



ROAD SAFETY

It matters to everyone.

PUBLIC CONSULTATION
REFERENCE DOCUMENT



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Original text in French.



PUBLIC CONSULTATION

**Road safety:
It matters to everyone.**

MESSAGE FROM THE MINISTER OF TRANSPORT, SUSTAINABLE MOBILITY AND TRANSPORT ELECTRIFICATION



The Québec government proclaimed 2007 as Road Safety Year and since then road safety has become one of the main concerns of Québécois.

While Québec has made significant progress in reducing the number of traffic accident victims, statistics for 2015 remind us that we cannot take this progress for granted and that we need to explore new avenues that will allow us to continue to improve the road safety record.

The timing therefore could not be better for Québec's first-ever public consultation on road safety, and I invite everyone to take part. The time has come for us to rally together in order to make our roads as safe as possible.

I have the firm conviction that this exercise will provide us with new tools and ideas that will allow us to go further and bring us closer to having a road safety record that ranks among the best in the world. The public consultation will also serve to bring road safety closer to home for everyone.

We look forward to hearing from as many participants as possible! In Québec, road safety matters to everyone.

A handwritten signature in black ink, appearing to read 'C. Boivin'.

MESSAGES FROM THE SPOKESPERSONS



CLAUDIA DI IORIO

I take great pride in having this opportunity to contribute to finding new ways for Québec to advance and come closer to having a road safety record that ranks among the best in the world. Having myself been a victim of a serious car accident in which drinking and driving played a role, I intend to do my best to promote this public consultation and stimulate interesting discussions on road safety.

Claudia Di Iorio



ALAIN GELLY

Road safety has always been a passion of mine. Whether as a police officer, a columnist or now as a teacher of police technology, I have always tried to promote road safety. I therefore intend to invest myself fully in this public consultation in order to encourage a high level of participation and the sharing of innovative ideas. I am very proud to be a part of this exercise that aims, among other things, to bring road safety closer to home for all Québécois.

Alain Gelly

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INTRODUCTION



Road safety is a social issue and a subject of public interest. According to a survey conducted in November 2014, it was the number two concern for Québécois.¹

Road safety is also a major public health issue. The direct and indirect costs associated with traffic accidents are high—approximately \$4 billion a year.

Road safety depends on the efforts of all road users. The relevance of holding an extensive public consultation on the subject is therefore clear. This first-ever consultation on road safety in Québec will allow everybody—the general public and other road safety stakeholders—to propose strategies for improving the road safety record that may be added to those that already exist. The consultation also aims to find out what people in Québec think about road safety best practices used elsewhere in the world.

The goal of this document is to provide the general public and all other road safety stakeholders with material to fuel their thinking on various road safety topics of interest that are likely to generate suggestions and comments. These topics are: road infrastructure, fitness to drive (alcohol, drugs, fatigue), driver distraction, young drivers, cyclists, pedestrians, motorcyclists, health of drivers, vehicle security, heavy vehicles, speeding, seat belts, child safety seats and insurance contributions.

This document also gives some background on the context leading up to the public consultation, as well as its objectives and the approach that has been adopted.

¹ SOM. (2015). *Attentes et satisfaction des Québécois en matière de sécurité routière : rapport final présenté à la Société de l'assurance automobile du Québec*. Québec, QC.

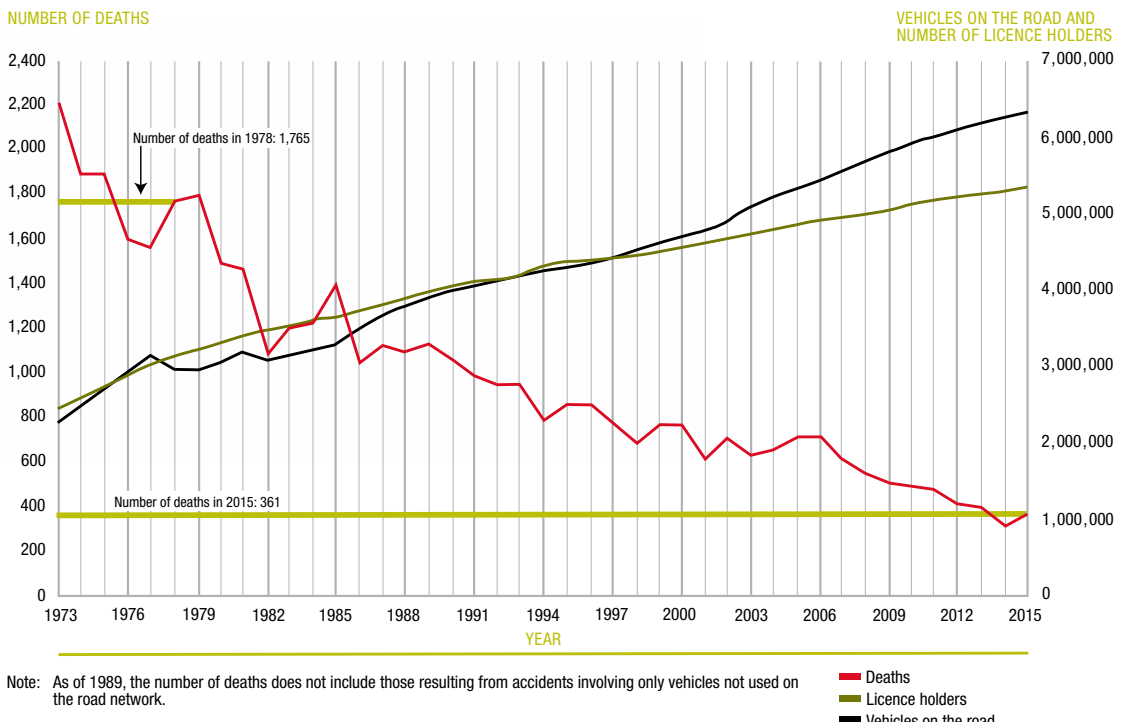
**GENERAL
INFORMATION**

BACKGROUND

ROAD SAFETY RECORD

Between 1978 (when the public automobile insurance plan came into effect) and 2015, the number of deaths on the road dropped by 80%, from 1,765 to 361. During that same period, the number of licence holders increased by 71%, and the number of vehicles on the road went up 114% (see the table below).

DEATHS, VEHICLES IN OPERATION AND LICENCE HOLDERS ON QUÉBEC ROADS FROM 1973 TO 2015



A number of factors, measures and tangible initiatives have obviously helped achieve these results. The remarkable improvement in the road safety record is the result of a collective effort involving improvements to legislation, the development of awareness campaigns, stronger enforcement measures and advances in road infrastructure and vehicle safety.

The Table québécoise de la sécurité routière (Québec road safety committee), which was created in 2005, has also played a significant role. This forum for exchange and discussion brings together partners from government, municipal, school and community sectors, as well as from the police and various associations. Over the years, it has filed three reports containing 73 recommendations with the Minister of Transport.² Several of these recommendations have led to the adoption of concrete measures concerning issues such as speeding, alcohol- and drug-impaired driving, use of cell phones while driving, and sharing the road.

² The three reports are available (in French only) on the committee's website at <https://securite-routiere.qc.ca/publications.html>.

However, a comparison between the 2014 and 2015 road safety records reveals that, despite the success of these initiatives, we cannot take these advances for granted and improvements are increasingly difficult to achieve (see the table below).

STATISTICS ON TRAFFIC ACCIDENT VICTIMS FROM 2010 TO 2015

Type of Injuries	Accident Victims						Variation (%)	
	2010	2011	2012	2013	2014	2015	2015/2014	2014 to 2010
Fatal	488	475	417	392	322	361	12.1	-13.8
Serious ¹	2,293	2,020	1,955	1,724	1,572	1,576	0.3	-17.6
Minor	41,043	39,403	37,115	35,981	34,303	35,414	3.2	-5.7
Total	43,824	41,898	39,487	38,097	36,197	37,351	3.2	-6.4

Source: Société de l'assurance automobile du Québec

It is also worth pointing out that even if the number of traffic accident-related deaths in Québec per 100,000 population has dropped significantly in recent years, it is still higher than the number for Ontario and for certain countries, including Sweden, Great Britain and the Netherlands. There is still room for improvement (see the table below).

NUMBER OF DEATHS PER 100,000 POPULATION FROM 2012 TO 2014³

	QUÉBEC	ONTARIO	SWEDEN	GREAT BRITAIN	NETHERLANDS
2014	3.9	3.5	2.8	2.8	3.4
2013	4.8	3.5	2.7	2.8	3.4
2012	5.2	4.2	3.0	2.8	3.9

ISSUES

In the future, Québec is going to come up against major issues that we will need to take into account as we continue to think about how to improve the road safety record. These issues include:

- **DEMOGRAPHICS:** From 2010 to 2015, the number of licence holders aged 65 and over increased by 29%, as opposed to 4% for the whole of the driving population. The number of drivers in that age group should reach approximately 1.5 million in 2030, at which time a quarter of Québec's population will be 65 or older. Older drivers are more at risk for health problems that can have an impact on their ability to drive. They are also more likely to die in an accident, or to sustain injuries that compromise their independence following the accident.
- **ENVIRONMENT:** The size of the province, its low population density and its rugged climate make Québec one of the most challenging places in the world to develop and maintain a road network. In addition, the growing popularity of active and public modes of transportation must also be taken into account, especially when it comes to sharing the road and developing road infrastructure. Many Québécois walk, bike or take the bus every day.
- **TECHNOLOGY:** The constant influx of new technologies improves safety. However, as much as certain advanced driver assistance systems may reduce driving mistakes, other technologies can become sources of distraction, just like cell phones, thereby increasing the risk of accidents. It is also important to consider the fact that certain vehicle manufacturers have announced that self-driving vehicles (also called "autonomous" and "intelligent"

³ Data compiled by the Société de l'assurance automobile du Québec.

