved a telephone survey with a random sample of 2,002 Canadians, 16 years of age and over who had driven a motor vehicle in the past month. This survey was completed between March 16<sup>th</sup> and April 5<sup>th</sup>, 2005. The survey data were statistically weighted by age, gender and region to ensure that the findings are representative of the Canadian population aged 16 and over. With a sample size of 2,002, the results may be considered accurate to within +/-2.2 percentage points, 19 times out of 20.

A total of 12 focus groups comprised the second component of the study. These focus groups were conducted in six centres across Canada with drivers 16 years of age and older who drive at least once per week. The purpose of the qualitative component of the study was to inform the survey results and to provide guidance for the potential development of a public awareness and education campaign.

## Key Findings

Overall findings reveal that Canadians view speeding as dangerous, and they associate it with increased risk of collision, injury and death. Economic impacts (e.g., increased fuel consumption) are also apparent to most, while potential environmental consequences are both more difficult to grasp and seen as less significant.

There appears to be little agreement among Canadian drivers regarding road safety trends. Survey respondents, for example, have mixed views regarding the safety and security of road travel in Canada (33 per cent feel it is less safe and 27 per cent think it is safer), while the majority of focus group participants are generally of the view that driving is becoming less safe. Despite this difference of opinion, many agree that speeding (47 per cent) and driver distraction (41 per cent) are the main causes of serious traffic collisions, along with impaired driving (27 per cent). According to Canadian drivers, four of the top six causes of traffic collisions on Canadian roads stem from conscious decisions made by those behind the wheel.

Overall, we find that the definition of speeding is elastic, that Canadians perceive themselves to speed much less than other drivers, and that their assessment and descriptions of their personal instances of speeding are often relatively benign. Seven in 10 drivers admit to exceeding the speed limit at least occasionally, particularly on highways (81 per cent). The average speeding amount is 12 kilometres

over the limit on highways, 10 kilometres on two lane highways/country roads and 7 kilometres on residential streets. From a definitional standpoint, many people believe that while they might be “technically speeding,” they are not driving in a way that endangers either themselves or others. Moreover, one in two drivers (52 per cent) agrees that people should keep up with the flow of traffic regardless of the speed limit. It is also interesting to note that most people believe it is just as dangerous to drive 20 kilometres *under* the speed limit, as it is to drive 20 kilometres *over* it.

Those who have admitted speeding are most likely to do so because they do not want to be late (57 per cent), because they believe that speed limits are set too low (51 per cent) or because they are not paying attention to the speed at which they are driving (51 per cent). Only one in five drivers say that enjoying the feeling associated with driving fast has been a reason for them to speed (however, both the qualitative research and the regression analysis suggest that this factor is linked to the more extreme instances of speeding).

The results of the cluster analysis group Canadians into five distinct cohorts, with about 30 per cent of drivers falling into two groups of people characterized by their tendency to 1) speed more than other drivers, and 2) have less negative attitudes to speeding and its potential consequences. Drivers belonging to these two groups also travel at higher speed when they do drive over the limit. One group (the Risk-Takers) seems to want to speed because they enjoy taking risks and defying authority. In short, they enjoy it and they do it on purpose. The second group, Pragmatic Speeders, drive over the speed limit for more practical reasons: they want to get to their destination as quickly as possible. They are also conscious speeders.

Canadian drivers were also asked cite what they thought to be the main disadvantages of speeding. Consistent with other survey and qualitative results, we find that an increased risk of collision (cited by 54 per cent of survey respondents) is mentioned most often. This is followed by the greater risk of injury in the event of a collision and the risk of getting a speeding ticket (both cited by roughly one-third of drivers).

While nearly one in five respondents (18 per cent) think that speeding results in the use of more gas, few (just six per cent) were likely to cite adverse impacts to the environment (such as climate change and air pollution) as a consequence of driving at high speeds. Indeed, opinions and knowledge are clouded regarding speeding and its connection to climate change. While scientific evidence has demonstrated that speeding does indeed contribute to climate change, only about half of drivers (45 per cent) actually believe this to be true (and roughly the same proportion – 47 per cent – say this is false).

Notwithstanding the inclination of drivers to speed despite their awareness of the potentially negative impacts, there appears to be significant support for measures aimed at curbing speeding. The results show strongest support for the wider use of electronic roadside signs that warn drivers if they are speeding (72 per cent of survey respondents think this is a good idea), as well as in-vehicle electronic systems that indicate speeds over 110 km/hr (with the qualitative research suggesting an assumption on the part of many that such equipment would be optional or under the control of the driver). Both these approaches are seen as relatively innocuous and inexpensive, but also more likely to be effective with

inattentive speeders as opposed to the more conscious and extreme speeders (i.e., the Risk-Takers and Pragmatic Speeders).

Many of the other speed reduction strategies are also considered sound. These include increased police enforcement (67 per cent) and “Black Box” technology to collect data for use in the investigation of accidents (62 per cent). (With respect to the latter, however, the qualitative research suggests its support is based more on its perceived worth as an accident investigation tool than its deterrent potential.) Lowering speed limits by 10 kilometres on two-lane highways and rural roads garnered the least amount of support from survey respondents and focus group participants alike: 58 per cent of survey respondents thought this particular speed reduction strategy was a bad idea, as did the majority of focus group participants.

There is significant support for a public awareness and education campaign aimed at reducing speeding, although it is worth reiterating that the qualitative research suggests that there might be greater support for an integrated campaign aimed at reducing all forms of dangerous driving, including speeding. To Canadian drivers enforcement appears to be the most effective way to curb speeding in the immediate term, but to a significant group of drivers social marketing represents the best hope for a cultural change that would see speeding (and other dangerous behaviours) become socially unacceptable, and as a result, relatively rare.

As previously mentioned, the environmental impacts of speeding tend not to be top of mind, as a number of indicators reveal (e.g., only 45 per cent agrees that driving over the speed limit contributes to climate change). Most people are able to make the link with some prompting given their understanding of the positive correlation between speed and fuel consumption. This relationship appears crucial from a communications standpoint, in that messages about environmental impacts appear much more likely to be understood if they are tied closely to the more significant and resonant messaging about the financial impacts of speeding, particularly with respect to fuel consumption. Despite a lack of top of mind knowledge of the environmental impacts of speeding, however, it should be noted that 81 per cent of survey respondents say they are either extremely interested (55 per cent) or somewhat interested (26 per cent) in receiving information on ways of reducing the impact that speeding has on the environment.

Suggestions for messaging revolve around the three main categories of negative impacts of speeding (i.e., health, economic, environmental), conveyed by means of a combination of emotional and logical appeals. In terms of specific messaging, one of the key knowledge gaps appears to centre on the relationship between increased speed and risk (while holding contextual variables such as road surface conditions constant): How much does one’s risk increase when they drive 120kms in a 100kms zone? What about 140kms? From an environmental standpoint, the key question is: What is the magnitude of the impact that the average Canadian driver (i.e., based on typical driving distances, types and speeds) has on the environment? How many trees is one “killing”?

The multivariate analysis suggests that communications efforts should focus on trying to change the attitudes and behaviour of the Risk-Takers and the Pragmatic Speeders because they pose the

greatest danger. Given that their reasons for speeding are very different (and that these groups have very demographic characteristics) communications efforts should be tailored for each of these audiences. However, it is instructive to note that both these groups tend to diminish the increased probability of collisions, injuries or death as a result of driving over the speed limit, suggesting that this could be a common re-enforcing theme for these efforts.

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## 1. Introduction

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### 1.1 BACKGROUND AND OBJECTIVES

Over the past number of years, there have been a number of research studies focusing on aggressive driving in general, and speeding in particular. The data consistently demonstrate the dangers of speeding (cited more frequently as a factor in the most severe vehicle collisions) and, by corollary, the benefits of driving at lower speeds. Speeding continues to be a serious road safety problem, despite encouraging data that demonstrates a decline in the number of fatal collisions on Canadian highways (from 3,610 in 1988 to 2,647 in 1997<sup>1</sup>). In 2002, nearly two-thirds of Canadians believed that aggressive driving and speeding were very serious problems.<sup>2</sup>

With the abundance of evidence that clearly indicates the importance of driving at slower speeds, combined with the public's perception of the significance of the problem, the following questions arise: why do so many drivers continue to speed and what can be done to reduce the amount of speeding on Canadian roads?

As part of a larger series of projects, Transport Canada and Natural Resources Canada commissioned EKOS Research Associates to conduct this joint quantitative/qualitative study on driver's attitudes to speeding. Specific issues examined in this study include:

- overall perceptions of road safety;
- extent to which speeding is perceived as a problem (e.g., as a cause of serious accidents);
- extent to which drivers speed;
- circumstances and reasons for speeding;
- knowledge and awareness of the potential impacts of speeding (e.g., health, economic/financial, environmental);
- reaction to and support for potential measures to reduce speeding; and
- communications (e.g., messaging, medium, target audiences).

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<sup>1</sup> *Trends in Motor Vehicle Traffic Collision Statistics 1988-1997*. Transport Canada, 2001.

<sup>2</sup> *The Road Safety Monitor 2002*. Traffic Injury Research Foundation

## 1.2 METHODOLOGY

This study was based on a national telephone survey of 2,002 Canadian drivers and complemented by 12 focus groups with drivers in six locations across the country.

### 1.2.1 Telephone Survey

The first component of the study consisted of a telephone survey based on a randomly selected national sample of 2,002 Canadians, 16 years of age or older who have driven a motor vehicle in the past month. The sample was drawn from randomly selected households across the country, using Random Digit Dialling (RDD).

The questionnaire was developed in consultation with Transport Canada and Natural Resources Canada. Prior to the interviewing period, the questionnaire was pre-tested (in both official languages). Revisions were made based on the input received from the study partners. The final survey questionnaire is appended to this report.

The telephone interviews were completed between March 16<sup>th</sup> and April 5<sup>th</sup>, 2005. The sample of 2,002 provides a margin of error of +/- 2.2 percentage points, nineteen times out of twenty. The margin of error increases when the results are sub-divided (i.e., error margins for sub-groups such as regions are larger). The average time taken to complete an interview was 21 minutes. The survey data was statistically weighted by age, gender and region to ensure that the findings are representative of the Canadian population aged 16 and over.

The following table provides details on the sample of Canadian drivers represented in this report.

Region:	N*	Household income:	N*
British Columbia	263	<\$20,000	182
Alberta	193	\$20,000-\$39,000	398
Prairies	138	\$40,000-\$59,000	325
Ontario	763	\$60,000-\$79,000	255
Quebec	482	\$80,000-\$99,000	182
Atlantic	157	\$100,000+	268
Age:		Gender:	
<25	158	Male	932
25-44	750	Female	1,070
45-64	769		
65+	311		

\*represents unweighted values from overall sample of 2,002

## **1.2.2 Focus Groups**

A total of 12 focus groups in six centres were conducted with drivers 16 years of age and older who drive at least once per week. Collectively, participants represented a wide range of driving experience. The purpose of the qualitative component of the study was to inform the survey results and to provide guidance for the potential development of a public awareness and education campaign.

For each of the focus groups, 12 randomly selected drivers were recruited. In addition to the basic driving experience criteria, the groups included a good cross section of people based on gender, family composition, age, education and income. The groups lasted two hours and were audio taped. Participants received a \$50 incentive for participating in the research. The focus groups were conducted in April.

Two focus group were held in the evening in each of the following locations:

- Sydney, NS;
- Toronto;
- Montreal;
- Weyburn, SK;
- Calgary; and
- Vancouver.

A moderator's guide was used to conduct the focus groups. As with the survey questionnaire, the guide was designed in consultation with the study partners. The final version of the focus group moderator's guide and handout are appended to this report.

## **1.3 ORGANIZATION OF THIS REPORT**

The following chapter presents the detailed findings of the research. It is organized according to the main study issues. The survey and focus group findings are integrated. The last chapter of the report is devoted to conclusions.



## 2. Detailed Findings

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The order in which the findings are presented in this chapter is generally consistent with the order in which they were examined with survey respondents and focus group participants.

### 2.1 DRIVER PROFILE

Along with standard socio-demographic data, the survey collected some information on the driving habits of Canadians. While this information was primarily gathered to facilitate analysis, it also provides some interesting findings concerning a number of different aspects of Canadians' driving experience (e.g., frequency, amount, involvement in serious collisions, and number of speeding tickets).

