



CANADA

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Canada recorded 1 922 road fatalities in 2018, a 3.6% increase from 2017. The mortality rate in 2018 was 5.2 deaths per 100 000 population. Canada has adopted the Vision Zero approach as an inspirational goal. The fourth national road safety plan, the Road Safety Strategy (RSS) 2025, was launched in 2016. This plan has a greater emphasis on vehicle technologies and roadway infrastructure.

Impact of Covid-19

In response to the Covid-19 Pandemic, Canada introduced lockdown measures at different moments depending on the jurisdiction, which affected the movement of people and goods on the road and, in turn, the exposure to road crashes.

As an illustration, traffic volumes decreased by 30 to 50%, while the number of road deaths decreased by 46% in April 2020, compared with the average for 2017-19, based on estimated data.

Table 1. Road fatalities by month

	Average 2017-19	2020	% change
January	121	113	-7%
February	99	105	6%
March	114	81	-29%
April	116	62	-46%
May	136	82	-40%
June	167	88	-47%

Trends

Canada registered an overall **increase in the number of road deaths in 2018**. According to latest data, 1 922 persons lost their lives in traffic crashes in Canada in 2018. This represents a 3.6% increase on 2017. In 2017, 1 856 road deaths were reported.

The **longer-term trend for road deaths** in Canada has shown significant progress. Between 2000 and 2018, the number of annual road fatalities fell by 34%. Significant declines in the number of annual road fatalities were made in the period 2005-11, when annual fatalities fell by 30%. Since 2012, however, the reduction in the number of road deaths has slowed with annual total fatalities dropping only 1.5% in the period 2013-18.

The number of **traffic deaths per 100 000 inhabitants** in Canada has fallen by 45% between 2000 and 2018. In 2018, 5.2 traffic deaths per 100 000 inhabitants were recorded, compared to 9.5 in 2000. By way of comparison, the average in the European Union is 4.9 deaths per 100 000 inhabitants in 2018.

Measured as **traffic deaths per billion vehicle-kilometres** (vkm) driven, the fatality risk of Canada showed an encouraging longer-term trend. In 2018, this metric stood at 4.9, 47% lower than in 2000.

Canada recorded 0.8 **road fatalities per 10 000 registered vehicles** in 2018. This represents a 50% reduction since the year 2000, when the rate of deaths to registered vehicles stood at 1.6.

Country Profile

Population in 2019: 37.5 million

GDP per capita in 2019: 46 195 USD

Cost of road crashes: 2.1% of GDP (2018)

Road network: 1 304 100 kilometres (2017)

Registered motor vehicles in 2019: 25 million (cars 92%; goods vehicles 5%; motorcycles 3%)

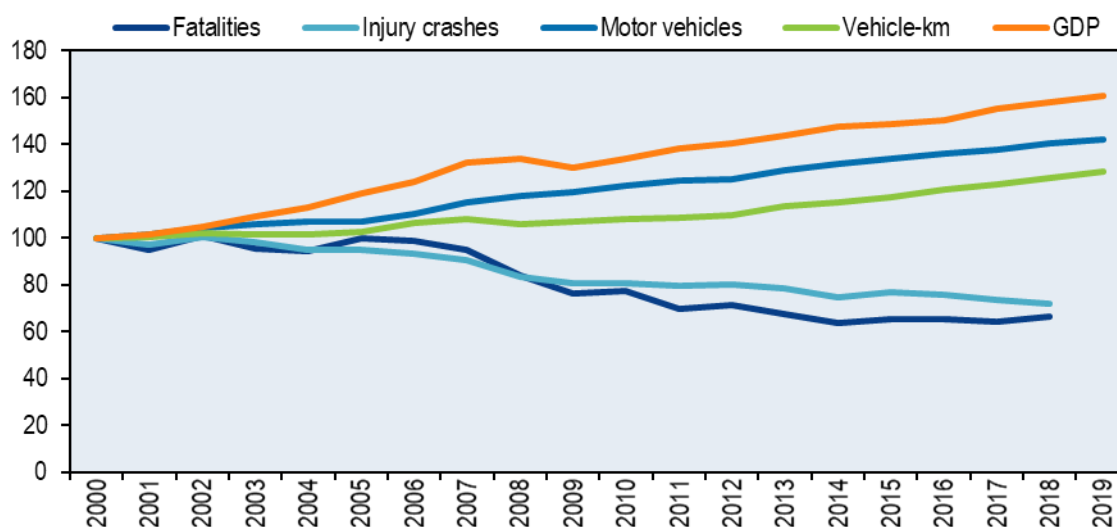
Volume of traffic: +25% between 2000 and 2019