- vehicles) will be on the market as early as 2020. Such vehicles are equipped with an automated driving system that allows drivers to hand over control of the vehicle in certain circumstances.
- **ECONOMY:** Investing appropriately is becoming a definite issue for all road safety organizations. It is increasingly important that they be able to update, innovate and adapt. Furthermore, the overall economic context (e.g. the value of the Canadian dollar, the price of oil) influences travel choices and, consequently, exposure to traffic accidents.

MAJOR PRIORITY AREAS

How can Québec continue to improve? The goal is to stimulate thought-provoking discussions in the following six priority areas:

- **LEGISLATION:** Over the years, new provisions have been added to several laws and regulations in order to govern the behaviour of road users and impose stiffer penalties for offences.
- **PUBLIC AWARENESS:** Every year, a variety of awareness-raising campaigns and activities are carried out throughout Québec. They include T.V. commercials, radio ads, social media and online ads and posts, and participation in trade shows and in school and business events. These initiatives set out to inform road users about good driving behaviours and to convince them to make these behaviours their own.
- **ENFORCEMENT:** Roadside inspections, facility audits and increased monitoring near road work zones (specifically for heavy vehicle owners, operators and drivers), targeted police operations and the control of access to the road network through the management of driver's licences—these are all examples of strategies adopted yearly to apprehend and penalize offenders, revoke high-risk road users' driving privileges and, ultimately, ensure that the bulk of drivers on the road are responsible and respectful and committed to safe behaviour.
- **INSURANCE CONTRIBUTIONS:** In recent years, the increasingly safe behaviour of Québec drivers has had a direct impact on the number of accidents. This has resulted in a decrease in compensation-related expenses, which in turn has allowed us to lower the insurance contributions for coverage in the event of bodily injury for over four million drivers and vehicle owners. This proves that an improved road safety record translates into real savings and that "Caution pays off!"
- **TRANSPORTATION INFRASTRUCTURE:** The implementation of best practices for the development, operation and maintenance of transportation infrastructure helps reduce the number and severity of accidents for all modes of transportation, and particularly for active modes (e.g. walking, cycling).
- **VEHICLES:** Vehicles equipped with components that make driving safer and that ensure greater protection for drivers and passengers in the event of impact also contribute to a decrease in the number and severity of accidents.

QUESTIONS

- What are the main road safety issues in your community or across Québec as a whole?
- Who else should have a role to play in road safety, in addition to the government?
- What should be done in order to get everyone to take concrete steps toward preventing accidents and sharing the road better?
- What innovative measures should be implemented to improve the road safety record?

THE PUBLIC CONSULTATION

OBJECTIVES

The public consultation on road safety has two objectives:

- Encourage all road users and other road safety stakeholders to give their suggestions and opinions on various road safety topics, as well as on a number of ideas inspired by best practices that have been adopted outside Québec;
- Bring road safety closer to home for all Québécois, so that everyone understands that their actions can make a difference.

SPOKESPERSONS

The consultation is being led by two spokespersons whose role is to gather the suggestions and comments of participants, and to stimulate discussion.

- **CLAUDIA DI IORIO:** In 2010, this young woman was the victim of a serious and highly publicized traffic accident that even went on to inspire the T.V. series “Pour Sarah.” These days, she is focused on raising public awareness about the dangers of drinking and driving. Ms. Di Iorio is also the spokesperson for Cool Taxi, a service that provides prepaid taxi coupons in order to give young people an alternative to getting behind the wheel when they are not fit to drive.
- **ALAIN GELLY:** Retired from the Lévis police department, Mr. Gelly is a keen road safety advocate. He writes a column for the newspaper *Le Peuple Lévis* and his articles are often reprinted in some of the major daily papers. He is also a regular contributor on news networks when it comes to road safety issues, and teaches police technology at the Campus Notre-Dame-de-Foy.

APPROACH

The approach adopted is a participative one. Three options are provided to allow as many people and groups as possible to participate and provide their suggestions and comments:

1. Speaking at one of the regional consultation sessions that will be held from February 3 to March 3, 2017 in 11 cities across Québec: Chibougamau, Val-d'Or, Gatineau, Baie-Comeau, Rimouski, Trois-Rivières, Saguenay, Sainte-Adèle, Sherbrooke, Montréal and Québec;
2. Answering the online questionnaire available on the public consultation's website;
3. Submitting a document (brief, letter, etc.) either online on the public consultation's website, or by mail.



FOR EVERYTHING YOU NEED TO KNOW ABOUT HOW YOU CAN PARTICIPATE, VISIT THE PUBLIC CONSULTATION'S WEBSITE AT consultation.saaq.gouv.qc.ca/en.

RESULTS

Once the consultation is over, all the suggestions and comments will be compiled, including the answers to the online questionnaire, and priorities will be established by the Société de l'assurance automobile du Québec and the Ministère des Transports, de la Mobilité durable et de l'Électrification des transports. Recommendations will then be filed with the Minister of Transport, Sustainable Mobility and Transport Electrification.

THE 15 ROAD SAFETY TOPICS

The public consultation aims to both gather and test the response to ideas that will make it possible to continue to improve the road safety record. A number of road safety topics have been proposed to provide a framework for discussion.

The topics are the following (in alphabetical order):

- Cyclists
- Drinking and driving
- Driver distraction
- Driver fatigue
- Drugs and driving
- Health of drivers
- Heavy vehicles
- Infrastructure development and maintenance and road signs and traffic signals
- Insurance contributions
- Motorcyclists
- Pedestrians
- Seat belts and child safety seats
- Speeding
- Vehicle safety
- Young drivers and road safety education

To facilitate participation, fact sheets have been prepared for each proposed topic and are provided in the next section. Each fact sheet includes a few questions to provide food for thought. The fact that we have proposed certain topics does not mean other topics cannot be addressed.



THE 15 ROAD SAFETY TOPICS



CYCLISTS

OVERVIEW

Overall, 80% of cyclist fatalities are caused by accidents involving a bicycle and a motor vehicle.

Each year on average from 2011 to 2015, 1,892 cyclists were victims of an accident involving a moving road vehicle. Of this number:

- 14 died;
- 102 sustained serious injuries;
- 1,776 sustained minor injuries.

Even though the number of cyclists in Québec has gone up, the number of cyclists who are victims of accidents involving road vehicles has been decreasing for the past 15 years.

LEGISLATIVE FRAMEWORK

Cyclist and vehicle traffic on public roads is governed by the *Highway Safety Code*. Many rules regulating how cyclists must travel were incorporated into the *Highway Safety Code* at the end of the 1970s.

In 2014, stakeholders from the cycling community and the government came together to discuss what changes could be made to the *Highway Safety Code* in order to improve cyclist safety and encourage everyone to better share the road. This group's conclusions were reflected in legislative amendments made to the *Highway Safety Code*, including the introduction of a distance requirement for vehicle drivers passing cyclists in the same lane, and stiffer penalties for dooring.

SHARING THE ROAD

The popularity of cycling is continually on the rise. According to *Cycling in Québec in 2015*, published by Vélo Québec, there are 4.2 million cyclists in Québec, 3.2 million of whom are adults.

Over the past few years, the media has increased its coverage of certain tensions between drivers and cyclists. A 2015 survey⁴ revealed that over 90% of respondents indicated that the need for cyclists and drivers to share road space was an issue of concern.

⁴ SOM. (2015). *Évaluation de la campagne vélo 2015 « On ne vous demande pas de devenir les meilleurs amis du monde. Juste de vous respecter. » : rapport final présenté à la Société de l'assurance de l'automobile du Québec*. Québec, QC.

CYCLIST SAFETY

The following factors must be taken into consideration in order to improve cyclist safety on public roads, particularly at intersections:

- the presence and quality of bicycle infrastructure;
- visibility (seeing others and being seen);
- sharing the road with heavy vehicles (which, due to their length and height, have many large blind spots);
- the speed of vehicles;
- distraction on the part of cyclists and drivers alike.

ADAPTED INFRASTRUCTURE

All road users need to obey the rules, demonstrate mutual respect, and exercise caution in order to improve cyclist safety and the ability to share the road. The development of safe infrastructure and proper traffic management, particularly for certain at-risk locations, like intersections, are also important factors to consider to improve cyclist safety.

Infrastructure that is adapted to both the road environment and road user needs will also meet the mobility needs of cyclists—whether they are cycling for practical reasons, for fun or for exercise. The different realities of urban, rural and peri-urban areas must be taken into account.

Municipalities and the Ministère des Transports, de la Mobilité durable et de l'Électrification des transports are responsible for the design and operation of infrastructure that facilitates safer cycling.