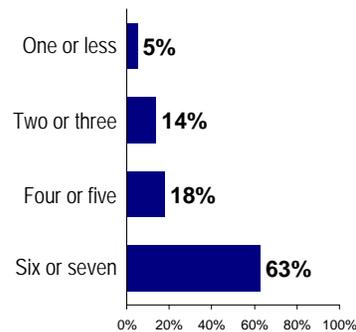
#### 2.1.1 Driving Frequency and Distance

Most Canadian drivers (63 per cent) are on the road at least six times per week and drive over 10,000 kilometres per year (53 per cent). In terms of frequency, we find that men, drivers between the ages of 25 and 44 years, and higher income earners are more likely than others to drive every day of the week. As could be expected, these same groups are also report driving greater distances over the past 12 months. In contrast, Canadian seniors drive the least (with respect to both frequency and distance).

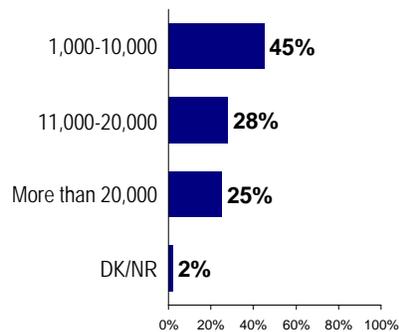
#### Driving Frequency & Distance

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"In an average week, how many days do you drive a vehicle for personal use including driving to and from work?"



"Approximately how many kilometres do you think you have personally driven a car, van or truck in the past 12 months? Would you say.."



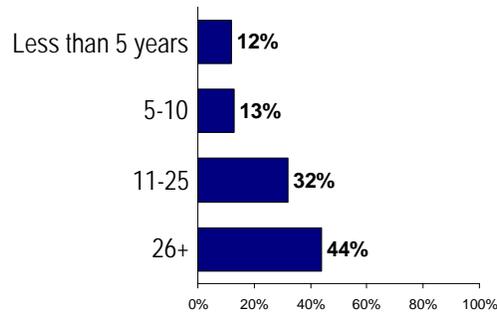
## 2.1.2 Driving Experience

The average driver in Canada has had their driver's license for almost 25 years and three-quarters (76 per cent) have been driving for at least 11 years. Obviously, the number of years that one has had a driver's license is strongly correlated with age. Among Canadians drivers under the age of 25 years, the mean number of years of license ownership is 4.2 years. In contrast, drivers over the age of 64 years have had their license for close to 48 years on average.

### Driving Experience

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"How long have you had a driver's license?"



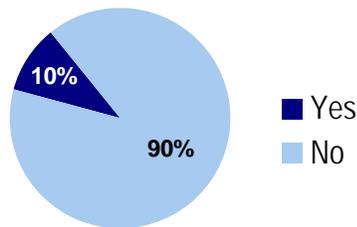
According to the literature, speeding puts drivers at significantly greater risk of being involved in a serious collision. It is also reasonable to assume that there is a positive correlation between speeding and being ticketed for this infraction.

One in 10 Canadian drivers has been in an automobile collision that resulted in the hospitalization of one or more people. The incidence of automobile collisions (that required hospitalization) is generally consistent across subgroups, but is slightly higher among men (12 per cent) compared to women (eight per cent). It is interesting that people who have been driving for no more than 10 years are just as likely as those who have been driving for at least 25 years to have been in a serious collision. We also note that there is no difference in the likelihood of being involved in a serious accident based on drivers' self-reported frequency of speeding. This paradoxical result could be explained by the fact that speeders tend to be disproportionately younger, have driven fewer total kilometres, and thus, have had less opportunity over the course of their driving lives to be involved in a serious collision.

### Automobile Collisions

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“Have you ever been in an automobile collision resulting in hospitalization for one or more persons?”



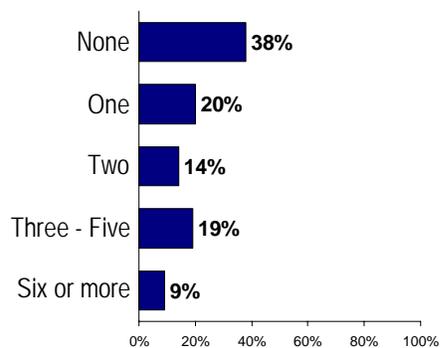
Most Canadians (62 per cent) have had at least one speeding ticket. The analysis reveals that a relatively small group of drivers account for a large number of speeding tickets. This is based on the finding that, while the average number of speeding tickets per driver is about 3.7, fully 72 per cent of all drivers have received no more than two tickets over the course of their lives. In sharp contrast, we note that one in 10 drivers have received six or more tickets.

Male drivers with an average of 4.6 tickets (compared to women at 2.3) and British Columbians with an average of 4.9 tickets are much more likely to have been fined for speeding than others. There is also a strong correlation between self-reported speeding and being fined for speeding, with those who report speeding frequently having an average of 4.3 tickets compared to an average of 2.7 tickets among those who say they rarely or never speed.

### Speeding Tickets

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“Approximately how many speeding tickets have you had in your life?”

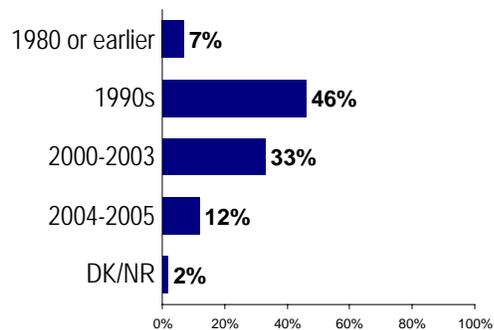


### 2.1.3 Canadians and Their Vehicles

About one in two Canadians drives a car that is no more than five years old. As expected, higher income earners are more likely than others to drive a late model vehicle. Our analysis of the make of cars they drive reveals that Canadians drive a wide variety of vehicles. No single make of vehicle is driven by more than four per cent of Canadians.

#### Age of Vehicle

"And, what is the year of this vehicle?"



 EKOS Research Associates Inc.

n=2002

2005 Speed Management Survey

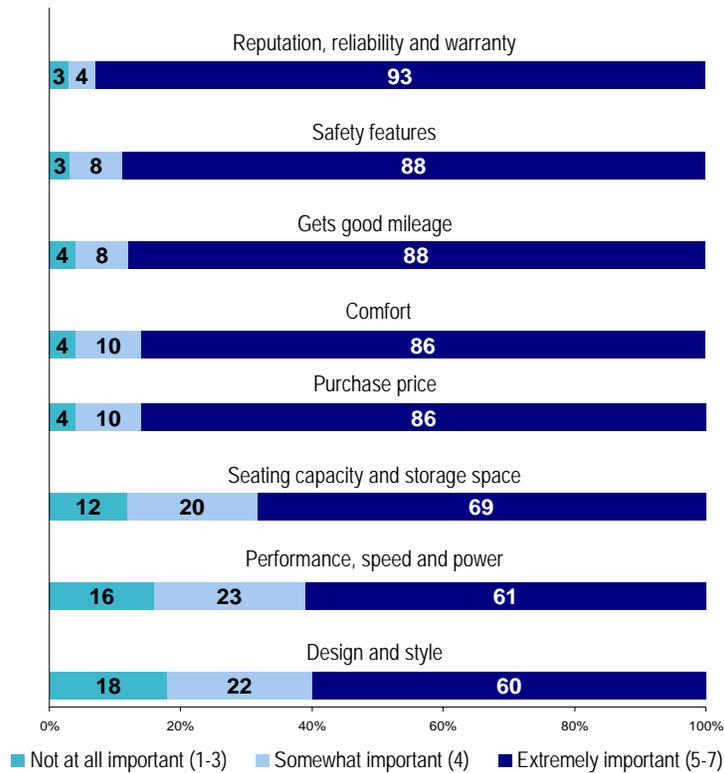
Canadian drivers were asked to rate the importance of a variety of features they consider when buying a vehicle. Overall, Canadians appear to be sober and pragmatic car buyers, placing greatest emphasis on things like reliability, reputation, and warranty (more than nine in ten say that these qualities are "very important"). A second tier of important features (identified as "very important" by approximately eight in ten drivers) focuses on factors such as safety, fuel efficiency, comfort, and price. Although still considered to be important by at least six in ten, Canadian drivers place less of an emphasis on seating capacity, design, and performance, speed, and power.

Generally speaking, the rated importance of reputation, reliability, and warranty is consistent across many of the subgroups of Canadian drivers, except for age. Seniors are more inclined than others to assign a greater weight to this feature. Female drivers are more inclined than others to attribute greater importance to all the second-tier features (safety, fuel efficiency, comfort and price) as well as seating capacity.

The importance of performance, speed, and power is relatively consistent across population sub-groups. However, Ontarians are somewhat more likely to value these aspects, while Quebeckers are among those least likely to do so (67 and 50 per cent respectively). Perhaps not surprisingly, drivers who indicated later in the survey that they speed frequently are also more likely to value a vehicle's performance, speed and power when making a purchase decision.

### Importance of Vehicle Characteristics

"I would like you to rate how important each of these things would be to you if you were deciding what kind of car to buy?"



EKOS Research Associates Inc.

n=2002

2005 Speed Management Survey

The qualitative research did not specifically examine the influence of various vehicle characteristics on people's purchasing decision. However, the question of vehicle advertising did surface spontaneously in most groups. When it was raised, everyone recognized that auto manufacturers often make speed, power, and performance key selling features of their products. This lead many to believe that the industry "glamorized speeding" and gave the message that driving at high speed is socially acceptable: "There are so many ads where they say in small print at the bottom of the screen: 'professional driver on closed course'."

Some participants were of the view that advertising that emphasizes a vehicle's performance and speed could in effect counter social marketing campaigns aimed at reducing speeding (e.g., *Speed Kills*): "It's sort of strange. You've got the Government spending money telling people not to speed and car companies telling people that driving fast is cool."

## 2.2 BROAD PERCEPTIONS OF ROAD SAFETY

Prior to addressing issues related to speeding in particular, the study was designed to gather Canadians' general thoughts about driving. Specifically, survey respondents and focus group participants were asked if they felt more or less safe driving on Canadian roads, and to identify what they considered to be the main causes of serious traffic collisions.

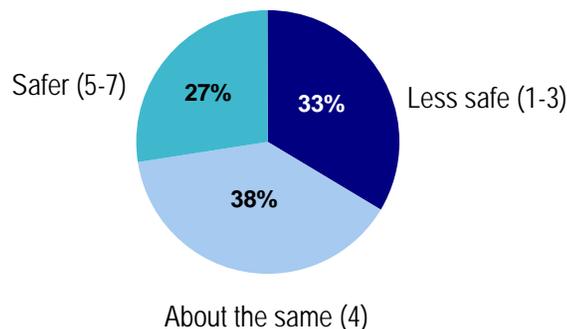
According to the survey, Canadian drivers have mixed views regarding the safety of road travel in Canada. While nearly three in ten (27 per cent) believe that road travel in Canada is safer now than it was five years ago, slightly more (33 per cent) feel that it is less safe now than in the past. Overall, the slight plurality (38 per cent) thinks that there has been no change in road safety over this timeframe.

Drivers in the Atlantic region are more inclined than those living in other areas of the country to think road travel is safer now than it was five years ago. The perception that driving is safer today lessens with increased driving frequency and length of driving experience. We also find that those who say that they rarely or never speed (38 per cent) are also significantly more likely than other drivers to say that road travel has become less safe compared to five years ago.

### Broad Perceptions of Road Safety

---

"Compared to five years ago, do you think that road travel in Canada is safer or less safe or about the same?"



In contrast to survey respondents, the majority of focus group participants were of the view that driving is becoming less safe. They often lamented what they perceived to be an erosion of civility on the road, characterized by people driving faster, more aggressively and with less care than before. This decline was in turn usually attributed to people leading busier and more stressful lives: "People are more stressed these days. They try to shove a lot into their day." Related to stress, but also seen as undermining safety in its own right, were increases in traffic volumes. Participants suggested that high volume (e.g., traffic jams) frustrated and delayed drivers, causing some to drive erratically as a way of venting and trying to make up for lost time.

An increase in driver distraction, mainly due to handheld cell phones, was also identified as a key factor in making roads less safe: "You've always had people fiddling with the radio and putting on make-up, but now you've got these cell phones. That's taking it to a whole other level." Other factors thought to contribute to the decline in road safety included: more powerful cars, increased prevalence of transport trucks on the road, and more road construction (particularly in large cities). Related to this last point, poor road maintenance was also mentioned, particularly in Sydney: "There are giant potholes everywhere; the province just doesn't spend money on fixing roads anymore."