Speed limits: 40-70 km/h on urban roads; 80-90 km/h on rural roads; 100-110 km/h on motorways

Limits on Blood Alcohol Content:

administrative maximum level of 0.5 g/l or 0.4 g/l in most provinces; 0.0 g/l administrative maximum level for novice and young (under 21) drivers in most provinces

Figure 1. Road safety, vehicle stock, traffic and GDP trends
Index 2000 = 100



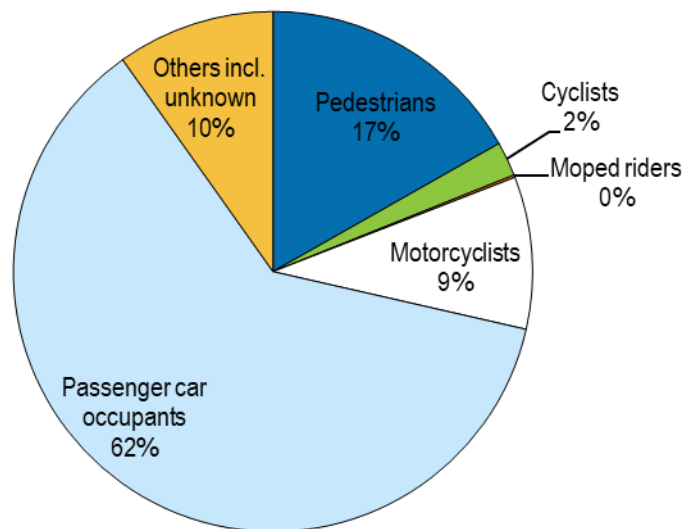
The graph for **fatalities by road user groups** shows that passenger car occupants continue to be the group the most affected by road crashes. In 2018, passenger car occupants accounted for the largest share of road deaths with 62% of the total. They were followed by pedestrians (17%), motorcyclists (9%) and cyclists (2%).

All road user groups suffered an increase in their number of road deaths in 2018, with the exception of motorcyclists, who suffered 6.2% fewer deaths compared to 2017. Pedestrians suffered 7% more road fatalities with an increase of 21 deaths, from 302 in 2017 to 323 in 2018. In 2018, road fatalities increased by 3.6% for occupants of passenger cars and 2.5% for cyclists.

The long-term perspective shows that traffic fatality trends in Canada have been somewhat inconsistent across road user groups. In the period 2000-18, road fatalities decreased by 42% for passenger car occupants, 40% for moped riders and 13% for pedestrians. Despite these improvements, cyclists (+2.5%) and motorcyclists (+9.6%) experienced an increase in annual road fatalities in the same period.

More recently, since 2010 (see Figure 6), the number of fatal casualties decreased for all user groups with the exception of pedestrians. Between 2010 and 2018, against an overall decrease of 14%, the number of road deaths decreased by 33% for cyclists, by 20% for car occupants and by 4% for motorcyclists; while it increased by 5.6% for pedestrians.

Figure 2. Road fatalities by road user group in percentage of total, 2018



Road deaths by age group in 2018 increased for all, except for the 0-14 age group who suffered 18 fewer fatalities (-24%) compared to 2017. The biggest increases in the number of road fatalities were suffered by road users aged 65 and over with 59 more deaths (+16%) and by the 15-17 age group with 9 more deaths (+17%) in 2018. The age groups between 18 and 64 years old registered a 1.3% increase on average.