BICYCLE HELMETS

Head injuries contribute to approximately 60% of deaths and 30% of hospitalizations related to transportation accidents⁵ involving cyclists. Despite these figures and the numerous awareness-raising campaigns conducted by the Société de l'assurance automobile du Québec (SAAQ) and its partner organizations over the years, in 2014 only 53.2% of cyclists wore protective helmets. Helmets cannot prevent accidents, but they protect people's heads and reduce the severity of injuries.

OUTSIDE OF QUÉBEC

Copenhagen, the capital of Denmark, is renowned as one of the most bicycle-friendly cities in the world. With regard to infrastructural solutions for cyclist safety, pedestrian, bicycle and vehicle traffic on the main traffic routes, where over 6,000 vehicles travel every day at speeds over 55 km/h, is systematically separated by physical barriers (e.g. one-way protected bike lanes). Copenhagen has also implemented a winter maintenance system for its entire cycling network.

WHAT DO YOU THINK?

When it comes to cyclists, what concrete steps should we take to keep improving Québec's road safety record?

What do you think are the main issues when it comes to cyclists and other road users sharing the road? What potential solutions would be the most effective to improve the situation?

The SAAQ's field studies reveal that just over 50% of cyclists wear helmets. What can we do to encourage the other 50% to start wearing helmets?

⁵ A transportation accident involving a cyclist refers to any accident involving a cyclist. This definition is not limited to accidents involving a motor vehicle.



DRINKING AND DRIVING

OVERVIEW

Drinking and driving is one of the leading causes of traffic accidents in Québec. Each year on average from 2010 to 2014,⁶ in the case of traffic accidents in which alcohol was a factor, a total of:

- 140 people died (33% of all traffic accident-related deaths);
- 340 people sustained serious injuries (18% of all traffic accident victims who sustained serious injuries);
- 1,900 people sustained minor injuries (5% of all traffic accident victims who sustained minor injuries).

However, over the past 35 years there has been a remarkable decrease in the number of victims: at the beginning of the 1980s, approximately 800 deaths per year were attributable to drinking and driving.

This downward trend is due in no small part to the steps taken by the government and its partners to fight drinking and driving, particularly through public awareness, legislation and enforcement.

OFFENCES

Each year in Québec, between 12,000 and 14,000 penalties are imposed for drug- and alcohol-related impaired driving offences under the *Criminal Code*.

Between 2003 and 2014, the percentage of repeat offenders dropped considerably, falling from 31.7% to 16.9%. Each year on average, from 2010 to 2014:

- 81% of offences were first offences;
- 19% of offences were committed by repeat offenders convicted of 2 or more offences over a period of 10 years:
 - 15% were second-time offenders;
 - 4% were at their third or more offence.

LEGISLATIVE FRAMEWORK

For several years now, the federal and provincial governments have been vigorously enforcing strict laws that impose stiff penalties for impaired driving.

The *Highway Safety Code* and the *Criminal Code* set out penalties for individuals found guilty of driving while impaired by alcohol or drugs or with a blood alcohol concentration over 80 mg of alcohol per 100 ml of blood (0.08).

⁶ The number of deaths attributable to alcohol is an estimate calculated using data from the Bureau du coroner (coroner's office) on deceased drivers who had a blood alcohol concentration over the legal limit. Data for 2015 is currently unavailable because of the case-by-case nature of this analysis, which prevents such data from being available until a year or more after the fact.

Since 1997, a number of stricter legislative measures have been added to the *Highway Safety Code* to punish and monitor drinking and driving offenders. These include:

- measures that are applied as soon as the individual commits an offence and before criminal proceedings are held (immediate licence suspension, immediate vehicle seizure and impoundment, and, in certain situations, a substance use disorder assessment);
- measures that apply after the individual has been found guilty under the *Criminal Code* (e.g. period of ineligibility for a driver's licence, obligation to undergo a substance use disorder assessment, Alcofrein driver education program, obligation to drive a vehicle equipped with an alcohol ignition interlock device).

The measures and penalties vary according to the nature of the criminal offence and the number of offences in the driver's record.

The *Criminal Code* has also been amended in recent years, with particular regard to giving police officers greater powers of investigation in the case of alcohol-impaired driving. Certain fines have also been revised.

A STRONG SOCIAL CONSENSUS AGAINST DRINKING AND DRIVING

A 2014 survey revealed that 98% of respondents considered that there was no excuse for drinking and driving.⁷ Despite this strong social consensus, the problem remains a major social issue as there are still many accidents caused by impaired drivers.

The fight against drinking and driving is a crucial one: this completely avoidable behaviour is responsible for approximately one third of all driver deaths and for the serious injuries sustained by many accident victims.

OUTSIDE OF QUÉBEC

Most European countries have introduced penalties for blood alcohol concentrations as low as 0.05. In Canada, all provinces and territories except for Québec have immediate administrative penalties for drivers with a blood alcohol concentration under 0.08. British Columbia, for example, applies an immediate roadside driver's licence suspension and vehicle impoundment in the case of drivers with a blood alcohol concentration between 0.05 and 0.08.

These measures are based on the following arguments:⁸

- the effects of alcohol are progressive and are felt as of the first drink;
- the risk of collision increases as the blood alcohol concentration increases;
- the risk of a fatal collision is 2 to 9 times higher when drivers have a blood alcohol concentration between 0.05 and 0.08;
- lowering the blood alcohol concentration limit for drivers reduces the number of accidents.

WHAT DO YOU THINK?

When it comes to drinking and driving, what concrete steps should we take to keep improving Québec's road safety record?

The legal limit set by the *Criminal Code* is 0.08. Should Québec introduce immediate penalties for drivers with a blood alcohol concentration between 0.05 and 0.08?

7 SOM. (2014). *Évaluation de la campagne alcool 2014 « Un geste lourd de conséquences » : rapport final présenté à la Société de l'assurance automobile du Québec*. Québec, QC.

8 Blais, É., & Maurice P. (2010). *Réduction de la limite d'alcool permise dans le sang pour la conduite d'un véhicule automobile : avis scientifique*. Québec, QC: Institut national de santé publique du Québec.



DRIVER DISTRACTION

OVERVIEW

Driver distraction is one of the leading causes of traffic accidents in Québec. Each year on average from 2011 to 2015, in the case of traffic accidents in which distraction at the wheel was a factor, a total of:

- 124 people died (31.5% of all traffic accident-related deaths);
- 686 people sustained serious injuries (38.8% of all traffic accident victims who sustained serious injuries);
- 18,732 people sustained minor injuries (51.4% of all traffic accident victims who sustained minor injuries).

Driving is a complex task that requires the driver's full attention. A mere second of distraction at the wheel can be dangerous not only for the driver, but also for all other road users.

When drivers aren't paying attention to the road, they are less alert and their decision-making skills and driving performance are compromised. The human brain was not designed to carry out several tasks at once; it processes information sequentially. The brain is either busy driving or it is doing something else.

DISTRACTIONS

There are many opportunities for distraction on the road network:

- Distractions can come from both inside and outside the vehicle.
- The pace of modern life can make time spent travelling in a vehicle feel unproductive. Because of this, people use their time in transit to get things done: contacting the office or people at home, drinking and eating, chatting with passengers, etc.
- The fact that technology is everywhere in our daily lives has resulted in a growing number of distractions at the wheel in the form of:
 - smart phones;
 - various electronic devices;
 - in-vehicle technologies.

CELL PHONES AND DRIVING

Using a cell phone while driving has a negative effect on driving performance, particularly on a driver's ability to perform cognitive tasks (paying attention, processing information, etc.) and visual tasks. It is not so much the handling of the device that causes the problem, but rather that the driver's attention is focused on the conversation or the information on the screen and not on driving. Using a cell phone at the wheel increases the risk of accidents by about four and

also increases the risk of committing offences (running a red light, speeding, failing to make a mandatory stop or to yield the right of way to other road users, etc.). This increase in risk applies to both hand-held and hands-free devices.⁹

When it comes to texting, one study of heavy vehicle drivers revealed that they are 23 times more likely to cause an accident when they text at the wheel than when they do not.¹⁰ Texting while driving forces drivers to take their eyes off the road for 4 to 6 seconds at a time. At 90 km/h, this is like travelling the length of a football field with your eyes closed.

LEGISLATIVE FRAMEWORK

Cell phones: The *Highway Safety Code* provides for fines of \$80 to \$100 and 4 demerit points for any driver holding a device that includes a telephone function, whether it be to talk, to read or write text messages or emails, or to surf the web.¹¹

Screens: Drivers may only use a screen while driving if the device was installed by the vehicle's manufacturer or in accordance with the manufacturer's instructions, or where the device only provides information that is useful for driving.¹² The *Highway Safety Code* provides for fines of \$80 to \$100 when any other screens are used.

OFFENCES

Between July 1, 2008 (when police officers began serving statements of offence for the use of cell phones at the wheel) and March 21, 2016, a total of 419,269 statements of offence were served. These offences were for any use whatsoever of hand-held devices equipped with a telephone function.

OUTSIDE OF QUÉBEC

Several jurisdictions recognize the dangers of cell phones and texting and have prohibited the use of cell phones behind the wheel. Hands-free devices are generally authorized, although France has recently prohibited drivers from using earpieces.

All Canadian jurisdictions prohibit talking or texting on a hand-held cell phone while driving, but allow using a hands-free device while at the wheel. Legislation varies between the different provinces and territories. In Nova Scotia, for example, the fine for using a cell phone while driving increases for repeat offenders. The fine is \$233.95 for a first offence, \$348.95 for a second offence and \$578.95 for a third offence or more.