Those in the groups who felt that roads were as safe or safer than before tended to point to the superiority of vehicle design and increased safety features of cars today (e.g., air bags), as well as to a reduction of drinking and driving.

Although there appears to be little agreement among Canadian drivers regarding road safety trends, many agree that speeding and driver distraction as the main causes of serious traffic collisions, along with impaired driving. According to Canadian drivers, four of the top six causes of traffic collisions on Canadian roads stem from conscious decisions made by those behind the wheel.

While drivers cite a wide range of possible conditions that would likely lead to a collision, speeding is seen to be the major contributor (cited by 47 per cent of respondents), followed closely by inattentive driving (41 per cent). Driving while impaired is the third most common contributor, cited by 27 per cent of respondents. Other factors, cited by approximately about one in seven, include road rage, bad weather and poor road conditions – these latter two being elements that are beyond the driver's control.

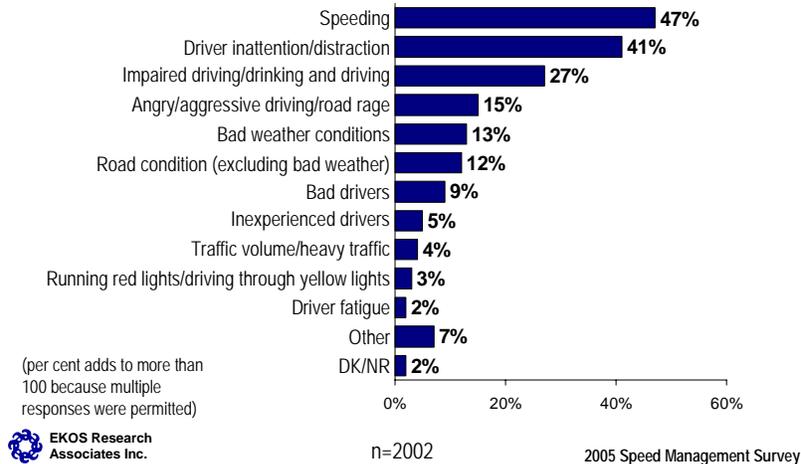
There are some interesting demographic variations on this issue:

- Drivers in British Columbia and Quebec are more likely than those in other areas of the country to consider speeding to be the leading cause of traffic collisions in Canada. This perception also increases with driving experience and is also more prevalent among women and those over the age of 45.
- Drivers in Alberta are more inclined to think that driver inattention is the major contributor.
- Drivers in the Prairies and Quebec are more likely than others to identify impaired driving as the main cause of collisions. This belief also increases with frequency of speeding and among the least educated and affluent Canadians.

- › Drivers in the Atlantic region are more likely than others to consider road conditions and bad weather to be the leading causes of collisions on Canadian roads.

### Main Causes of Traffic Collisions

“What would you say are the top two causes of traffic collisions on Canada's roads and highways?”



The results of the qualitative research are very consistent with the survey findings. Participants were asked to write down what they considered to be the top two or three main causes of serious collisions in Canada. In all groups, with the exception of those in Weyburn, Saskatchewan, speeding, driver distraction, and drinking and driving tended to occupy the top three rungs. The other factors identified in the survey (and listed in the above chart) were also noted in the focus groups.

In Weyburn, speeding was rarely mentioned. Instead, road conditions and poor driving skills were seen as the main reasons for serious collisions. Participants in these groups explained that their town was home to a great number of seniors, which means that speed limits are set “artificially low”. As a result, few people speed and one is more likely to be involved in a collision with a driver who is nervous or has poor/reduced driving skills: “I had one older women just stop in the middle of the highway in a snowstorm. I only saw her at the last minute.” “I’ve been driving for years, but I don’t have a driver’s license.”

It is important to note that here, as elsewhere in the discussions, it was apparent that in the eyes of many, the overarching road safety problem was considered to be dangerous/reckless driving. This broadest of categories was seen to include many elements, including inattention (e.g. cell phones), aggressive driving (e.g., weaving in and out of traffic), poor driving (e.g., lack of knowledge or skills), and, to the largest extent, speeding.

## **2.3 DEFINING SPEEDING**

In this section we look at how Canadian drivers define speeding, the extent to which they perceive other drivers to be speeding, as well as their perceptions of their own speeding behaviour. Overall, we find that the definition of speeding is elastic, that Canadians perceive themselves to speed much less than other drivers, and that their assessment and descriptions of their personal instances of speeding are often relatively benign. Most drivers admit to exceeding the speed limit on highways and two lane highways/country roads at least occasionally. We also note that those who report frequently driving over the posted limit are also more likely to indicate driving at higher average speeds when exceeding the limit.

### **2.3.1 What Constitutes Speeding?**

The findings from the focus groups provide a great deal of insight into on how Canadians perceive and define speeding. People almost always defined speeding in one of three ways: technical, relative, or absolute. It is also important to note that the same person can employ all three definitions, depending on the issue under discussion and the point they want to make.

- **Technical:** Articulated by relatively few people, this definition is the most conservative. Speeding occurs when one drives any amount over the posted limit (e.g., 101kms in a 100kms zone). Seen as somewhat unrealistic but technically correct by most others: "I don't look at it that way, but yes, technically you're speeding." This definition was also seen as the one most likely to be employed by governments.
- **Relative:** Many participants viewed speeding in relative terms, based on factors such as road surface conditions, traffic volume, vehicle type, weather conditions and even the experience and skill of the driver. Participants often said that speeding was "driving too fast for the conditions". In other words, driving dangerously. According to this definition one can safely exceed the speed limit (by up to 30 per cent according to some) without affecting their risk of collision.
- **Absolute:** Many chose to define speeding in absolute terms. That is, driving a specific amount over the posted limit, with over 120 kilometers in a 100 kilometers zone emerging as the most popular example/definition. Driving over 90 kilometers in an 80 kilometers zone was also provided as an absolute definition of speeding.

When participants described personal examples of speeding, a significant number recounted situations in which they were only “technically” speeding. When speaking about the speeding of others, however, their definition would often move much closer to what they considered to be dangerous driving. Similarly, during subsequent discussions about approaches for reducing speeding, it was obvious that quite a few people appeared more receptive to speaking about curbing dangerous driving than they were about reducing speeding *per se*: “I don’t know if speeding is the problem as much dangerous driving is. I can drive 120 or even 130 when conditions are good, no problem.”

### **2.3.2 How Often and Where do People Speed?**

The vast majority of drivers (88 per cent) are of the view that other people frequently drive over the speed limit. This compares to one in two drivers who say that they personally travel beyond the speed limit frequently. The difference in perception is accentuated when responses on the extreme end of the scale are examined (i.e., the seventh point on a seven-point scale). Here, we find that 26 per cent of people say that others are “always” speeding, while only nine per cent of drivers place themselves in this same category. Canadians that admit to frequently speeding themselves, as well as younger drivers, are much more likely than others to think that other people also speed frequently.

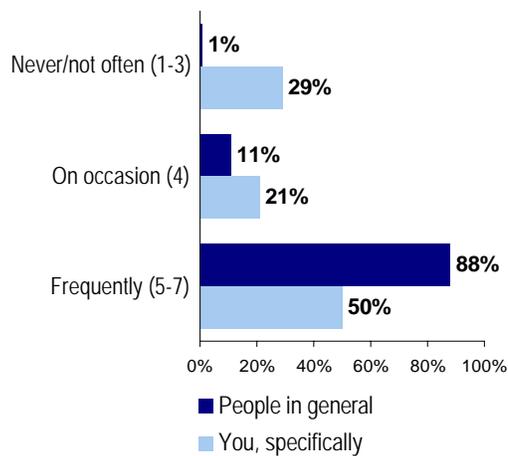
There are numerous and wide sub-group differences related to this issue. Ontarians (59 per cent), males (58 per cent), those who drive everyday (55 per cent), and those who have had their driver’s license for 10 years or less (59 per cent) are all more likely to say that they frequently drive over the speed limit. The likelihood of describing oneself as frequently driving over the speed limit also increases with education and income, but decreases with age.

As could be expected, speeding is most common on major highways. More than half of those surveyed (58 per cent) say that they frequently speed there. One in five (39 per cent) admit that they frequently speed on two lane highways and country roads and relatively few drivers (13 per cent) say that they frequently speed in residential areas.

With the slight exception of residential areas, those who speed seem to do so regardless of where they drive. In other words, the same drivers who say they usually drive over the posted limits in general are also more inclined to say they usually speed when asked specifically about major highways and two lane highways/country roads. They are also more likely to drive faster than other drivers when they do exceed the speed limit.

## Frequency of Speeding

"Generally speaking, how often would you say ... drive over speed limits?"



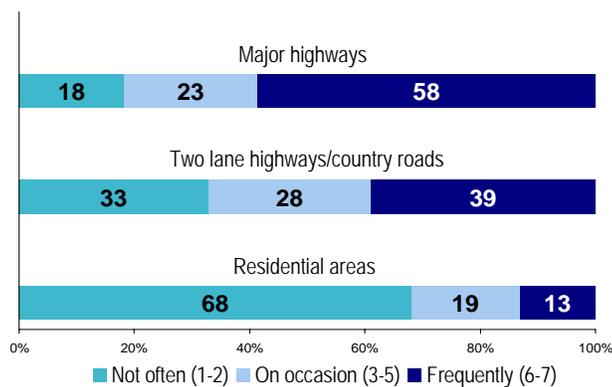
EKOS Research Associates Inc.

n=2002

2005 Speed Management Survey

## Speeding in Different Locations

"Now, how often would you say that you personally drive over the speed limit when traveling on..."



EKOS Research Associates Inc.

n=1711; excludes those who say they never speed

2005 Speed Management Survey

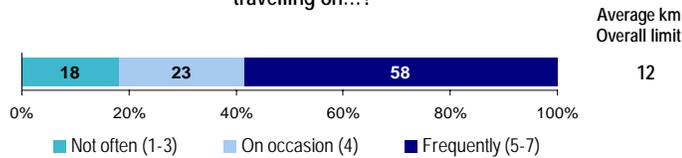
### 2.3.3 How Fast are People Driving When They Speed?

As noted earlier, the focus groups suggest that people's definition of speeding can vary significantly. One of the most common definitions used by participants was driving at a speed of 120 kilometres in a 100 kilometres zone. The survey results show that, on average, the majority of drivers (81 per cent) who say that they exceed the limit at least sometimes do not typically exceed a speed of 120 kilometres on major highways. Only one out of 50 says that they drive 30 kilometres or more over the speed limit.

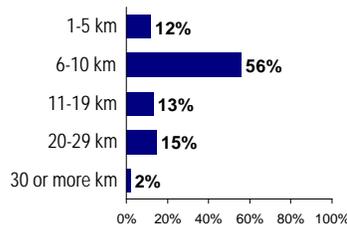
Drivers who say that they frequently drive over the speed limit are also more likely to drive faster when they do so. Males, younger drivers, and drivers having relatively higher socio-economic status are also all more likely to drive faster than others when they do exceed the limit, as are drivers from Ontario. Drivers in rural areas are slightly less likely than those in urban areas to speed on major highways.

#### Speeding on Major Highways

"Now how often would you say you personally drive over the speed limit when travelling on...?"



"And usually by how many kilometres over the speed limit?"



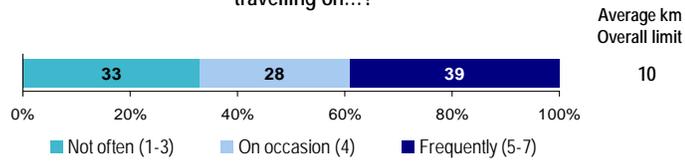
n=1711; excludes those who say they never speed 2005 Speed Management Survey

Most Canadian drivers that have driven beyond the speed limit on two lane highways and country roads report doing so at an average of at least 10 kilometres over the posted limit. Almost one in five says that they exceed the limit on these roads by at least 11 or more kilometres over the posted limit.

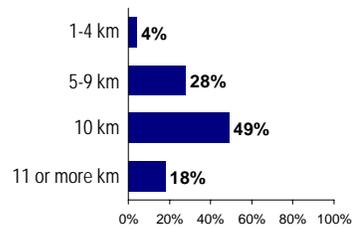
Sub-group analysis continues to reveal a consistent pattern. In particular, frequency of driving over the posted limit is positively correlated with the extent of driving over the limit (i.e., the more often one speeds, the faster they are likely to drive when doing so).

## Speeding on Two Lane Highways/Country Roads

"Now how often would you say you personally drive over the speed limit when travelling on...?"



"And usually by how many kilometres over the speed limit?"