Looking at the longer-term trend, since 2000, the number of road deaths decreased for all groups. The strongest reduction in fatalities over this period occurred among 15-17 year-olds, who registered 120 fewer deaths (-66%). More broadly, young people benefitted greatly from road safety improvements during this period with each age category up to 24 years of age seeing reductions of 50% and above.

More recently, since 2010 (see figure 6), the number of road deaths decreased for all age groups, with the exception of people aged 65 and above.

Despite these improvements, young people continue to be at high risk in traffic, with a much higher than average mortality rate. In particular, 18-20 year-olds and 21-24 year-olds had mortality rates of 8.4 and 7.4, respectively, per 100 000 persons in 2018. However, in 2018 the age group at the highest risk was that of over 75 years-old, with a rate of 8.7 fatalities per 100 000 inhabitants.

Figure 3. Road fatality rates by age group, 2010-18
Deaths per 100 000 population in a given age group

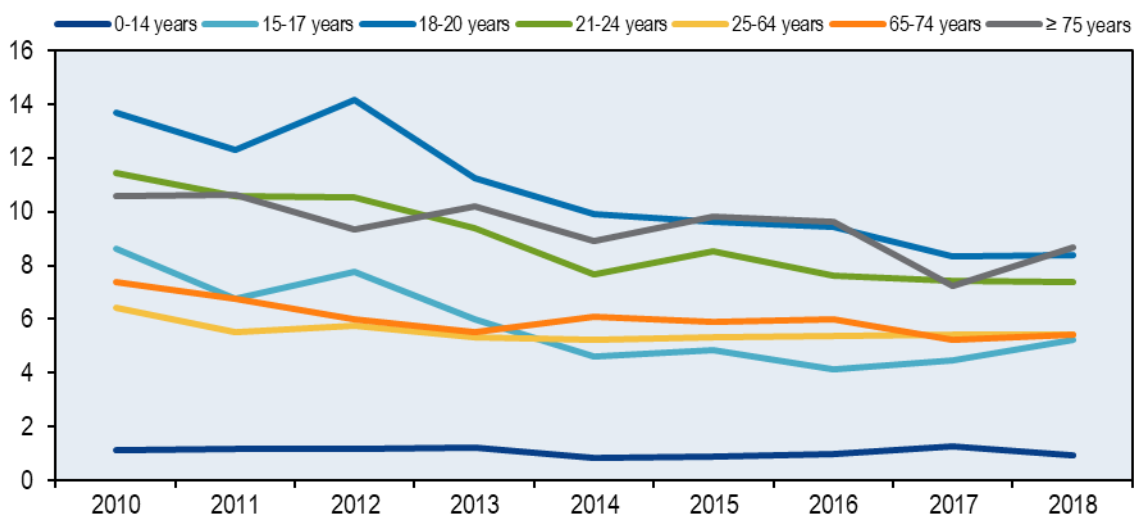
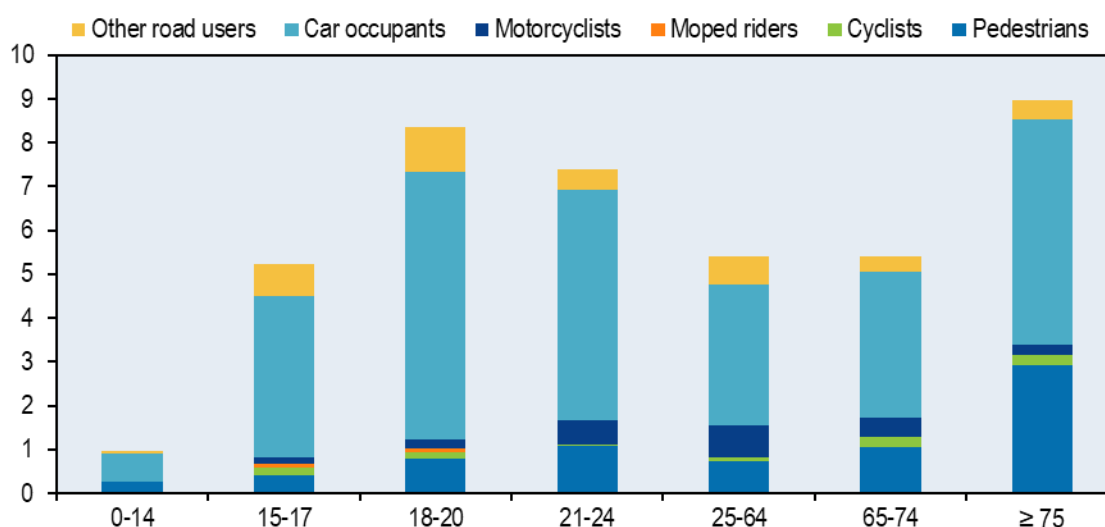