WHAT DO YOU THINK?

When it comes to driver distraction, what concrete steps should we take to keep improving Québec's road safety record?

Would you agree with progressively increasing fines each time an individual is found guilty of holding a cell phone while driving?

⁹ Blais, É., & Sergerie, D. (2007). *Avis de santé publique sur les effets du cellulaire au volant et recommandations*. Québec, QC: Institut national de santé publique du Québec.

¹⁰ Box, S. (2009). *New Data from VTTI Provides Insight into Cell Phone Use and Driving Distraction*. Blacksburg, USA: Virginia Tech Transportation Institute.

¹¹ Certain exceptions apply.

¹² Certain exceptions apply.



DRIVER FATIGUE

OVERVIEW

Fatigue is one of the leading causes of traffic accidents in Québec. Each year on average from 2011 to 2015, in the case of traffic accidents in which fatigue was a factor, a total of:

- 87 people died (22% of all traffic accident-related deaths)
- 324 people sustained serious injuries (18% of all traffic accident victims who sustained serious injuries)
- 8,359 people sustained minor injuries (23% of all traffic accident victims who sustained minor injuries)

LEGISLATIVE FRAMEWORK

There is still no such thing as a “fatigue test” that can detect and measure how tired someone is, which makes it complicated to adopt legislative measures that would allow police to intervene when drivers are impaired by fatigue. In light of this fact, raising awareness and focusing on prevention are the best strategic options.

AN ISSUE THAT AFFECTS ALL DRIVERS

Certain individuals are more at risk for driver fatigue, in particular:

- young drivers (especially men) age 30 or younger;
- workers with irregular schedules, including those who work night shifts;
- heavy vehicle drivers: for several years now, the transportation industry must comply with a regulation governing the number of hours of driving and off-duty time;
- individuals who suffer from an undiagnosed or untreated sleep disorder;
- all individuals who do not get enough sleep or who lack quality sleep.

Just like alcohol, fatigue affects driving ability. Not only is it detrimental to concentration, judgment and reflexes, it also has a negative impact on a driver’s memory, mood and ability to process the information in his or her environment. Overall, a tired driver is less alert, which can lead to driving errors well before he or she starts nodding off or falls asleep at the wheel.

A VARIETY OF CAUSES

Certain causes of driver fatigue are related to biology and sleep (e.g. quantity and quality of sleep, number of waking hours, the internal biological clock that makes certain hours of the day higher-risk).

Other causes have to do with a driver's tasks and activities (e.g. time spent driving, complexity of the tasks performed, monotony of the road).

A lack of sleep, hectic schedules due to work, family and social obligations, and the use of electronic devices (especially during periods when we ought to be sleeping) are among the many reasons why a large sector of the population suffers from "permanent fatigue." The underlying causes of this condition are hard to manage and, as a result, driving while tired remains a widespread and socially tolerated behaviour.

RUMBLE STRIPS

Some road structures can alert distracted or sleepy drivers to the fact that they are not fully present, thereby reducing the risk and severity of accidents. For example, shoulder and centreline rumble strips alert drivers who start to stray out of their lanes by causing uncomfortable and noisy vibrations.

REST AREAS AND "VILLAGES-RELAIS"

Rest areas, roadside service areas and "villages-relais" are all safe and accessible places where road users can pull over to rest at any time. They are evenly distributed along the main travel routes (highways, major and regional roads) and offer a place to take a break, as well as services and information. The network of rest areas is currently being updated in order to diversify the services offered, make the sites more welcoming and create rest areas that are safe and enjoyable.



WHAT DO YOU THINK?

When it comes to driver fatigue, what concrete steps should we take to keep improving Québec's road safety record?

Do you think there are enough rest areas, roadside service areas, and "villages-relais" where drivers can rest safely? Do they meet road users' needs and are they available in the right locations?



DRUGS AND DRIVING

OVERVIEW

Drugs, both legal and illegal, were detected in the bloodstream of approximately 32% of drivers killed in traffic accidents between 2010 and 2014.¹³ With specific regard to cannabis, the percentage of drivers killed in a traffic accident who were found to have this drug in their bloodstream went up from 14.9% in 2010 to 23.8% in 2014. However, this data does not indicate whether these individuals' ability to drive was actually impaired when the accident happened.

OFFENCES

In Québec, between 12,000 and 14,000 impaired driving penalties are imposed each year for *Criminal Code* offences related to alcohol or drugs.

LEGISLATIVE FRAMEWORK

For several years now, the federal and provincial governments have been vigorously enforcing strict laws that impose stiff penalties for alcohol- and drug-impaired driving.

The *Highway Safety Code* and the *Criminal Code* set out penalties for individuals found guilty of driving while impaired by drugs.

Under the *Highway Safety Code*, just like for drinking and driving, offenders are subject to a number of penalties and measures, including:

- immediate licence suspension for 24 hours following a failed physical coordination test;
- the same penalties and measures that apply to drinking and driving offenders when it comes to obtaining a new driver's licence (e.g. obligation to undergo substance use disorder assessments, period of ineligibility for a driver's licence).

Penalties are also provided for under the *Criminal Code* for this type of offence, in addition to the penalties and measures provided for under the *Highway Safety Code*.

JUST LIKE ALCOHOL, DRUGS AFFECT DRIVING ABILITY

- Studies suggest that taking drugs increases the risk of being involved in an accident.
- Combining drugs and alcohol greatly increases the risk of being involved in an accident.

¹³ The number of deaths attributable to drugs is an estimate calculated using data from the Bureau du coroner (coroner's office) on deceased drivers who had legal or illegal drugs in their system. Data for 2015 is currently unavailable because of the case-by-case nature of this analysis, which prevents such data from being available until a year or more after the fact.

In a 2015 survey conducted by the Société de l'assurance automobile du Québec, 8% of surveyed drivers said that they had consumed cannabis, cocaine or amphetamines at least once during the past twelve months. Among those respondents, 28% admitted to driving a vehicle after they had taken those drugs.¹⁴

THE EFFECTS OF DRUGS ON DRIVING

Regardless of the type of drug a person takes, the effects of drugs on driving ability are significant. Drugs can lead to:

- increased risk-taking (speeding, failure to wear a seat belt, recklessness);
- a false sense of security and control;
- difficulty maintaining a constant speed and trajectory;
- decreased attention and judgment;
- difficulty concentrating;
- slower reaction time in the face of danger;
- poor coordination;
- drowsiness.

PERCEPTION THAT THE RISK OF BEING PULLED OVER IS LOW

Driving under the influence of drugs is a fairly common phenomenon. This is partially because drivers think that it is unlikely that they will be pulled over by the police for doing so.¹⁵

The fact remains that under the law police officers can arrest drug-impaired drivers. They have the means to detect whether or not drivers have taken drugs (e.g. physical coordination tests, evaluation by a drug recognition expert).

OUTSIDE OF QUÉBEC

The federal government has announced its intention to introduce a bill to legalize the recreational use of cannabis in Canada. Various stakeholders have voiced their concern, warning the government that this legislative change could lead to an increase in drug-impaired driving.

Since being legalized in Colorado and Washington, the number of people using cannabis in those states has gone up considerably. There has also been a significant rise in the percentage of drivers killed in accidents who had cannabis in their bloodstreams. However, this legalization came into effect very recently and it is too soon to draw any definitive conclusions on the impact that cannabis legalization has had on the road safety record.

WHAT DO YOU THINK?

When it comes to drugs and driving, what concrete steps should we take to keep improving Québec's road safety record?

Should the recreational use of cannabis eventually be legalized, what would be the best way to limit the impact on the road safety record?

¹⁴ SOM (2015). *Évaluation de la campagne Drogue au volant 2015 « Toutes les drogues sont détectables » : rapport final présenté à la Société de l'assurance de l'automobile du Québec*. Québec, QC.

¹⁵ *Ibid.*



HEALTH OF DRIVERS

OVERVIEW

A driver's health, and not age, is what determines his or her ability to drive a vehicle. We need to make sure that driver's licence holders have the physical and mental skills required for driving in order to guarantee, inasmuch as it is possible, their own safety and the safety of all road users.

Certain health problems are detrimental to the ability to drive and are associated with an increased risk of accident.

An Australian study showed that more than 10% of traffic accidents resulting in hospitalization involved a driver with a confirmed medical condition considered to be a factor in crash causation. For drivers aged 70 and over, this percentage increased to 34%.¹⁶ However, it is difficult to identify all accidents involving such drivers, because the accident reports filed by peace officers do not contain such information.

LEGISLATIVE FRAMEWORK

Under the *Highway Safety Code*, driver's licence holders have 30 days to notify the Société de l'assurance automobile du Québec (SAAQ) of any change in their health condition that could affect their ability to drive. Anyone—a police officer, a doctor, a health care professional or an everyday civilian—can notify the SAAQ if they have doubts about someone's ability to drive.

Each year when drivers pay for the renewal of their driver's licence, they are required to complete and provide the SAAQ with the "Declaration of Illness or Functional Impairment" section if there have been any changes in their state of health.

Despite these obligations, every year less than 1% of all licence holders self-report medical conditions that could result in their driving privileges being restricted or suspended.