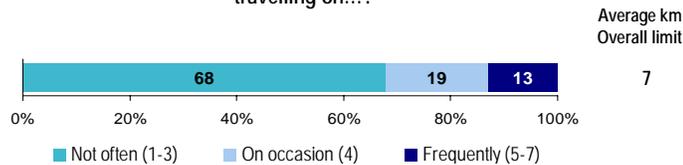
 EKOS Research Associates Inc.

n=1711; excludes those who say they never speed 2005 Speed Management Survey

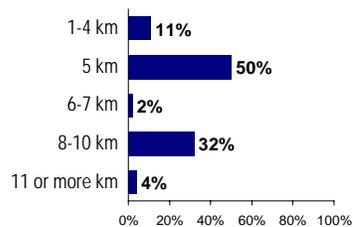
Few Canadian drivers frequently exceed the posted speed limit in residential areas. The average speed at which people do so, however, is relatively elevated given that many residential limits are set at 50 or 60kms. Indeed, we note that fully 36 per cent exceed the posted limit on these road types by an average of at least 8kms per hour. Once again, frequency of driving over the posted limit is positively correlated with extent of speed. Regionally, Quebecers drive fastest in residential zone (an average of 8.8kms over the limit). Again, drivers in rural areas exhibit greater caution than those in urban areas.

## Speeding in Residential Areas

"Now how often would you say you personally drive over the speed limit when travelling on...?"



"And usually by how many kilometres over the speed limit?"



n=1711; excludes those who say they never speed 2005 Speed Management Survey

## 2.4 WHY DO CANADIANS SPEED?

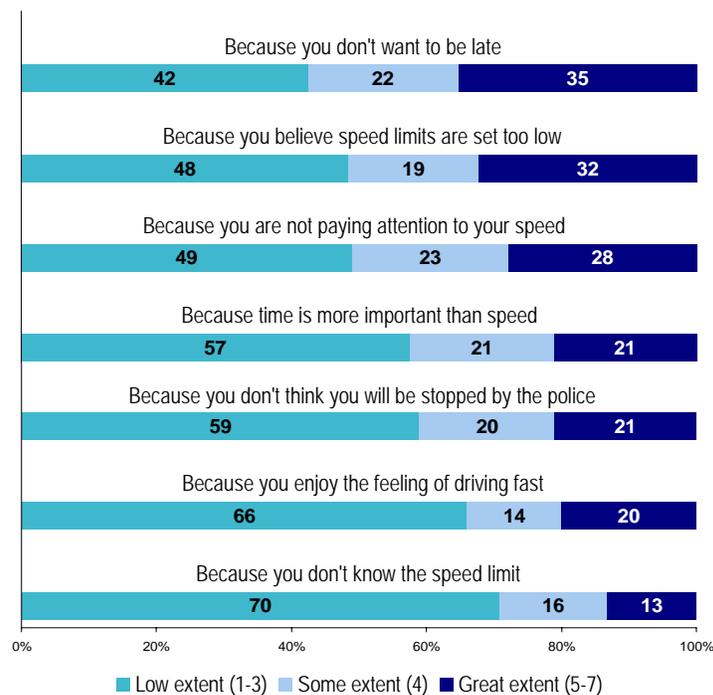
### 2.4.1 Direct Motivations for Speeding

People have many different motivations for speeding. According to the survey results, the most commonly cited reasons are time-related (i.e., do not want to be late or time more important than speed). Inattentive driving, in some form or another (i.e., either not paying attention to one's speed or being unaware of the posted limit), follows closely. Believing that speed limits are set too low is also frequently mentioned as a way to justify speeding. Only one in five drivers say that enjoying the feeling associated with driving fast explains their past speeding behaviour.

The sub-group differences are predictable. The relevance of many of these reasons declines with age and driver experience (likely related to the fact that the oldest and most experienced drivers do not speed regularly). On the other hand, drivers who frequently speed are more likely than others to have used nearly all of these justifications for speeding, with the exception of not knowing the speed limit, indicating that people who frequently exceed the posted limit are more likely to do so consciously.

## Reasons for Speeding

“Please tell me to what extent each of these has been a reason for YOU to speed in the past.”



n=1711; excludes those who say they never speed

2005 Speed Management Survey

The survey findings that people speed for many different reasons were also reflected in the qualitative component of the research. As indicated earlier, participants attributed the speeding of others to a desire to save time. Interestingly, this factor was also given as a significant reason for their own speeding behaviour. The personal examples of time-related speeding usually related to driving to work or as part of their work (e.g., making deliveries), and involved mainly city driving and some highway driving. Participants revealed that feelings of stress and frustration sometimes accompanied this type of speeding.

Many other participants described a rationale for speeding that blends time saving with the pleasure of driving fast. These scenarios involved driving to a destination that they were looking forward to arriving at, such as a cottage, a party, or friend's/relative's house. Far from being work-related, this type of speeding was about pleasure and having fun, weekends and vacations: "I'm picturing the start of a long weekend. I'm driving to my parent's place in the country. I'm really looking forward to getting there so I'm driving fast. The music is on. I'm having a good time." This type of speeding was usually said to take place on highways and country roads and was sometimes associated with extreme speeds: "Me and a bunch of friends were in my parent's mini van going to this cottage and it was going to be really fun so we really wanted to get there as soon as we could... I had other friends in another car so we decided to race. It wasn't planned, it just sort of happened... I think I went as high as 180."

Relatively few people described typical instances of speeding due to inattention. Those who did tended to be people who did not speed very much, drove less, and were more likely to be women and older. The inattentive speeding scenario usually involved traveling no more than 10 per cent over the speed limit and was rarely prolonged: "As I mentioned before, I don't drive over the speed limit. When I have, I've caught myself, and I slow down right away."

#### **2.4.2 Broader Attitudes Towards Driving and Speeding**

Canadian drivers were presented with a range of statements pertaining to driving in general, speeding, as well as enforcement of speeding regulations. Many of these items were designed to facilitate the analysis of other questions, but they also shed considerable light on why Canadians speed.

Perhaps the most interesting finding is that one in two drivers agrees that people should keep pace with the traffic regardless of the speed limit. First, it is noteworthy that this view is much more likely to be held by those who frequently speed and that these same people are much more likely to agree that they are often angered by other drivers. The focus group findings suggest that quite a few drivers who do not normally speed (e.g., women, older and less frequent drivers) can often feel pressured to drive faster than they are comfortable doing in order to keep pace with traffic and avoid the wrath of aggressive drivers: "It happens quite a bit. You're driving and someone comes right up behind you. I'll speed up. Driving faster is less stressful than having an angry driver tailgating me."

The survey results, coupled with information obtained from the qualitative research, suggest that a significant number of people feel that governments should focus more of their resources and attention to stopping and fining drivers who greatly exceed the speed limit (i.e., the worst offenders). For example, about four in 10 feel that speed limits on highways are set too low and that speeding tickets have more to do with raising money for the police than with reducing speeding. This stands in contrast to the view held by a similar proportion that police do not enforce speeding limits enough and majority (65 per cent) disagreement with the idea of removing speed limits from highways. These views were often echoed in the focus groups where participants indicated strong support for "cracking down" on the worst speeders through tougher penalties (e.g., loss of licence), while at the same time recalling with dread how they had received a

speeding ticket (for driving at a speed they considered safe) or occasionally expressed frustration at speeding limits that they felt were set to low.

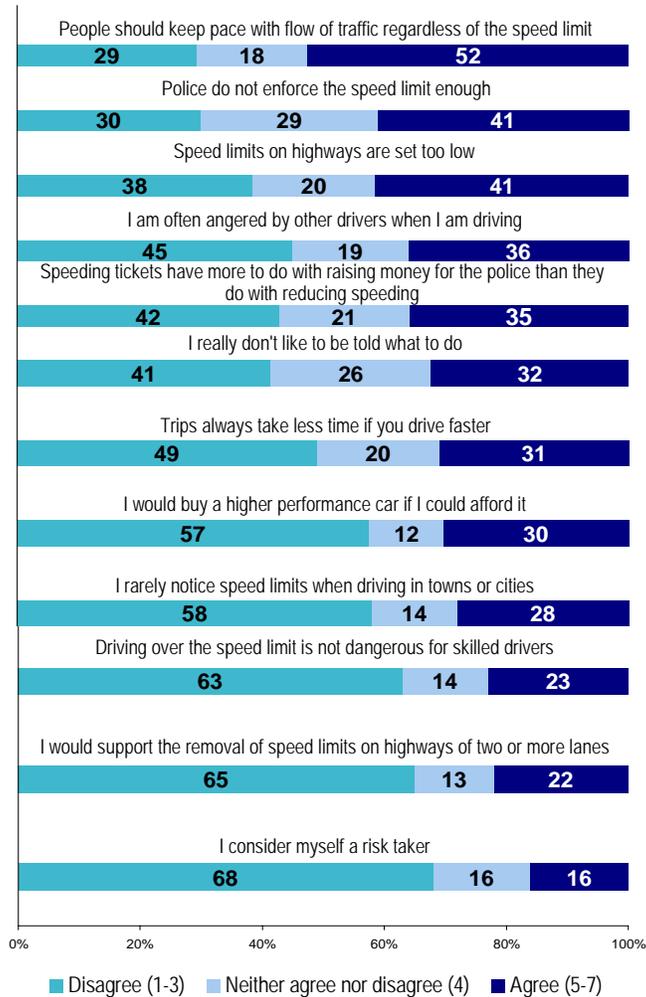
Notwithstanding these complaints, there was a general acceptance among participants that the enforcement of speed limits was necessary in order to protect the public: "No one likes getting speeding tickets. And driving 100 or even 110 km/h can feel really slow sometimes, but speeding causes hundreds of deaths each year, so if I speed, I have to be willing to take my medicine." This quote illustrates the elasticity found in the way people define speeding. Speeding from the Government's perspective is technical (i.e., over 100 kilometres in a 100 kilometres zone), while the participant's personal definition of speeding is more liberal and likely akin to dangerous driving.

Consistent with a number of the survey results, particularly the multivariate analysis discussed later in this report, the vast majority of the speeding scenarios described by the focus group participants involved conscious speeding. Those who indicated that their incidences of driving over the speed limit were inadvertent were likely to be people who, by their own account, rarely speed: "Oh sometimes I'll just be driving along and you just don't notice until you look down and see that you're over. I just take my foot off the gas." As discussed later, these participants also appeared more likely to support measures aimed at alerting drivers that they are traveling over the speed limit.

Overall, saving time/getting to one's destination faster were the main reasons given to account for the speeding behaviour of other drivers. It was also given as a main cause of personal speeding in both the survey and focus groups. But do people really believe that driving faster will save them time? The survey suggests that while quite a few drivers (31 per cent) unequivocally believe that the answer to this question is yes, the majority of drivers are either unsure or do not believe that driving faster always results in time savings. The focus groups results suggest that most Canadians' view of the speed-time relationship depends on driving circumstances. For example, many people said that they realized that driving faster in order to save time is often an illusion when driving in heavy traffic or within the city. Conversely, it was generally agreed that driving faster will cut time from longer trips involving mainly highway driving: "You might save a minute, if that, in the city during the day. In the middle of the night you might save some more time, but if I'm driving from Calgary to Edmonton, yes, I can definitely save a lot of time if I go faster."

## General Attitudes About Driving

"Please rate the degree to which you agree or disagree with the following statements."



## **2.5 PERCEIVED CONSEQUENCES OF SPEEDING**

Understanding how Canadian drivers perceive the consequences of speeding is crucial to the effective design of speed reduction strategies. The survey asked them to rate a number of potentially dangerous driving behaviours. Although viewed as at least “somewhat dangerous” by most drivers, driving over the speed limit (i.e., 120 kilometres in a 100 kilometres zone and 50 kilometres in a 40 kilometres zone) is seen as the least dangerous of nine behaviours examined, behind driving 80kms in a 100 kilometres zone). This finding is particularly surprising given that speeding is viewed as the number one cause of serious traffic collisions.