Figure 4. Road fatality rate by age and road user group, 2018
Fatalities per 100 000 population



Analysis of **fatalities by road type** shows that the rural road network accounted for the highest number of deaths. In 2018, 32% of deaths occurred on rural roads, 31% on urban roads and 16% on motorways. This repartition has remained relatively stable in recent years. For about 20% of road deaths, the road category is not identified in the crash data system.

In 2018 - in comparison to 2017 - the number of road deaths increased by 6.1% on urban roads and by 3% on motorways. On rural roads, road fatalities increased by 0.8%.

Since 2000, fatalities decreased by 26% in urban areas, by 46% on rural roads and by 18% on motorways.

Figure 5. Road fatalities by road type

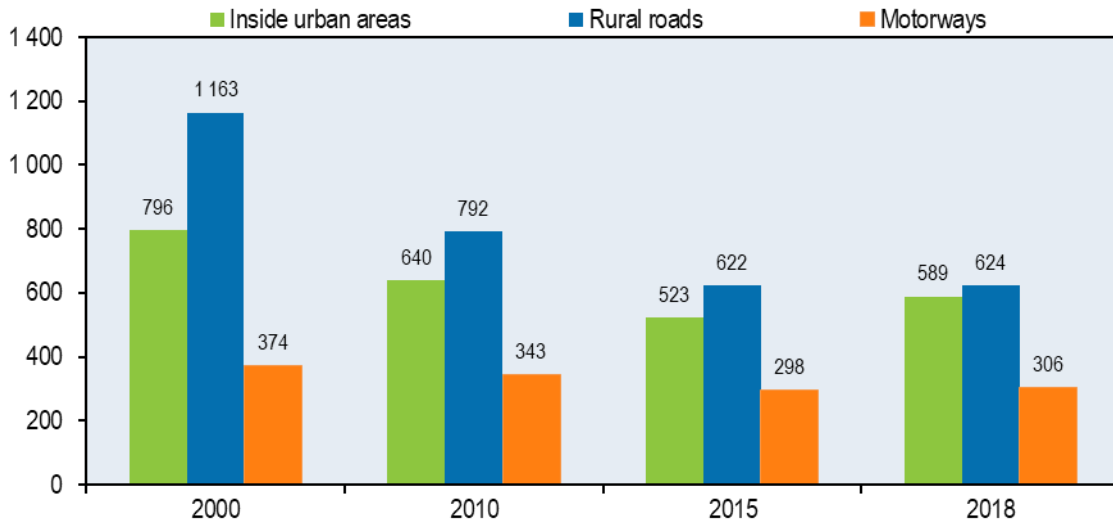
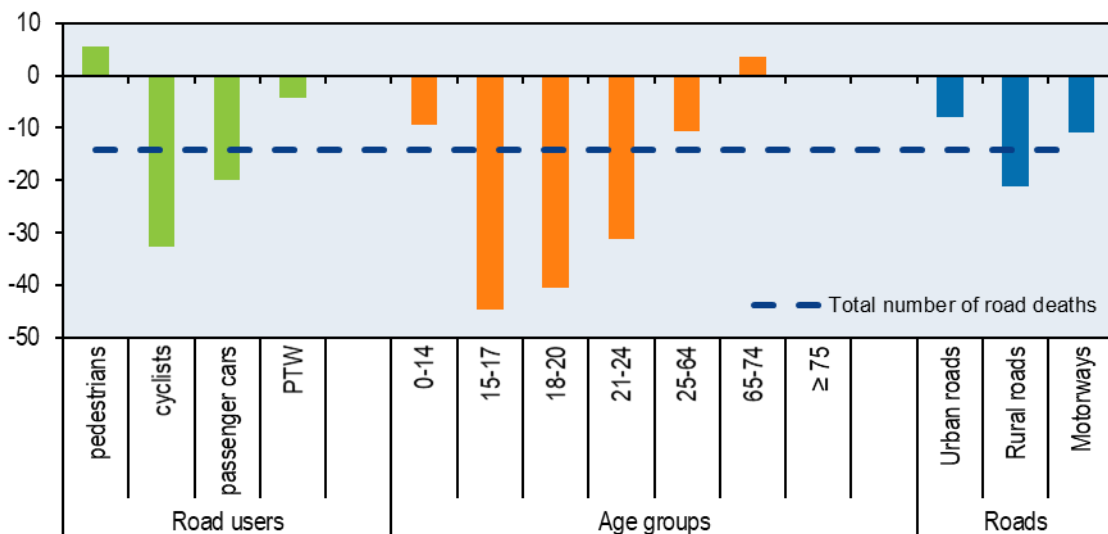