SENIOR DRIVERS

- Senior drivers are proportionally less involved in traffic accidents causing death or injury than drivers in other age groups.
- In Québec, the number of driver's licence holders aged 65 or older is set to go up from 956,111 in 2014 to approximately 1.5 million in 2030.
- The total kilometres travelled by individuals who are 55 or older has also gone up in recent years.

¹⁶ Lindsay, V. L., & Ryan, G. A. (2011). *Medical Conditions as a Contributing Factor in Crash Causation*. Sydney, Australia: Austroads.

- It is important to take the aging population into account because health issues tend to add up and become more pronounced with age.
- Although they are proportionately less represented in traffic accident statistics, in the event of an accident their physiological vulnerability makes seniors more likely to die, be seriously injured or be left with impairment that could negatively impact their independence.

MEDICAL ASSESSMENTS

Information provided by a driver or a third party can lead to the driver being required to undergo an assessment of his or her driving ability. This assessment can take into account medical reports, reports from other healthcare professionals, and road tests.

DRIVERS AGED 75 OR OLDER

At ages 75, 80 and every two years thereafter, the SAAQ requires passenger vehicle drivers to undergo a medical assessment.

PROFESSIONAL DRIVERS

Professional drivers are required to undergo medical assessments at more frequent intervals, beginning with when they apply for a professional class of licence. Additional medical assessment requirements apply to professional drivers who wish to operate in the United States.

ASSESSMENT RESULTS

In 2015, the SAAQ opened 420,218 files relating to the health of drivers: 60,052 for professional drivers and 129,202 for drivers aged 75 and older.

An analysis of the files of drivers aged 75 and older showed that in 54% of cases, drivers were required to comply with new conditions (e.g. obligation to wear glasses when driving). In 4% of cases, they had to relinquish their licence or a class of licence, and in 1% of cases their licences were cancelled. Nearly half (45%) of the drivers assessed kept their licence without any additional conditions.

OUTSIDE OF QUÉBEC

In many countries, the bodies that issue driver's licences use a variety of screening methods to identify drivers who are medically at risk. Most Canadian jurisdictions, as well as the Netherlands and Great Britain, require all drivers to complete a health questionnaire when they renew their licence. It is worth pointing out that the Netherlands and Great Britain have some of the best road safety records among European countries for the 65 and older demographic.



WHAT DO YOU THINK?

When it comes to the health of drivers, what concrete steps should we take to keep improving Québec's road safety record?

In order to make it easier to identify drivers whose medical condition makes them "at risk", should the SAAQ make it mandatory for all driver's licence holders to report their state of health each year when they pay for the renewal of their driver's licence?



HEAVY VEHICLES

OVERVIEW

From 2010 to 2015, heavy vehicles represented, on average, 3.6% of all the vehicles on the road. During this same five-year period, accidents involving a heavy vehicle were responsible for 8.6% of traffic accident victims. With regard to fatal accidents, this proportion was 21.6%.

According to an analysis of fatal accidents involving at least one heavy vehicle (2007-2011),¹⁷ drivers of heavy vehicles were at fault in only 33.8% of cases. When a heavy vehicle driver was deemed responsible for a fatal accident, the main causes were:

- working procedures;
- driver inattention or distraction;
- reckless driving or driving inappropriately for road conditions;
- failure to yield the right of way;
- driver fatigue.

LEGISLATIVE FRAMEWORK

In addition to being required to follow the safety rules that apply to all road users, heavy vehicle owners, operators and drivers are also subject to several laws, regulations and policies, most notably:

- the *Act respecting owners, operators and drivers of heavy vehicles*;
- the conduct review policies for heavy vehicle owners, operators and drivers (rigorous monitoring and assessing of their conduct);
- the *Regulation respecting the hours of driving and rest of heavy vehicle drivers*;
- mandatory periodic mechanical inspections;
- mandatory activation of a speed limiter to prevent heavy vehicles from travelling over 105 km/h;
- the prohibition from travelling on certain parts of the road network, except to make local deliveries;
- regulations that ensure the safety of all road users by regulating load and size limits, cargo securement standards, the transportation of dangerous substances and special travel permits for oversized loads.

¹⁷ Ministère des Transports, de la Mobilité durable et de l'Électrification des transports. [2016]. *Réduction des accidents mortels impliquant des véhicules lourds : état d'avancement des travaux*. [PowerPoint slides]. Retrieved from https://aqtr.com/system/files/file_manager/mardi_am_plourde.pdf

In the interest of consistency and in order to support interprovincial trade, regulations are discussed with other Canadian jurisdictions in order to ensure they are harmonized as much as possible. Moreover, the provinces and territories have developed methods of cooperation to facilitate this dialogue and take industry needs into account without compromising road safety.

As for inspections carried out by Contrôle routier Québec, they include roadside inspections and facility audits. Contrôle routier Québec is responsible for monitoring this industry in the province. Failure to comply with the established rules constitutes an offence, for which penalties apply.

SPECIFIC REALITIES OF OPERATING A HEAVY VEHICLE

Driving a heavy vehicle is complex. Heavy vehicle drivers are called upon daily to make decisions that can have serious consequences for the safety of road users. The dimensions of the vehicle, its mass, the long distances often travelled, the variety of goods transported, the braking distance necessary to bring the vehicle to a stop, visibility around the vehicle, blind spots and the wide berth required to make a turn are all characteristics unique to driving a heavy vehicle and are all factors that contribute to an increased risk of accidents, as well as to their severity.

Driving such a vehicle therefore requires good professional knowledge, sustained attention and constant vigilance in order to make judicious decisions rapidly when confronted with dangerous situations. Appropriate preparation and training are therefore necessary. Although drivers hone the skills acquired during their training through experience on the road, they must also ensure that their knowledge of the laws, regulations and policies that govern the operation of heavy vehicles is complete and up to date.

SHARING THE ROAD

Due to its length and height, a heavy vehicle has many large blind spots that often prevent the driver from seeing other road users; this is particularly true for more vulnerable users, such as pedestrians and cyclists. This situation is most dangerous at traffic intersections in urban settings. In addition, the weight of a heavy vehicle, and the associated increased braking distance, require that other road users adapt their behaviour in the presence of this type of vehicle.

Regardless of who is at fault, whenever an accident involves a heavy vehicle, it is the occupants of the smaller vehicle or the pedestrians who are at greatest risk for injury.



WHAT DO YOU THINK?

When it comes to the safety of heavy vehicles, what concrete steps should we take to continue improving Québec's road safety record?

What solutions would you propose for a better coexistence between heavy vehicle drivers and other road users?



INFRASTRUCTURE DEVELOPMENT AND MAINTENANCE AND ROAD SIGNS AND TRAFFIC SIGNALS

OVERVIEW

Average annual figures for traffic accidents causing death or injury from 2011 to 2015 show that:

- 53% took place at or near an intersection;
- 26% took place at night: these accidents were generally more serious, as 35% of fatal accidents or accidents causing serious injury happened at night;
- in 21% of cases, the vehicle went off the road: nearly two thirds of such accidents took place on highways or rural roads;
- 17% took place on roads that were covered with snow, ice, packed snow, slush or melting snow: nearly half of such accidents took place on highways or rural roads;
- 4% were head-on collisions between two vehicles: these accidents were generally more serious, as 12% of fatal accidents or accidents causing serious injury were head-on collisions (two-thirds of head-on collisions resulting in death or serious injury happened on rural roads).

Québec's road network is managed mainly by municipalities and the Ministère des Transports, de la Mobilité durable et de l'Électrification des transports. Infrastructure development and maintenance, as well as road signs and traffic signals, play a crucial role in ensuring the safety of road users.

Various international studies have highlighted the importance of designing roads, as well as road signs and traffic signals, that help road users make the best decisions, reduce the number of driver errors and minimize the consequences of such errors.

As a rule, uniformity and consistency in the choice of components for each different type of road (highways, interurban roads, city boulevards, residential streets, etc.) allows people to better adapt their behaviour.

INFRASTRUCTURE DESIGN, ROAD SIGNS AND TRAFFIC SIGNALS, AND INFORMATION—ALL AT THE SERVICE OF ACCIDENT PREVENTION

Many aspects of road infrastructure design, as well as road signs and traffic signals, can help prevent accidents and reduce the severity of the injuries sustained. We only have to think of road layout (geometry of curves), intersection design (with or without traffic lights, 4-way intersections or roundabouts), roadside design (guardrails, crash cushions), the quality of the roadway and driving surface (absence of ruts, good skid resistance), lighting and the design of road work zones.

Given Québec's climate, winter maintenance operations and the ability to anticipate potential risks and access up-to-date information all directly impact the safety of road users.

Finally, when used effectively, a number of technologies and information systems can make driving easier and reduce the risk of being involved in an accident.

INFRASTRUCTURE DEVELOPMENT

Appropriate road infrastructure takes into account the type of road being built and the needs of all users—regardless of their modes of transportation, their physical capacities or their age. This ensures that roads can accommodate the growing number of pedestrians and cyclists, and also helps encourage the use of public (e.g. buses) and active (e.g. cycling) modes of transportation.¹⁸

OUTSIDE OF QUÉBEC

Research on the causes of accidents shows that the behaviour of road users is complex, that driver errors are numerous and often not intentional, and that road design can be a determining factor in preventing serious injuries and fatalities. The most recent road safety strategies focus on developing appropriate infrastructure and using the most effective techniques, such as building roundabouts or designing roadsides to prevent collisions with obstacles such as trees and lampposts.