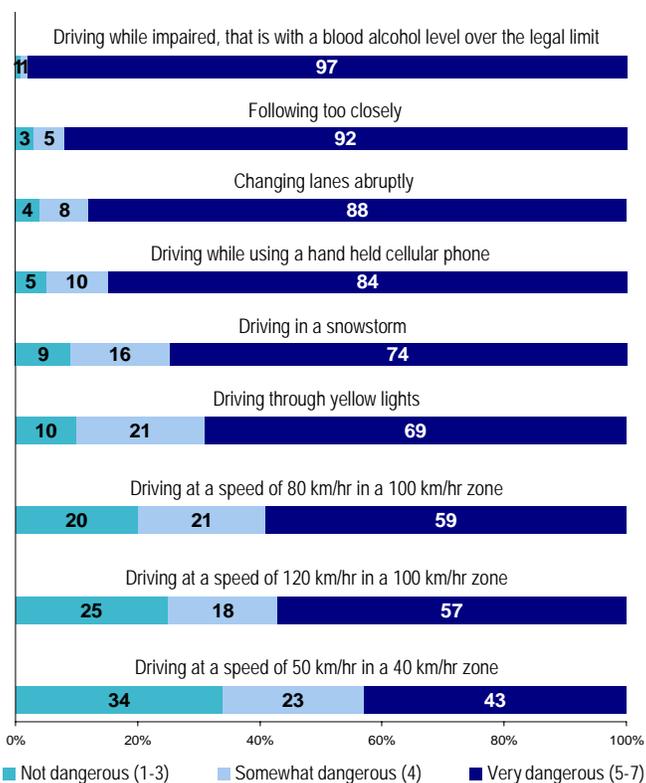
Nearly all (97 per cent) identify driving while impaired as the most dangerous driving situation and slightly fewer (92 per cent) say that following too closely is extremely dangerous. Abrupt lane changes, driving while using a hand held cell phone, and driving in a snowstorm round out the top five most dangerous driving situations. Also considered dangerous by roughly six in ten drivers is driving through yellow traffic lights and driving slower than the posted speed limit (80km/hr in a 100km/hr zone).

Generally speaking, women are more likely than men to identify most of these situations as extremely dangerous. The perceived danger level associated with most of these situations also increases with the age and experience of the driver.

It is interesting, although perhaps not unexpected to note that, the perceived danger of driving through yellow lights and speeding weakens as drivers’ frequency of speeding increases. The perceived danger associated with speeding (either 10 or 20km/hr over the posted limit) also weakens with higher levels of education and income. On the other hand, drivers in rural areas exhibit a little more caution and are more likely than those in urban areas to consider speeding dangerous. Finally, drivers who say they frequently drive over the speed limit are much less likely to view speeding as dangerous. For example, only 48 per cent of these people view driving 120 kilometres in a 100 kilometres zone as dangerous compared to 72 per cent of those who rarely exceed the posted limit.

## Dangerous Driving Situations

“Please tell me how dangerous you believe each of the following driving-related situations are?”



EKOS Research Associates Inc.

n=2002

2005 Speed Management Survey

The survey findings and qualitative results are very consistent. The latter also help to explain the paradox which is found in the fact that Canadians view speeding as the primary cause of serious accidents, while at the same time ranking two examples of speeding as the least dangerous of nine potentially dangerous driving situations.

As discussed earlier, the answer might lie in the realm of definitions. While a significant proportion views speeding at 120 kilometres in a 100 kilometres zone and 50 kilometres in a 40 kilometres zone as dangerous, the focus groups suggest that these speeds are at the high range of what many consider to be acceptable. That is, depending on conditions these speeds are not likely to be construed as endangering anyone, whereas the other examples are much more likely to be considered dangerous and their definitions much less relative or elastic.

## 2.6 MAIN DISADVANTAGES OF SPEEDING

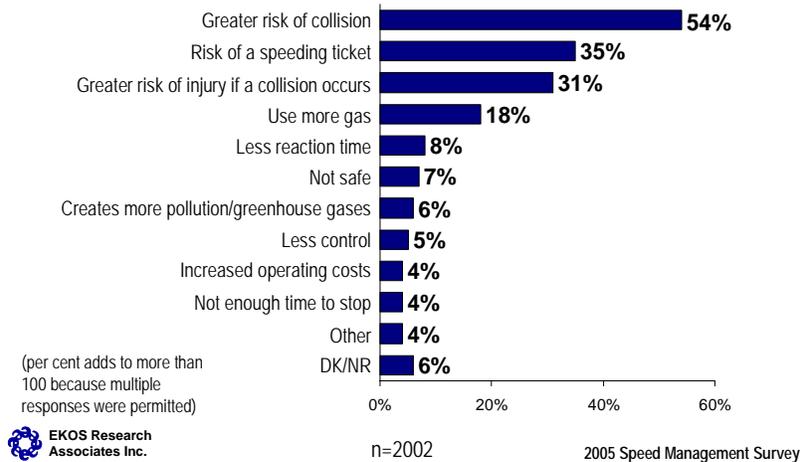
Consistent with other survey and qualitative findings, we find that, by a large margin, Canadian drivers believe that the main disadvantage of speeding is an increased risk of collision (mentioned by 54 per cent of survey respondents). This is followed by the greater risk of injury in the event of a collision and the risk of getting a speeding ticket (both cited by roughly one-third of drivers). It is also important to note that 24 per cent of drivers mentioned other disadvantages related to collisions, such as lessened reaction and stopping time. Potential economic and environmental disadvantages (e.g., increased fuel use, increased pollution/green house gases) were mentioned relatively few times (only 28 per cent of the total).

Some of the more notable demographic variations include:

- Men are more likely to cite increased fuel consumption as a disadvantage of speeding.
- The likelihood of citing the greater risk of collision or injury as the main disadvantage of speeding declines as the frequency of speeding increases.
- On the other hand, those who speed more frequently are more likely than others to say that speeding tickets are a main disadvantage.

### Main Disadvantages of Speeding

“What do you think are the main disadvantages of driving faster than the speed limit?”



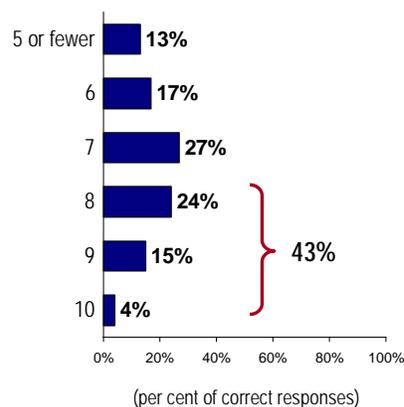
Issues of risk perception are complex. Some discussion of the relationship between increased speed and increased risk of accident and injury took place in the focus groups. It revealed that people appear to have greatly varying understandings and assumptions about this issue. At one end of the spectrum, we find those that view each increase in speed as having a corresponding influence on risk: "For every kilometre you drive faster, your reaction time and breaking time are affected. You have less time to react and you need more time to break. It's not debatable, it's physics." At the other end, we find drivers who feel that their risk of collision does not significantly increase until they reach relatively high speeds (depending on road and other conditions): "I think I can drive 135 even 140 if it's clear and there isn't much traffic before my risk of an accident goes up."

## 2.7 KNOWLEDGE ABOUT SPEEDING

Through a series of 10 true or false questions, Canadians were quizzed on their knowledge of speeding and its consequences. Generally speaking, Canadian drivers appear to be moderately knowledgeable, with about half responding correctly to eight out of ten questions. It is important to note that those who say that they frequently drive over the speed limit are significantly less knowledgeable than other drivers.

### Knowledge of Speeding

"Accuracy of responses to questions testing drivers' knowledge of speed and speeding."



EKOS Research Associates Inc.

n=1486; excludes those not responding to question 2005 Speed Management Survey

Most significantly, the individual question results show that, when the option of equivocation is removed, the vast majority of drivers associate speeding with increased risk of collision, injury and death.

Fully 86 per cent of Canadians understand that speeding increases fuel consumption, while roughly eight in ten drivers also believe that speeding tickets cause insurance rates to go up and that insurance companies give lower rates to people who have graduated from a driver's education course. Many

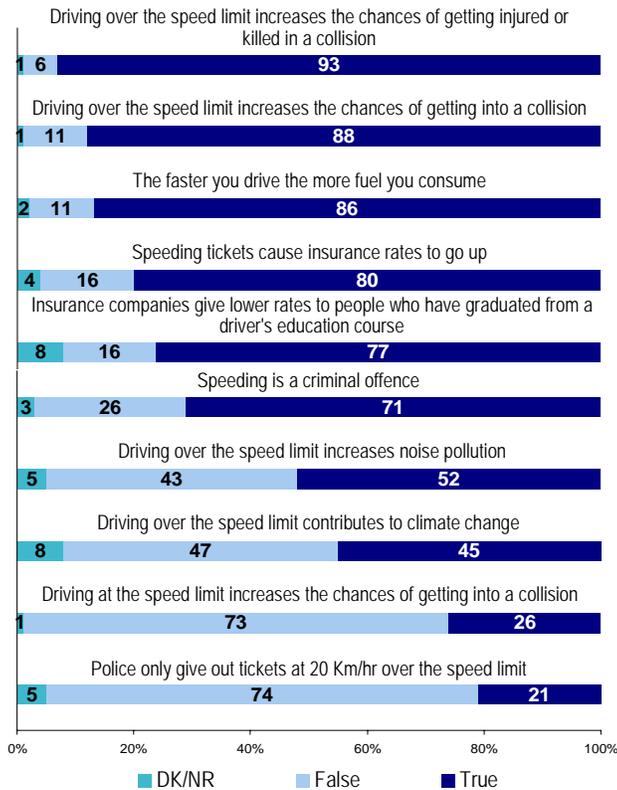
drivers are also correct in rejecting the statements that driving at the speed limit increases the chances of a collision and that the police only ticket drivers travelling more than 20km/hr over the speed limit – three-quarters of drivers correctly said that these statements are false.

Opinions and knowledge become more clouded regarding speeding and its contribution to noise pollution and climate change. While scientific evidence has demonstrated that speeding does indeed, increase noise pollution and contribute to climate change, only about half of drivers (52 and 45 per cent, respectively) actually believe this to be true.

Finally, many drivers incorrectly believe that speeding is a criminal offence - seven in ten (71 per cent) believe this to be true.

### Knowledge About Speeding

“Please tell me whether you think each statement is mainly true or false.”



## **2.8 SUPPORT FOR POTENTIAL SPEED REDUCTION STRATEGIES**

The study was designed to illicit driver reaction (i.e., good or bad idea) to a series of potential measures for reducing the incidence of speeding on Canadian roads. These measures can be grouped into four broad categories: 1) road design changes, 2) enforcement, 3) in-vehicle technology, and 4) public education and awareness.

The survey results suggest strongest support the wider use of electronic roadside signs that warn drivers if they are speeding. Many of the other strategies are also considered sound. These include increased police enforcement, in-vehicle electronic systems that indicate speeds over 110km/hr, "Black Box" technology to collect data for use in the investigation of accidents, public education and information campaigns, as well as photo radar and increased fines for speeding.

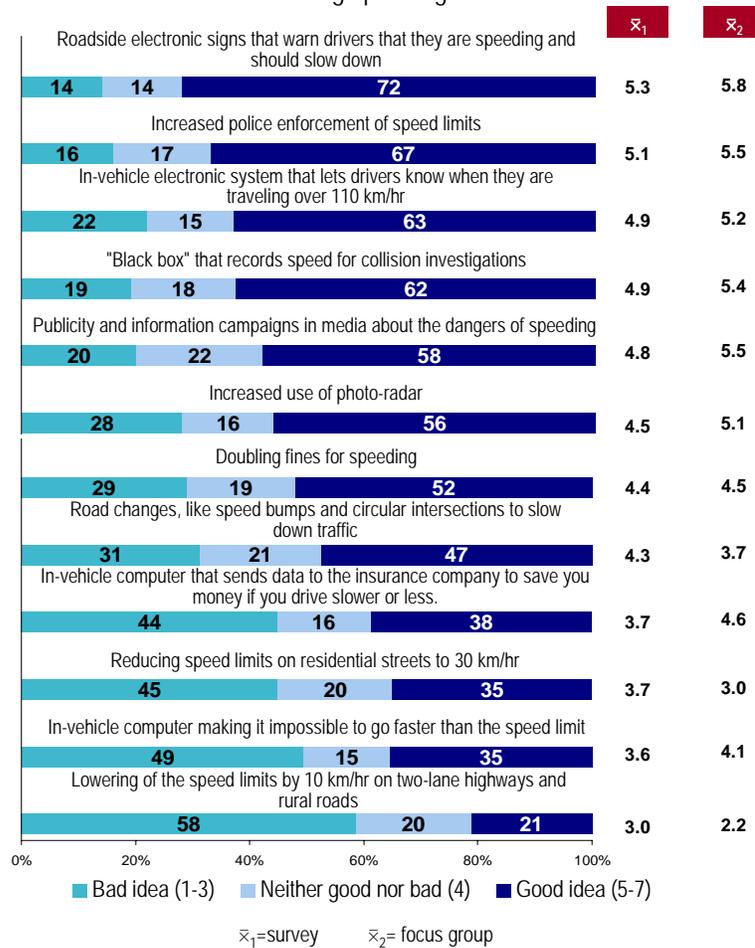
Mixed ratings were accorded to physical road changes (speed bumps, circular intersections), in-vehicle computer that sends data to insurance companies or limit a vehicle's ability to travel faster than the speed limit and speed reductions on residential streets. Drivers largely reject lowering speed limits by 10km/hr on two-lane highways and rural roads.

Generally speaking, female drivers are more likely than others to consider all of these strategies to be good ideas. As drivers age and experience increase, so too does their belief in the effectiveness of many of these strategies. This is especially true regarding roadside electronic signs, increased police enforcement, in-vehicle systems that alert drivers when they are speeding, publicity campaigns, increased fines and reducing speed limits on residential streets and two lane highways and rural roads.

Those who speed more frequently are also less likely to support publicity and information campaigns, the increased use of photo radar and in-vehicle systems that limit a vehicles ability to travel faster than the posted limits.

## Strategies for Reducing Speeding

"I would like to know how good of an idea you feel each one would be for reducing speeding."



n=2002

2005 Speed Management Survey

Before completing the rating exercise (or in some cases after), focus group participants were asked to comment on the need to institute additional measures aimed at curbing speeding in Canada. In other words, was speeding a serious enough problem that the state, either acting on its own and/or in concert with stakeholders (e.g., industry, advocacy/consumer groups), should take additional action? With a few exceptions, the answer was yes. Proponents argued that additional measures were warranted by the simple fact that speeding is a major cause of injury and death, particularly among the young, and has a variety of societal costs (e.g., loss of productivity) associated with it. Those who thought that current measures were sufficient, given the scope and depth of the problem, suggested that there was little the state could do to prevent the worst offenders from speeding, and that increased measures would only lead to a reduction of freedom among average drivers.

There was also a group of people, who, while they supported increased state action to curb speeding, reiterated their belief that the essence of the road safety challenge lay in reducing the incidence of dangerous driving, of which speeding was only one, albeit the most important, aspect: "I'm going to say yes, but I'd feel better if we were talking about doing something to deal with dangerous drivers. A guy talking on a cell phone is just as dangerous as a guy who is going 120, more so really." Other participants tended to agree when such a point was made. In short, people hoped that measures to reduce speeding would target the "bad apples".

Prior to rating and discussing the measures examined in the survey, participants were asked to suggest potential ways of reducing speeding that would be both effective and personally acceptable. Top of mind suggestions tended to revolve around the familiar. Enforcement measures dominated preferences based on a belief that financial disincentives are most effective: "You've got to hit people in the pocketbook." Others stressed a different aspect of enforcement, suggesting that it should be much easier for chronic speeders to lose their driving privileges: "Rich guys with fast cars don't care about speeding tickets or the cost of insurance. You've got to start taking people's licence away."

Increased public awareness and education campaigns were also popular top of mind suggestions. Some simply saw this as an inevitable part of any government-led effort to curb speeding, and one which might be more or less effective: "They have those now. I'm not sure how well they work on people who are the worst speeders." There were others who, for several reasons, were convinced of the long-term effectiveness of social marketing. First, they felt that the only real way to drastically reduce speeding was for it to become socially unacceptable. Second, they suggested that the most successful examples of attitudinal change that have taken place over the last 50 years were propelled by public awareness and education, as opposed to sanctions: "Look at smoking. Sure the price of cigarettes has gone up, but does anyone really think that that's why a lot less people smoke?"

In addition to increased enforcement and social marketing, a surprising number of people anticipate some of the in-vehicle technology ideas examined in the survey, as well as other potential measures, such as roadside signs.

The focus group results allow us to better understand how Canadians feel about the various speed reduction measures examined in the survey. The pros and cons of each measure, as articulated by the qualitative research participants, are presented below.

- ***Increased police enforcement.*** Seen by most as a bullwark against speeding, and as requisitely part of any broad campaign aimed at reducing its prevalence. Understood to be a major deterrent. Some concern that minor incidents of speeding could be indiscriminately included in an increased overall effort. Preference for a concerted effort aimed at worst offenders. Similarly, some concern that employing "highly paid and trained" police officers to "patrol roads" represents a waste of tax dollars: "I'm all for more cops, but I'd rather see them going after real criminals than sitting in a speed trap all day."

- **Roadside signs:** Seen as inexpensive and having little downside: "Can't hurt", although a few suggested that some people, particularly younger drivers who enjoy speeding, might also enjoy "seeing how high they can get the reading". Most knew that such signs existed in various places and some recalled how these had caused them to slow down in the past. Some felt that the best signs were those that provided drivers with a read-out of their speed coupled with an estimate of what the amount of their fine would be if they were stopped for speeding: "Oh yeah, that works for me when you see \$250.00 flash up there." The few critics of the idea felt that it would only be effective with unconscious/inattentive speeders and futile with the worst offenders: "That's only going to be good if you don't know how fast you're going. If you know that you're going 150 and it flashes 150 how is that going to get you to slow down? That's what the speedometer is for."
- **Road design modifications** (such as circulars, speed bumps and rumble strips): Seen as potentially good idea depending on how and where these are implemented. People are familiar with rumble stripes as these have kept some of them from straying too far off the centre of a lane and some have noticed the strips on off ramps: "It works on off ramps, you tend to sort of keep almost the same speed even though you're coming off the highway, so the bumps remind you to slow down." Participants often had polarized views of circulars. Those who were opposed said that they found them confusing and potentially dangerous: "I hate those, they scare me." Speed bumps were judge effective, but were also seen as having the potential to be a nuisance, depending on where they are built: "It makes sense around schools, but I certainly wouldn't want to see them everywhere."
- **Photo radar:** This technology elicits polarized responses. Most view it as highly effective and quite a few support it: "Let's face it, if you've got photo radar set up everywhere, you will definitely see less speeding. No question." Opponents often pointed to technical deficiencies/potential evidentiary issues: "What if someone else is driving your car?" In a number of cases, however, it seemed that some of the technical objections that were raised were masking people's desire to maintain their relative freedom to drive over the speed limit: "What if the picture is blurry? " Another objection lay in photo radar's real and/or symbolic infringement of civil liberties: "Yes it would be effective, but I don't want to live in a place where the government is watching our every move on cameras. It starts with that and then next thing you know you boss is installing one in your office."
- **The black box:** Well understood given their prominence in airline crash investigations. Seen as good idea in general, but weak as a deterrent to speeding because the potential sanction is too far removed from the action of speeding: "I just don't think that some kid who's driving like an idiot is going to tell himself: 'If I get into a serious accident, that box is going to get me into trouble. That kid doesn't think he'll ever crash.'"

- ***In-vehicle devices that alert drivers when they are driving over the speed limit:*** Reaction generally similar to road side signs. They are seen as having little down side, but also relatively limited effectiveness, particularly with respect to reducing the worst forms of speeding. Effectiveness thought to be limited to unconscious speeders. Many imagined that the sound alerting speeding drivers could be very annoying and likely to be disabled by those most likely to speed. Good idea to offer this as optional on vehicles for those who want it.
- ***In-vehicle computer that sends information to insurance companies:*** Like photo radar, the insurance rate data collection technology garners polarized responses based on the level of trust that people have in insurance companies. Some fear that in time, the technology could be used to the financial detriment of drivers: "At first it will be voluntary, but then they will say: 'If you don't get this, we will raise your rates.'" "I don't trust insurance companies." Others saw this technology, and the potential for a cut in their auto insurance premium, as akin to receiving a reduced insurance premium rate in return for having an alarm system in one's home. Many proponents also like the idea of rewarding good driving behavior: "I don't speed and I think that I should get something for that. I think it's a great idea, sign me up."
- ***The in-vehicle device making it more difficult to go faster than the speed limit:*** In most of the groups, this was assumed to be a form of governor rather than a speed feedback mechanism. People had difficulty imagining how a governor would work (e.g., adjusting to different speed limits). Technical issues aside, most people continued to reject the idea. Some simply recoiled at the notion of stringent speed control, but most of those who were generally against the concept put forward concerns about being prevented from driving fast in response to a medical or other emergency: "What if I have to drive someone to the hospital?" This was a particular concern in Weyburn where a few participants explained how they had driven people to the hospital in Regina to receive emergency medical treatment: "Sure it happens. It happened to three out of eight here." In the end, the measure was seen as fine for those who want it as *optional* equipment on their car.
- ***Public education and awareness:*** As noted above, this approach was seen as a natural part of any government attempt to curb speeding. While some felt that such campaigns mainly preach to the converted, others believe in the effectiveness of social marketing based on changes they have seen with respect to seatbelts, drinking and driving and smoking.
- ***Reducing speed limits:*** Consistent with the survey results, the idea of reducing speed limits was often rejected out of hand by focus group participants. They felt that this would only serve to annoy good drivers, while failing to reduce speeding among society's worst offenders: "All that will do is make everyone mad." Indeed, participants were more likely to suggest raising speed limits in certain areas as a way of reducing speeding.

## **2.9 PERCEPTIONS AND INTEREST IN THE ENVIRONMENTAL IMPACTS OF SPEEDING**

Research has consistently demonstrated the impact that vehicles and transportation have on the environment. Canada's GHG Inventory<sup>3</sup> reports that, in 2002, Canada produced 731Mt of GHG, a 2.1 per cent increase in total emissions from 2001. In fact, between 1990 (which is the base year for calculations under the Kyoto Accord) and 2002, Canada's GHG emissions have increased 20.1 per cent. Over this 12-year period, vehicles constitute the second largest contributor to the overall emissions increase – representing 22.7 per cent of the overall total. Moreover, research has also demonstrated that travelling at speeds in excess of 90km/hr reduces vehicle fuel efficiency, thereby increasing GHG emissions.

As shown elsewhere in this report, the negative impacts of speeding are first and foremost associated with an increase risk of collision and injury. Negative economic consequences (e.g., increased fuel costs, speeding tickets, higher insurance rates) occupy a second tier, while environmental impacts form a third set of concerns.

However, other results of this study suggest that Canadians are concerned about the environment and appear willing to take personal action to reduce the negative impact that some of their driving habits have on the environment. The research also reveals that, while awareness of the negative impact that vehicles have on the environment is very high, the negative impact that speeding has on the environment might only be top of mind and apparent to relatively few drivers.

Public opinion research conducted by EKOS over the years has shown that Canadians view the environment as a top priority for government and that a majority support Canadian participation in the Kyoto Accord. In this study, we find almost one in two drivers saying that they are much more environmentally concerned than people they know, compared to only one in five holding the opposite view. It is interesting that those who say they speed frequently are significantly less likely to say that they are more concerned about the environment.

Focus group findings corroborate the survey results that suggest that the environmental impacts of speeding are not top-of-mind for most. Yet they also point to the possibility that most people might be able to see a connection between speeding and environmental degradation, with increased fuel consumption serving as linchpin: "It's not the first thing I think of, but yeah, if you drive faster you burn more fuel and if you burn more fuel you emit for exhaust in the air."

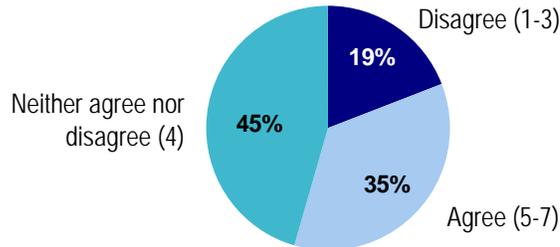
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<sup>3</sup> Canada's Greenhouse Gas Inventory, 2002, Environment Canada ([www.ec.gc.ca](http://www.ec.gc.ca))

## Care for the Environment

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“Compared to other people I know I care much more about the environment than they do”



 EKOS Research Associates Inc.

n=2002

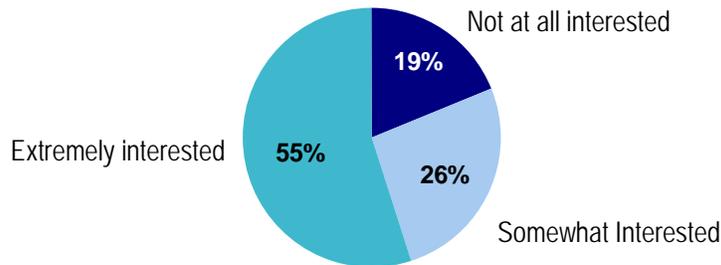
2005 Speed Management Survey

Canadian drivers are generally interested in receiving information on how to reduce the impact of speeding on the environment, with eight in 10 professing moderate to very high interest. Female drivers and those in Quebec exhibit a greater interest than others in learning about ways of reducing the impact of speeding on the environment. It is important to note that interest in this information increases with one's level of education.