Austroroads, an umbrella organization whose membership is comprised of Australian and New Zealand transport and traffic agencies, published a report¹⁹ in 2016 that identifies the most common types of accidents and the best road design and operation strategies for reducing the number of serious injuries and deaths caused by driver error and collisions.



WHAT DO YOU THINK?

When it comes to infrastructure development and maintenance and road signs and traffic signals, what concrete steps should we take to continue improving Québec's road safety record?

It has been shown that roundabouts reduce the number and severity of accidents. If you have already used a roundabout, whether as a driver, a pedestrian or a cyclist, was your experience a positive one? Should we build more roundabouts in areas where they can help reduce the number of accidents?

Having real-time access to information on road conditions makes it possible to better plan your trips and to adapt your driving while on the road in order to prevent accidents. Would you like to have access to more information than is currently available? If so, what type of information would you like to have access to? How would you like to access or receive that information?

¹⁸ For more information, see the "Pedestrians" and "Cyclists" fact sheets.

¹⁹ Turner, B., Jurewicz, C., Pratt, K., Corben, B., & Woolley, J. (2016). *Safe System Assessment Framework: Research Report AP-R509-16*. Sydney, Australia: Austroroads.



INSURANCE CONTRIBUTIONS

OVERVIEW

The Société de l'assurance automobile du Québec (SAAQ) requires every driver's licence holder to pay an insurance contribution in order to cover bodily injury sustained in a traffic accident.

An insurance contribution is also collected on vehicle registration payments.

The amount of the contribution collected on the driver's licence payment is based on the number of demerit points entered on a driver's record. The more demerit point offences a driver commits, the higher the insurance contribution will be (*see the table below*).

2016 INSURANCE CONTRIBUTIONS – PASSENGER VEHICLE DRIVER'S LICENCE (CLASS 5)

INSURANCE CONTRIBUTION	DEMERIT POINTS
\$55	0
\$90	1 to 3
\$124	4 to 6
\$151	7 to 9
\$169	10 to 14
\$324	more than 15

OUTSIDE OF QUÉBEC

Manitoba and Saskatchewan, which have public insurance plans that cover both bodily injury and material damage, reward good driving behaviour by decreasing the amount of the insurance contribution required to register a vehicle. In Manitoba, a decrease is also applied to the driver's licence fees.

In the United States, Virginia uses a point system with both demerit and safe driving points. The "safe driving points" allow drivers with good behaviour to accumulate points and use them to the offset demerit points when they commit an offence.



WHAT DO YOU THINK?

When it comes to insurance contributions, what concrete steps should we take to keep improving Québec's road safety record?

How should the SAAQ go about updating its demerit point system in order to reward good driving behaviour?



MOTORCYCLISTS

OVERVIEW

Each year on average, from 2011 to 2015, 1,832 motorcyclists were involved in traffic accidents. Of these:

- 44 died;
- 227 sustained serious injuries;
- 1,561 sustained minor injuries.

Although the road safety record deteriorated in 2015, when it comes to motorcyclists, there has been a drop in accident victims over the past few years. However, the death rate per 10,000 vehicles on the road is still higher for motorcyclists than for other motorists. In 2015, the rate was 2.9 deaths per 10,000 motorcycles, compared to 0.5 deaths per 10,000 vehicles for car and light truck occupants.

MAIN CAUSES OF ACCIDENTS

- speed at which the motorcyclist was riding;
- visibility (other drivers can find it difficult to see motorcyclists);
- inexperience of the motorcyclist;
- inattentiveness and distraction on the part of the motorcyclist or other road users.

VULNERABLE ROAD USERS

Motorcyclists drive vehicles that offer less protection than other vehicles, such as cars. Protective gear and helmets are the only protection they can count on to avoid or reduce the severity of injuries in the event of an accident or a fall. Furthermore, the smaller size of motorcycles makes them more difficult to see on the road, especially from the front.

MOTORCYCLE COMMITTEE RECOMMENDATIONS – ROAD SAFETY COMPONENT

In 2012, a committee of motorcycle experts put forward 10 recommendations to improve motorcyclist safety and the conditions surrounding motorcycle riding. These recommendations addressed 5 issues: visibility, training, graduated licensing, the road environment and awareness-raising. Of the 10 recommendations, 5 were implemented as soon as the committee published its report, as they did not require that any amendments be made to the *Highway Safety Code*. The other 5, however, do require such amendments (*see the table on the following page*).

FOLLOW-UP ON THE MOTORCYCLE COMMITTEE'S RECOMMENDATIONS – ROAD SAFETY COMPONENT

ISSUE	RECOMMENDATIONS	STATUS
Visibility	Allow motorcyclists to use their high beams during the day	Amendment to HSC ¹ required
	Promote the use of headlight modulators, as well as auxiliary headlights and signal lights	Implemented
	Make wearing personal eye protection mandatory	Amendment to HSC required
	Promote the use of appropriate clothing and gear during the motorcycle driving course	Implemented
Training	Update the motorcycle driving course	Implemented
Licensing Procedure	Withdraw the requirement that motorcyclists with a learner's licence always be under the supervision of an accompanying rider	Amendment to HSC required
	12-month learning stage with the following restrictions: • no passengers • zero alcohol (gradual tolerance according to the class of licence) • dusk to dawn curfew Prerequisites to Class 6R and Class 6A learner's licences: must have fewer than 4 demerit points and not have had their driver's licence revoked in the past 2 years due to an accumulation of demerit points or a driving-related <i>Criminal Code</i> offence	Amendment to HSC required
	Implement graduated licensing for high-risk motorcycles based on years of experience	Amendment to HSC required
Awareness-Raising	Run an awareness campaign on motorcycle visibility	Implemented
	Promote the use of appropriate clothing and gear for riding a motorcycle	Implemented

¹ HSC: Highway Safety Code

THE NEW MOTORCYCLE DRIVING COURSE

In January 2015, the Société de l'assurance automobile du Québec announced a new driving course. This new course focuses on motorcyclist behaviours and the mastery of techniques and manoeuvres. In addition to learning how to perform manoeuvres both on a closed track and on the road, prospective motorcyclists learn to ride in a way that is safe, cooperative and responsible. The course includes significantly more practical training hours.

WHAT DO YOU THINK?

When it comes to motorcyclists, what concrete steps should we take to keep improving Québec's road safety record?

What can be done to encourage motorcyclists to participate in annual clinics (e.g. awareness-raising activities, closed-track training sessions) that aim to help motorcyclists refresh their riding skills early in the season?



PEDESTRIANS

OVERVIEW

Each year on average, between 2011 and 2015, 2,908 pedestrians were victims of a traffic accident. Of these:

- 58 died;
- 293 sustained serious injuries;
- 2,557 sustained minor injuries.

Although the number of pedestrians killed or seriously injured in traffic accidents has dropped over the past 15 years, pedestrians continue to represent a high proportion of those injured or killed in traffic accidents.

- Every day an average of 7 pedestrians are involved in a traffic accident in Québec.
- Pedestrians represent 8% of all traffic accident victims.
- Among pedestrians, children and young adults between the ages of 10 and 24 and people 65 and older are more at risk for traffic accidents.

LEGISLATIVE FRAMEWORK

The *Highway Safety Code* governs pedestrian traffic and the traffic of all other public road users. Obeying traffic rules is the foundation for being able to share the road safely and harmoniously. Just like drivers and cyclists, pedestrians must follow the rules that apply to them.

SHARING THE ROAD

Among all the different kinds of road users—including passenger vehicle drivers, cyclists, pedestrians, motorized mobility aid users, motorcyclists and heavy vehicle drivers—some are more vulnerable than others. This is true of pedestrians, who are vulnerable for a variety of reasons, such as the space they are given to move in, which is not always adequate, and the fact that they do not have any sort of physical protection when they use the road network.

PEDESTRIAN SAFETY

Pedestrian safety is an issue that affects everyone. At one point or another, we have all been pedestrians, even those of us who travel mainly by car.

The following factors all need to be taken into account in order to improve pedestrian safety:

- development of pedestrian infrastructure (e.g. sidewalks, pedestrian crosswalks);
- visibility (seeing and being seen by other road users);
- heavy vehicles: pedestrians may not be seen if they are in a heavy vehicle's blind spots;
- traffic speed;²⁰
- distraction on the part of pedestrians, drivers and cyclists.

INFRASTRUCTURE

On top of encouraging all road users to obey the rules, demonstrate mutual respect and take the necessary precautions, pedestrians can be better protected by the development of infrastructure designed with them in mind and by proper traffic management in high-risk areas like intersections. Municipalities and the Ministère des Transports, de la Mobilité durable et de l'Électrification des transports (MTMDET) are responsible for planning and operating infrastructure that is adapted to the needs of pedestrians and compliant with a wide range of design, road sign, traffic signal and technical guideline standards.²¹

MOTORIZED MOBILITY AID USERS

People who use motorized mobility aids, such as three- and four-wheeled scooters and motorized wheelchairs, represent a vulnerable category of road users. Use of these vehicles is currently not regulated by the *Highway Safety Code*, but a pilot project is underway that, among other things, will help to define what traffic rules apply to them. The MTMDET is responsible for this pilot project.