## Interest in Information

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“Please tell me how interested you are in information on ways of reducing the impact that speeding has on the environment?”



 EKOS Research Associates Inc.

n=2002

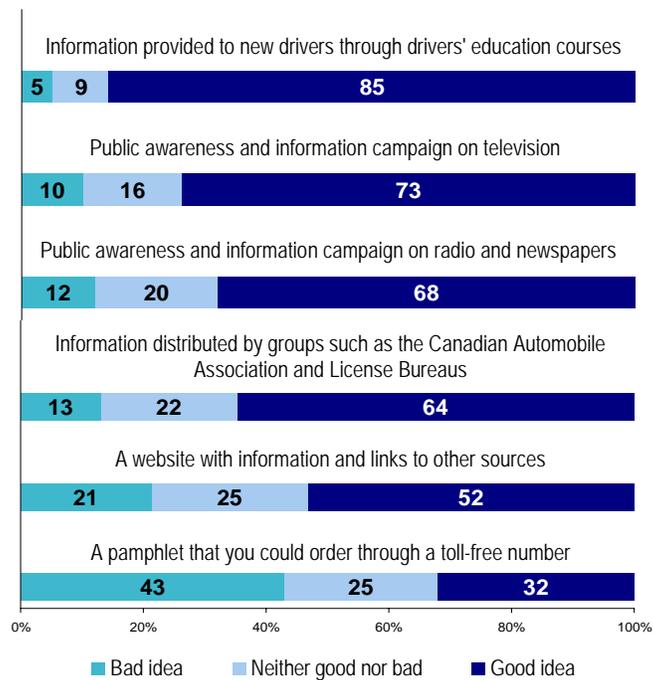
2005 Speed Management Survey

Distribution of information through drivers' education courses and public information campaigns on television are generally thought to be the most effective means of communicating the environmental impact of speeding – cited by more than three-quarters of drivers surveyed. Awareness campaigns produced through radio and newspapers or through groups such as the Canadian Automobile Association (CAA) are also seen as good ideas (by about two in three), but less so than television campaigns. Roughly half of drivers think that this information is best communicated via a website, while mail order pamphlets are generally considered to be the least effective means of communication.

Drivers in Quebec are more likely than those in other areas to agree with using the CAA and License Bureaus to distribute this type of information. Support for this method also increases with driver age and experience, but declines as frequency of speeding increases.

### Communicating the Environmental Impacts of Speeding

Which of the following do you think are good ways to communicate to the public about the environmental impacts of speeding?"



## 2.10 COMMUNICATIONS

The final segment of the focus groups was devoted to a discussion of potential approaches for communicating with Canadians in an effort to reduce the prevalence of speeding on roads.

Generally, people naturally gravitated to the notion of a public awareness and education campaigns based on both emotional (e.g., shocking images about the dangers of speeding) and rational/informational (e.g., increased costs through fuel consumption) messaging: "I think you have to do both, some people will react to the blood and guts and others are more receptive to logic."

Similarly, participants felt that the three main categories of negative impacts of speeding (i.e., health, economic, environmental) should be conveyed, albeit with difference emphasis:

- **Health:** Centers on the increased risk of collisions, injury, and death associated with speeding. Mainly shocking and emotional messaging recommended, in the same vein as the *Speed Kills* campaign. Seen as most likely to influence younger drivers. Also need to provide education and information about the relationship between increased speed and risk: "Some people here said that driving 120kms in a 100kms zone doesn't increase your risk. Does it? Does going 20 per cent faster increase your chances of getting into an accident by 20 per cent?"
- **Economic/Financial:** Held significant appeal to a number of participants, particularly males (the survey results corroborate this). Most promising approach seen as providing drivers with an indication of the actual cost of speeding, particularly in the area of fuel consumption: "Something like: 'If the average driver exceeds the speed limit just 10 per cent of the time, that translates into this many dollars in extra costs.'" Indeed, a number of participants emphasized the potential effectiveness of conveying information through the use of specific dollar amounts, reasoning that people such as themselves understand the relationship between speeding and fuel consumption, but have a poor grasp of actual costs: "I don't know if it's \$50.00 or \$500.00." Many participants indicated that \$500.00 in savings represented a type of "magic number" that could induce a change in their driving behavior.
- **Environmental:** Similar approach to conveying financial impact messaging. Mainly rational and informational, but with some room for emotion. Seen as less relevant, but as a nice compliment to the financial messages given the perceived role of increased fuel consumption as bridge: "I picture something like: 'Save money and save the environment too.'" Here too, a number of participants said that it would be helpful for them to have some idea of the environmental impact that speeding actually has; expressed in the destruction of trees or some other form that the average person could easily grasp. This suggestion is particularly relevant given the tendency among participants to assume that impacts on an individual were very minor: "I think with new technology the impact on the environment would be negligible."

Suggestions with respect to target audience (e.g., young males, everyone), and tools/vehicles (e.g., radio, television) were predictable. Radio advertising was assumed to be particularly effective given that many people listen to radio while they drive. Quite a few participants, however, placed emphasis on the importance of driver education and refresher training, recommending that more emphasis should be placed on sensitizing people to the hazards of speeding.

## **2.11 TYPOLOGY OF DRIVERS**

### **2.11.1 Background**

In order to add texture to the survey results, multivariate analysis (cluster analysis) was undertaken with selected findings from the survey. Cluster analysis is a multivariate statistical procedure aimed at identifying relatively homogeneous groups or clusters. Forming clusters of individuals and studying the characteristics that they share, as well as those in which they differ, provides valuable insights into the data collected.

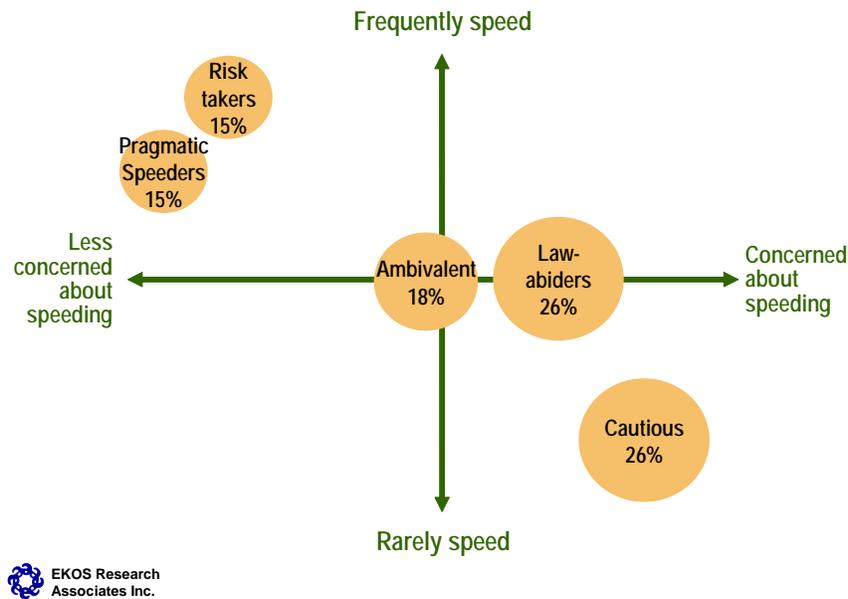
The segments were created using a battery of attitudinal questions examining views on speeding and driving in general, as well as more general attitudes (e.g., risk taker, don't like being told what to do). The clusters created were then cross-tabulated by a number of variables (e.g., demographics, knowledge of speeding, support for ideas to reduce speeding) in order to gain a better understanding of each of these clusters.

## **2.12 FINDINGS**

The results of this cluster analysis reveal that Canadians can be grouped into five segments based on their views of speeding and driving in general: the *Cautious*, the *Law-Abiders*, the *Ambivalent*, the *Pragmatic Speeders*, and the *Risk Takers*.

The five segments are displayed graphically in Exhibit 1 (on the following page) along two dimensions: frequency of speeding and concern about speeding (please note segments are displayed relatively rather than absolutely across both these dimensions). These findings are described in more detail below.

## Exhibit 1



**Cautious** (26 per cent of the Canadian public): This group is least likely to indicate that they personally drive over the speed limit. When they do exceed the limit, they do so at a lower average speed than drivers belonging to the other four segments.

The Cautious also have the most negative views of speeding. For example, they strongly disagree that people should keep pace with the flow of traffic regardless of the speed limit, disagree that speed limits on highways are set too low. Moreover, they are least likely to agree that driving over the speed limit is not dangerous for skilled drivers, or that trips take less time if one drives faster. They also exhibit different attitudes across the more general, psychographic, indicators tested: they are least likely to consider themselves risk takers, or to indicate that they don't like to be told what to do.

They tend to be most supportive of all ideas aimed at reducing speeding (e.g., doubling fines for speeding, lowering speed limits, information campaigns about dangers of speeding). They also express greatest concern about the dangerous driver-related situations tested (e.g., driving 120km/hr in a 100km/hr zone, following too closely, driving in a snowstorm).

This group consists of drivers who have had their drivers' license for a long period of time, and are most likely to have never received a speeding ticket in their life. They are also the group that has driven the least amount in the previous year.

This group is over-represented by Atlantic Province and Alberta residents, rural residents, women, older Canadians, and lower income earners.

**Law-Abiders** (26 per cent of the Canadian public): This group is also less likely than other groups to indicate that they drive over the speed limit. What primarily differentiates this group from other groups is their stronger agreement with the questions that involve law enforcement. They tend to disagree that speeding tickets have more to do with raising money for the police than they do with reducing speeding, or that they rarely notice speed limits when driving in towns or cities. They are least likely to support the removal of speed limits on highways with two or more lanes, and they do not agree with the idea that speed limits on highway are too low. Of particular note, they are by far the most likely to agree that police do not enforce the speed limit enough.

This group expresses strong concern about all of the dangerous driver-related situations tested, and strongly support all of the ideas aimed at reducing speeding.

Interestingly they are most likely to disagree they would buy a higher performance car if they could afford it, and disagree that they are risk takers.

This group is over-represented by older Canadians, those with university education, and those who have been driving for a long period of time.

**Ambivalent** (18 per cent of the Canadian public): This group tends to fall in the middle of the pack in terms of frequency of speeding (although they are not particularly inclined to speed). This group also tends to fall in the middle of the pack across many of the speeding attitudes tested (e.g., speeding tickets have more to do with raising money for the police than they do with reducing speeding; they are often angered by other drivers when driving, police do not enforce the speed limit enough).

This group tends to express somewhat contradictory viewpoints across a number of the issues tested. They demonstrate relatively lower concern about the danger associated with each of the driver-related situations tested (including speeding situations). At the same time, they are second only to the Cautious in terms of support for ideas aimed at reducing speeding.

The Ambivalent group assigns highest importance to safety as a consideration when deciding what type of car to buy. At the same time, they are most likely to assign importance to performance, speed and power features when buying a new car, and are the most likely to agree that they would buy a higher performance car if they could afford it.

As further evidence of their contradictory viewpoints, this group tends to disagree with the idea that driving over the speed limit is not dangerous for skilled drivers, and expresses little support for the removal of speed limits on highway with two or more lanes. However, they also tend to agree that trips take less time if you drive faster, and (other than the Risk Takers) are most likely to say they rarely notice speed limits when driving in towns or cities.

This group tends to consist of relatively inexperienced drivers, however, they are most likely to never have had a speeding ticket. The Ambivalent group is over-represented in residents of Alberta and the Prairies, those under 25 years of age, and those with college education.

**Pragmatic Speeders** (15 per cent of the Canadian public): Other than the Risk-Takers, they are most likely to indicate that they frequently drive over the speed limit (and, also like the Risk-Takers, are more likely to exceed the speed limit by the greatest number of kilometres). This group tends to strongly agree that people should keep pace with the flow of traffic regardless of the speed limit, and that speed limits are set too low. They are also most likely to disagree with the idea that police do not enforce the speed limit enough. Moreover they strongly believe that driving over the speed limit is not dangerous for skilled drivers, and support the removal of speed limits on highways of two or more lanes.

This group is least supportive of all ideas to reduce speed, and express little concern about the dangers associated with the driver-related situations tested. They are also least likely to feel that driving over the speed limit increases the chance of getting into a collision, or increases the chance of getting injured or killed in a collision.

The Pragmatic Speeders drive the greatest number of kilometres per year and they (along with the Risk Takers) are more likely than their counterparts to have received speeding tickets.

However, unlike the Risk Takers, their speeding behaviour does not appear to be driven by emotional issues. They do not consider themselves risk takers, nor do other drivers anger them. Moreover, this group does not tend to agree with the idea that they do not like being told what to do, and most say they would not buy a higher performance car even if they could afford it.

This group is over-represented by men, Ontario residents, those between 25 and 44 years of age, those with university education, and higher income earners.

**Risk Takers** (15 per cent of the Canadian public): This group is most likely to say that they frequently drive over the speed limit (and are most likely to exceed the speed limit by the greatest number of kilometres). For example, they are three times as likely as other drivers to travel at an average speed of 130 kilometres when they exceed the posted limit on highways.

Attitudinally, they are most likely to agree that driving over the speed limit is not dangerous for skilled drivers, and to support the removal of speed limits on highways of two or more lanes. They are also most likely to agree that speed limits on highway are set too low, and that trips always take less time if you drive faster.

This group offers little support for any of the ideas tested to reduce speeding, and express little concern about the dangers associated with the driver-related situations tested. Other than the Pragmatic Speeders, they are least likely to feel that driving over the speed limit increases the chance of getting into a collision, or increases the chance of getting injured or killed in a collision.

What differentiates this group from the Pragmatic Speeders is their reasons for speeding. The Risk Takers group appears to speed for more emotional/thrill-seeking reasons than do the Pragmatic Speeders. They are most likely to agree that they do not like to be told what to do, and that that they consider themselves to be a risk taker. Moreover this group is most likely to indicate they speed because they like the feeling of driving fast, and that they are angered by other drivers when they drive. Interestingly this group also tends to agree with idea that police do not enforce the speed limit enough.

This group is most likely to assign high importance to the performance, power, and speed of a vehicle when deciding what type of car to buy, and strongly agree that they would buy a higher performance car if they could afford it.

While not having had a licence for a particularly long time, this group that has the highest number of speeding tickets.

This group is over-represented by men, urban residents, those under 25 years of age, and those with less educational attainment.

### **2.13 IMPLICATIONS**

The results of the cluster analysis suggest that Canadians can be grouped into five distinct cohorts based on their attitudes to speeding. Two of these groups (comprising about 50 per cent of the population) indicate they do not speed, although they have different reasons for obeying speed limits: one group (the Cautious) obeys speed limits because of an inherent cautious attitude to life; the other group (the Law Abiders) does not speed because they feel that laws should be respected

The segmentation also suggests that there are two groups which tend to speed (comprising about 30 per cent of the population), however their reasons for doing so seem to be quite different. One group (the Risk-Takers) seems to want to speed because they enjoy taking risks and defying authority. The other group (the Pragmatic Speeders) speeds for more practical reasons (i.e., they want to get to their destination as quickly as possible).

The fifth group identified by the cluster analysis (comprising about 18 per cent of Canadians) expresses more mixed/contradictory views about speeding (although they do not seem to be particularly inclined to speed).

Consequently, communications efforts should focus on trying to change the attitudes and behaviour of the Risk-Takers and the Pragmatic Speeders. Given that their reasons for speeding are very different (and that these groups have very different demographic characteristics) communications efforts should be tailored for each of these audiences. However, it is instructive to note that both these groups tend to diminish

the increased probability of collisions, injuries or death as a result of driving over the speed limit, suggesting that this could be a common theme for these efforts.

## **2.14 DETERMINING THE PRIMARY PREDICTORS OF SPEEDING**

### **2.14.1 Regression Analysis**

In order to add texture to the survey results, multivariate analysis (multiple linear regression) was undertaken with selected findings from the survey. The main purpose of the regression analysis was to help determine the primary predictors of speeding. Consequently, the dependent variable chosen for this analysis was question 9 (How often would you say you personally drive over speed limits?).

Two models were tested using this question as the dependent variable. Model 1 included questions 13A to 13G (Importance of a range of reasons to speed in the past) as the independent (predictor) variables. Model 2 also included questions 13A to 13G as independent variables, but also incorporated demographic questions (e.g., age, gender, income, educational attainment) as independent variables. The results of these regression analyses are described below.

#### **MODEL 1 - Question 9 (Frequency of Speeding) as Dependent Variable; Questions 13A to 13G (Reasons for Speeding) as Independent Variables**

The results of the regression analysis based on Model 1 suggest that a reasonable proportion of the variability in the dependent variable (23 per cent) is explained by the independent variables in this model. The regression analysis based on Model 1 suggests that six of the seven reasons for speeding tested are predictors of speeding behaviour:

- Because you believe speed limits are set too low
- Because you enjoy the feeling of driving fast
- Because you don't want to be late
- Because you don't think you will be stopped by the police
- Because you don't know the speed limit
- Because time is more important than speed

However, among these six indicators, the regression analysis indicates that the belief that speed limits are set too low is the best predictor, followed by the enjoyment associated with driving fast. Not wanting to be late, the belief that you won't be stopped by police, a lack of awareness about the speed limit, and the idea that time is more important than speed are significant, but weaker, predictors of speeding behaviour. The only reason for speeding tested that was not significantly related to speeding behaviour was the idea of not paying attention to one's speed.

## **MODEL 2 - Question 9 (Frequency of Speeding) as Dependent Variable; Questions 13A to 13G (Reasons for Speeding) and Demographics (E.g., Age, Gender, Educational Attainment) as Independent Variables**

The results of the regression analysis based on Model 2 suggest that a somewhat higher proportion of the variability in the dependent variable (25 per cent) is explained by the independent variables in this model.

The regression analysis based on Model 2 indicates that the six reasons for speeding identified in Model 1 are also identified by Model 2 (i.e., because you believe speed limits are set too low, because you enjoy the feeling of driving fast, because you don't want to be late, because you don't think you will be stopped by the police, because you don't know the speed limit, because time is more important than speed).

As was found in Model 1, Model 2 suggests that, among the indicators identified in the regression analysis, the belief that speed limits are set too low is the best predictor, followed by the enjoyment associated with driving fast.

Age is the most significant predictor of speeding behaviour among the demographics tested (younger Canadians are more likely to say they speed than are their older counterparts).

Again, not wanting to be late, the belief that you won't be stopped by police, a lack of awareness about the speed limit, and the idea that time is more important than speed are significant, but weaker, predictors of speeding behaviour (again, the only reason that was not significantly related to speeding behaviour was the idea of not paying attention to one's speed).

### **2.14.2 Conclusions**

The results of the regression analysis reveal that both models tested explain a reasonable proportion of the variability in the dependent variable (23 per cent for Model 1, and 25 per cent for Model 2).

The findings from both of these models also suggest that the belief that speed limits are set too low has the strongest relationship with speeding behaviour (among the issues tested), followed by the enjoyment associated with driving fast.

These findings suggest that the decision to speed is very much a conscious decision – a lack of knowledge about speed limits, or not paying attention to one's speed are not as strongly related to speeding behaviour as the desire to drive fast and a belief that speed limits should be increased.

Consequently, communications messages should be focused on changing beliefs and behaviour rather than just raising the awareness of drivers about paying attention to speed limits/paying attention to one's speed.

### 3. Conclusions

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Canadians view speeding as dangerous, and they associate it with increased risk of collision, injury and death. Economic impacts (e.g., increased fuel consumption) are also apparent to most, while potential environmental consequences are both more difficult to grasp and seen as less significant.

Despite their awareness of the negative impacts of speeding, most people drive over the speed limit at least occasionally, particularly on highways. They often speed to get to where they are going faster, although many realize that this can be illusory. Believing that speed limits are set too low constitutes another major justification for speeding and is identified as a significant explanatory factor by the regression analysis. Only one in five drivers say that enjoying the feeling associated with driving fast has been a reason for them to speed. However, both the qualitative research and the regression analysis suggest that this factor is linked to the more extreme instances of speeding. Inattention in contrast, is often given as a reason for speeding but the research suggests that it is related to relatively benign forms of speeding.

The results of the cluster analysis group Canadians into five distinct cohorts, with about 30 per cent of drivers falling into two groups of people characterized by their tendency to 1) speeding more than other drivers, and 2) have less negative attitudes to speeding and its potential consequences. Drivers belonging to these two groups also travel at higher speed when they do drive over the limit. One group (the Risk-Takers) seems to want to speed because they enjoy taking risks and defying authority. In short, they enjoy it and they do it on purpose. The second group, Pragmatic Speeders, drive over the speed limit for more practical reasons: they want to get to their destination as quickly as possible. They are also conscious speeders.

Canadian drivers appear to speed despite their awareness of potential negative consequences because most are of the view that the speed (over the limit) they travel at does not significantly increase their risk of accident, injury or death, or that if it does, the overall risk threshold continues to be very low. According to the survey, the average speeding amount is 12 kilometres over the limit on highways, 10 kilometres on two lane highways/country roads and 7 kilometres on residential streets. From a definitional standpoint, many people believe that while they might be "technically speeding"; they are not driving in a way that endangers either themselves or others.

The definition of speeding is elastic and tends to be defined in one of three ways: technical (anything amount over the limit), relative (depends on circumstances but can safely exceed limit), or absolute (exceed limit by 10 to 20 per cent). Many people likely see a discrepancy between the government's definition of speeding, which is assumed to be technical/conservative and their own definition, which is likely to be more liberal. This perception is important to understanding public support for government-led measures aimed at reducing speeding. In fact, it may be that in the eyes of many, the overarching road safety problem is considered to be dangerous/reckless driving; a broad category that includes many elements, including inattention (e.g. cell phones), aggressive driving (e.g., weaving in and out of traffic), poor driving (e.g., lack of knowledge or skills), and, to the largest extent, speeding.

Notwithstanding definitional issues and potential debate on the conceptual primacy of dangerous driving over speeding, there appears to be significant support for measures aimed at curbing speeding. The results show strongest support for the wider use of electronic roadside signs that warn drivers if they are speeding, as well as in-vehicle electronic systems that indicate speeds over 110 km/hr (with the qualitative research suggesting an assumption

on the part of many that such equipment would be optional or under the control of the driver). Both these approaches are seen as relatively innocuous and inexpensive, but also more likely to be effective with inattentive speeders as opposed to the more conscious and extreme speeders (i.e., the Risk-Takers and Pragmatic Speeders).

Many of the other speed reduction strategies are also considered sound. These include increased police enforcement and "Black Box" technology to collect data for use in the investigation of accidents. Although with respect to the latter, the qualitative research suggests its support is based more on its perceived worth as an accident investigation tool than its deterrent potential.

There is significant support for a public awareness and education campaign aimed at reducing speeding, although it is worth reiterating that the qualitative research suggests that there might be greater support for an integrated campaign aimed at reducing all forms of dangerous driving, including speeding. To Canadian drivers enforcement appears to be the most effective way to curb speeding in the immediate term, but to a significant group of drivers social marketing represents the best hope for a cultural change that would see speeding (and other dangerous behaviours) become socially unacceptable, and as a result, relatively rare.

The environmental impacts of speeding tend not to be top of mind, this is clear from a number of indicators (e.g., only 45 per cent agrees that driving over the speed limit contributes to climate change). Most people are, however, able to make the link with some prompting given their understanding of the positive correlation between speed and fuel consumption. This relationship appears crucial from a communications standpoint, in that messages about environmental impacts appear much more likely to be understood if they are tied closely to the more significant and resonant messaging about the financial impacts of speeding, particularly with respect to fuel consumption.

Suggestions for messaging revolve around the three main categories of negative impacts of speeding (i.e., health, economic, environmental), conveyed by means of a combination of emotional and logical appeals. In terms of specific messaging, one of the key knowledge gaps appears to centre on the relationship between increased speed and risk (while holding contextual variables such as road surface conditions constant): How much does one's risk increase when they drive 120kms in a 100kms zone? What about 140kms? From an environmental standpoint, the key question is: What is the magnitude of the impact that the average Canadian driver (i.e., based on typical driving distances, types and speeds) has on the environment? How many trees is one "killing"?

The multivariate analysis suggests that communications efforts should focus on trying to change the attitudes and behaviour of the Risk-Takers and the Pragmatic Speeders because they pose the greatest danger. Given that their reasons for speeding are very different (and that these groups have very demographic characteristics) communications efforts should be tailored for each of these audiences. However, it is instructive to note that both these groups tend to diminish the increased probability of collisions, injuries or death as a result of driving over the speed limit, suggesting that this could be a common re-enforcing theme for these efforts.