OUTSIDE OF QUÉBEC

Many European countries have successfully introduced shared streets that give priority to urban activities, cyclists and pedestrians; these streets are meeting places and shared spaces. The speed limit on these streets is very low (20 km/h or less), which allows pedestrians, cyclists and vehicle drivers to all be able to use the same space. In certain countries, regulations give pedestrians priority on shared streets. The beneficial impacts that shared streets have had on safety, comfort and quality of life are significant.

WHAT DO YOU THINK?

When it comes to pedestrians, what concrete steps should we take to keep improving Québec's road safety record?

What can be done to make more drivers yield the right of way to pedestrians?

Many European cities have introduced shared streets where all road users share the same space, where priority is given to pedestrians, and where the vehicle speed limit is 20 km/h. The effect that these streets have had on road safety and quality of life has been very positive. Is this a concept that could work in Québec?

²⁰ The consequences of speed are major for pedestrians involved in collisions. If the speed of the vehicle on impact is 30 km/h, there is a 10% probability that the pedestrian will die; at 50 km/h, this probability is higher than 75%. [Source: Ashton, S. J. (1981). *Pedestrian Injuries: The Influence of Vehicle Design*, as cited in Table québécoise de la sécurité routière (2009). *Deuxième rapport de recommandations : pour poursuivre l'amélioration du bilan routier*. Québec, QC.

²¹ For more information, see the "Infrastructure Development and Maintenance and Road Signs and Traffic Signals" fact sheet.



SEAT BELTS AND CHILD SAFETY SEATS

OVERVIEW – SEAT BELTS

Each year on average between 2011 and 2015, 240 of the passenger vehicle occupants (drivers and passengers) who died or were seriously injured in accidents were not wearing their seat belts. The breakdown is as follows:

- 70 people died;
- 170 people were seriously injured.

OFFENCES

From 2010 to 2014, the number of offences for not wearing a seat belt dropped by 16%, from 51,837 to 48,523. Of the 43,523 offences in 2014, 81.6% were committed by men and 18.4% by women.

LEGISLATIVE FRAMEWORK

Under the *Highway Safety Code*, all individuals who do not wear their seat belts properly are subject to fines of \$80 to \$100 and 3 demerit points.

PROVEN PROTECTION

Seat belts minimize the uncontrollable movement of vehicle occupants in the event of impact. They are recognized as the best form of protection. They reduce the risk of being killed or seriously injured in an accident by half.

The vast majority of people in Québec wear their seat belts. During the day, the percentage of drivers and front seat passengers who wear their seat belts is 96%. However, this percentage decreases gradually as day turns into night.

Every year on average, approximately 30% of passenger vehicle occupants (drivers and passengers) who died in a traffic accident were not wearing their seat belts at the time of the accident. Individuals who do not wear their seat belts are therefore overrepresented in fatal accidents.

If everyone who got into a vehicle buckled up, there would be approximately 35 fewer deaths and 85 fewer people seriously injured in traffic accidents every year.

OUTSIDE OF QUÉBEC

Many jurisdictions recognize that seat belts are an important and effective form of protection, and have therefore made them mandatory. In Canada, seat belts are mandatory, although legislation varies between the different provinces and territories. In Nova Scotia, for example, the amount of

the fine increases for repeat offenders. The fine for a first offence is \$176.45; it goes up to \$233.95 for a second offence and then \$348.95 for any offence thereafter.

OVERVIEW - CHILD SAFETY SEATS

Each year on average from 2011 to 2015, 1,098 children under the age of 10 were victims of traffic accidents while they were inside a vehicle. The breakdown is as follows:

- 6 children died;
- 20 children sustained serious injuries;
- 1,072 children sustained minor injuries.

LEGISLATIVE FRAMEWORK

Under the *Highway Safety Code*, drivers are subject to fines of \$80 to \$100 and 3 demerit points if a child in their vehicle whose sitting height is less than 63 cm is not adequately secured in a child safety seat, or if the child safety seat is improperly installed in their vehicle.

PROPER USE OF CHILD SAFETY SEATS

The proper use of child safety seats saves lives and decreases the severity of injuries. The overall rate of correct usage takes into account how appropriate the choice of the child safety seat is, based on the child's weight and height, and the proper use of the appropriately chosen seat. In Québec, the overall rate of correct usage has been stuck at around 50% for several years.²² This means that half of all children are not properly protected when they travel in a vehicle. The main problems related to the usage of child safety seats are:

- moving from booster seats to seat belts too early (choice of seat);
- incorrect usage of infant seats and child safety seats.

NETWORK FOR THE INSPECTION OF CHILD SAFETY SEATS

In 2007, the Société de l'assurance automobile du Québec created the Network for the Inspection of Child Safety Seats. It provides free inspections by appointment for parents. The network operates year-round and has over 400 members throughout Québec.

OUTSIDE OF QUÉBEC

The use of child safety seats varies greatly from one jurisdiction to the next and is primarily practised in high-income countries. In Canada it is mandatory, although legislation varies between the different provinces and territories. In British Columbia, for example, a child less than 145 cm tall (which corresponds to roughly 74 cm in a seated position), or younger than 9 years old, must be secured in a booster seat.

WHAT DO YOU THINK?

When it comes to seat belts, what concrete steps should we take to keep improving Québec's road safety record?

When it comes to child safety seats, what concrete steps should we take to keep improving Québec's road safety record?

Would you agree with progressively increasing fines each time an individual is found guilty of not wearing a seat belt?

²² Data from field studies performed by the Société de l'assurance automobile du Québec.



SPEEDING

OVERVIEW

Speeding is one of the leading causes of traffic accidents in Québec. On average, for each year between 2011 and 2015, in the case of traffic accidents in which speed was a factor, a total of:

- 138 people died (35% of all traffic accident-related deaths);
- 515 people sustained serious injuries (29% of all traffic accident victims who sustained serious injuries);
- 6,975 people sustained minor injuries (19% of all traffic accident victims who sustained minor injuries).

The number of speed-related accidents has remained stable during the last few years.

Speed is a risk factor for all types of traffic accidents on all types of roads. The problem affects all drivers; however, young drivers aged 16 to 24 are overrepresented in the statistics regarding speed-related accidents and speeding offences, particularly excessive speeding offences.²³ Drivers aged 25 to 34 are also overrepresented, with respect to both accidents and offences, although to a lesser extent.

OFFENCES

On average, from 2010 to 2014, more than 600,000 speeding offences leading to demerit points were recorded annually, which represents approximately 70% of all offences leading to the accumulation of demerit points. Of these, 44,000 were offences for excessive speeding.

During this same time period, there were close to 453,800 statements of offence served for violations captured by photo radar devices or red light cameras.

LEGISLATIVE FRAMEWORK

The *Highway Safety Code* provides for fines and a system whereby demerit points²⁴ are entered on the driving record of drivers who exceed the posted speed limits or fail to adapt their speed to road conditions. Stiffer penalties are assessed for speeding in road work zones and for excessive speeding.

²³ Excessive speeding means driving a vehicle at a speed that exceeds the speed limit by:

- 40 km/h or more in a zone where the speed limit is 60 km/h or less;
- 50 km/h or more in a zone where the speed limit is over 60 km/h and up to 90 km/h;
- 60 km/h or more in a zone where the speed limit is 100 km/h or more.

²⁴ There are, however, no demerit points entered on a driver's record for exceeding the speed limit by anywhere from 1 to 10 km/h, or for speeding violations captured by photo radar or red light cameras.

LACK OF SOCIAL CONSENSUS

Speeding is a safety concern for all road users; yet, in spite of that:

- going over the speed limit is a widespread phenomenon in Québec: speed readings reveal that limits are not typically obeyed, regardless of the type of road or setting (urban, rural or highway);
- failure to obey posted speed limits remains socially acceptable.

LOWER SPEED, FEWER ACCIDENTS

Reducing the average driving speed would lower the number of traffic accident victims and the severity of associated injuries. In fact, studies show that if all drivers were to reduce their average speed by 5 km/h, the number of accidents resulting in fatalities or injuries would decrease by 15%.²⁵

PHOTO RADAR DEVICES

Since 2009, the use of stationary or mobile photo radar devices and red light cameras has helped to control vehicle speed in problematic zones. These devices have had a positive impact on drivers' behaviour by changing their perception of the risk of being caught.

Originally a pilot project, the use of these devices was officially adopted in June 2012. Since then, additional devices have been installed. The results have been very positive:

- between the time of the installation of stationary photo radar devices and 2014, average traffic speed decreased by 18% in places where these devices were installed;
- between the 2005-2007 period (before the devices were installed) and the 2011-2013 period, the number of traffic accidents was reduced by 58% in these locations, whereas it was reduced by 26% in Québec overall.

OUTSIDE OF QUÉBEC

The consequences associated with speeding are proven, and controlling drivers' speed has been recognized as the key element of any road safety strategy. Among the interventions worth noting are the improvement of road infrastructure, the setting of appropriate speed limits and, most importantly, effective measures to ensure said limits are obeyed.

In many countries, photo radar devices have proven to be the most effective measure in reducing the number of traffic accidents. France estimates that the use of photo radar devices between 2003 and 2010 resulted in 16,000 fewer deaths and 62,000 fewer accident victims with serious and minor injuries. More than 4,000 devices are operational on that country's road network.

WHAT DO YOU THINK?

When it comes to speeding, what concrete steps should we take to continue improving Québec's road safety record?

Vehicle speed can currently be monitored in more than 150 locations by photo radar devices. The observed decrease in the number of accidents in these locations is significant. Should we install more photo radar devices and increase the number of locations where speed is monitored?

In order to improve the safety of pedestrians and cyclists and thereby encourage these alternative modes of transportation should we reduce the speed limits on certain roads in urban settings?

²⁵ Ranta, S., & Kallberg, V. P. (1996). *Analysis of Statistical Studies of the Effects of Speed on Safety*. Helsinki, Finland: Finnish National Road Administration.



VEHICLE SAFETY

OVERVIEW

Transport Canada's security standards apply to most classes of vehicles. However, some modes of transportation are not required to meet federal standards. This is the case for bicycles, non-motorized foot scooters, motorized personal transportation devices (such as Segways or motorized scooters), and motorized mobility aids (such as motorized wheelchairs and three- and four-wheeled scooters).

Since the adoption of the *Motor Vehicle Safety Act* in 1971, vehicle manufacturing standards have continually been tightened in order to improve the protection of vehicle occupants in the event of a collision. Several components that improve the safety of vehicle occupants have been integrated into vehicles, including:

- shock absorbing crumple zones;
- seat belts with shoulder belts;
- front and side airbags;
- anti-lock brake systems (ABS);
- electronic stability control (ESC) systems.

In addition to the minimal requirements set out by regulation, certain automobile manufacturers now offer other attractive safety features, such as speed adaptation systems, automatic brake systems, lane departure warning and lane keeping assist systems, collision warning systems, backup cameras and more. However, some of the navigation tools offered, such as screens or GPS systems that provide information on the condition or location of the vehicle, can also be sources of distraction.

MANUFACTURING STANDARDS

Manufacturing standards²⁶ come under the jurisdiction of Transport Canada and are different for each class of vehicle:

- Cars, pick-up trucks and sport utility vehicles must comply with more safety standards than trucks, buses, motorcycles and low-speed vehicles.
- The standards only apply to new vehicles sold in Canada and to imported vehicles that are less than 15 years old.
- In order to assess whether certain safety standards are met, destructive tests, such as crash tests, are required. Compliance with other standards, such as braking distance standards, can be tested using simpler techniques.

²⁶ Not all types of vehicles are subject to these standards.

Some vehicles, including imported vehicles that are more than 15 years old and hand-crafted vehicles, are exempt from complying with Transport Canada's manufacturing standards. Such vehicles provide substandard protection to their occupants in the event of a collision, due to their lack of certain features (like airbags) and systems (like ABS or ESC).

AGE OF VEHICLES

In Québec, the average age of vehicles on the road (automobiles and light trucks) is approximately 7 years, and approximately 20% of all vehicles are 10 years old or more. Despite the fact that the vehicles in operation are getting older, mechanical defects are responsible for less than 6% of accidents.

MODIFICATION, REBUILDING AND MECHANICAL INSPECTION OF VEHICLES

In Québec, the *Highway Safety Code* (HSC) authorizes the modification of vehicles. However, the only modifications that must be approved by the Société de l'assurance automobile du Québec are those that affect a vehicle's stability or braking capacity. This is a safety issue, as modified vehicles may sometimes no longer meet Transport Canada's standards.

Furthermore, as the technology used in vehicles becomes increasingly complex, as more and more vehicles become equipped with electronic sensors and controls, and as new specialized materials (e.g. advanced high-strength steel, aluminium, adhesives, structural foams) make their way onto the market, repairing severely damaged vehicles is becoming more complex. Big car manufacturers do not always make the necessary repair procedures and equipment available to body shops. In general, technical expertise and mechanical inspections do not ensure that the proper procedures have been followed or that the repairs are well done and meet requirements, which increases the risk of non-compliant, less safe vehicles ending up on the road.

OUTSIDE OF QUÉBEC

Most big car manufacturers and high-tech companies are in the process of developing, between now and 2020, vehicles equipped with an automated driving system (self-driving vehicles). These systems can operate at varying levels of autonomy and, at the highest level, the system controls all driving tasks.

Given that approximately 80% of all accidents are attributable to human factors, these vehicles have the potential to dramatically improve road safety. However, the issues that they come with are manifold and there are still many steps that need to be taken before we see them on our roads. All around the world, public authorities need to assess the safety of these vehicles, establish rules to govern their operation and regulate the technologies that they use.

The National Highway Traffic Safety Administration has advised American states to not authorize self-driving vehicles for on-road use, except for road tests. Certain states, including California, Nevada and Florida, have adopted legislation to that effect that regulates road tests carried out by manufacturers who apply to carry out such tests. In Canada, Ontario launched a pilot project in January 2016 to test self-driving cars on its roads.

WHAT DO YOU THINK?

When it comes to the safety of vehicles, what concrete steps should we take to keep improving Québec's road safety record?

Self-driving vehicles may have great potential for improving road safety. What should we do to prepare for the arrival of such vehicles in Québec?



YOUNG DRIVERS AND ROAD SAFETY EDUCATION

OVERVIEW

The two leading causes of death for young people aged 16 to 24 in Québec are traffic accidents and suicide.

In 2015, while the 16-to-24 age group represented only 9% of all driver's licence holders, it represented 21% of all drivers involved in accidents resulting in injury or death.

From 2011 to 2015, each year on average:

- 101 young drivers were involved in a fatal accident;
- 470 were involved in an accident resulting in serious injury;
- 9,382 were involved in an accident resulting in minor injury.

Although the road safety record of young drivers aged 16 to 24 has greatly improved over the past years, due to their inexperience and greater tendency for risk taking, they remain overrepresented in accidents.

OFFENCES

Young drivers are overrepresented when it comes to offences that lead to demerit points, notably: failure to obey speed limits, failure to stop at red lights or stop signs, using a hand-held cell phone while driving. Furthermore, 25% of all alcohol-related *Criminal Code* offences in 2014 were committed by drivers aged 16 to 24.

LEGISLATIVE FRAMEWORK

In order to lower the number of young drivers involved in traffic accidents, holders of a learner's licence or a probationary licence are required to go through a graduated licensing process. A driver who holds a learner's licence must be accompanied at all times by an accompanying rider who has held a valid driver's licence (of the same class as that sought by the learner driver) for at least 2 years. The accompanying rider must be capable of providing help and advice at all times. Furthermore, holders of a learner's licence or probationary licence cannot have more than 4 demerit points entered on their record and are subject to a zero-alcohol rule, regardless of their age.

Since 2010, the rules governing access to a driver's licence have been reinforced by the introduction of:

- a mandatory driving course for all new drivers;
- graduated maximum demerit point brackets following the probationary licence period:
 - 8 demerit points, for those under age 23,

- 12 demerit points, for those aged 23 and 24,
- 15 demerit points, for those aged 25 and older; and
- the zero alcohol rule for all drivers under age 22.

CHARACTERISTICS OF TRAFFIC ACCIDENTS INVOLVING YOUNG DRIVERS

- Impaired driving (alcohol, drugs, fatigue):
 - From 2010 to 2014, 46% of drivers aged 16 to 24 who were killed in an accident had alcohol in their bloodstream.
 - Drivers aged 16 to 19 drive under the influence of cannabis more frequently than they drive under the influence of alcohol.
 - Teenagers and young adults tend to accumulate a lack of sleep and overestimate their abilities. This helps explain why they are among the drivers most at risk for fatigue-related accidents.
- Speeding:
 - From 2011 to 2015, speeding was a factor in 54% of fatal accidents involving drivers aged 16 to 24.
- Seat belts:
 - In 2015, 27% of young drivers killed in a traffic accident were not wearing their seat belts.

MANDATORY DRIVING COURSE

Since January 2010, individuals who wish to obtain a licence to drive a passenger vehicle must pass the mandatory driving course.

The goal of the course is to ensure that new drivers have a better understanding of how to drive a road vehicle and what the traffic rules are. As a result, new drivers will be more aware of the risks associated with driving and more mindful of their responsibilities.

On top of teaching new drivers the skills required to drive a passenger vehicle, the course also focuses on the influence that behaviour has on driver safety.

OUTSIDE OF QUÉBEC

The graduated licensing system is based on the premise that it is safer to progressively integrate learner drivers into the driving environment in order to have them acquire experience in lower-risk conditions.

All Canadian provinces and territories use this type of program for learner drivers, who are, for the most part, young people. Legislation varies between the different jurisdictions. This is also the case for the restrictions that may apply to new drivers. In Ontario, for example, as a rule, learner drivers cannot drive between midnight and 5 a.m., and they cannot drive with more than one passenger.

WHAT DO YOU THINK?

When it comes to young drivers, what concrete steps should we take to keep improving Québec's road safety record?

Should Québec prohibit learner drivers from driving at night and/or limit the number of passengers they can have in the vehicle with them?

CONCLUSION



This document was prepared for the general public and all other road safety stakeholders as a starting point for their reflection on ways to improve the road safety record.

The writing team attempted to present the information it contains in as simple and straightforward a manner as possible to ensure that everyone understands the road safety issues Québec faces.

This first public consultation on road safety is a unique opportunity for people to have their voices heard on how to make Québec roads as safe as possible.

We are all invited! In Québec, road safety matters to everyone.



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