Figure 6. Evolution of road deaths by user category, age group and road type, 2010-18



To understand road safety issues, fatality data are essential, but hardly sufficient. Information on **serious injuries from crashes** is also critically important. Yet injury data are much more difficult to obtain, validate and - where available - compare. In Canada, the number of people hospitalised or injured after a road crash decreased by 7% in 2018 compared to 2017. Since 2000, hospitalisations due to road crashes have decreased by 33%.

Economic costs of road crashes

For the purpose of this report, costs have been calculated using the willingness-to-pay approach. This means that the value of a statistical life (VSL) is used to value fatalities, and fractions of VSL are used to value injuries, based on quality-adjusted life years (QALYs) lost.

Traffic crashes represent a very significant cost for society at CAD 40.7 billion or 2.1% of GDP in 2018.

Table 2. Costs of Road Crashes, 2018

	Unit Cost (2010 CAD)	Total Cost (2010 CAD)
Fatalities	9 068 280*	17.62 billion
Hospitalised	1 238 209*	10.91 billion
Slight injuries	32 213*	3.87 billion
Property damage costs	10 804**	5.12 billion
Other	5 513**	3.22 billion
Total	69 743**	40.74 billion
Total as % of GDP		2.1%

*Unit cost is per casualty

**Unit cost is per collision

Behaviour

The behaviour of road users is an important determinant of a country's road safety performance. **Speed**, along with impaired and distracted driving, is a significant contributor to motor vehicle fatalities. In 2018, approximately 23% of fatal crashes involved speeding. Over the last decade, speed-related fatalities have declined significantly. Casualty data in 2018 indicated a 36% reduction in speed-related crashes compared to the 2006-10 period.

The table below summarises the main speed limits in Canada.

Table 3. Passenger car speed limits by road type, 2020

	General speed limit
Urban roads	40-70 km/h
Rural roads	80-90 km/h
Motorways	100-110 km/h

In 2018, statistics from the National Collision Database showed that approximately one-in-five fatal collisions were reported to have **alcohol** involvement as a contributing factor.

Information on the presence of alcohol is collected on police crash report forms, but as the data are not always reliable, a surrogate is used for instances of deaths of drivers and pedestrians involving alcohol and drugs. The percentage of fatally-injured drivers who were tested for alcohol and drugs is applied to all motor vehicle deaths to estimate the percentage of all deaths that were alcohol or drug related. With respect to injury crashes, any police report which indicates alcohol or any crashes that fit a surrogate model are identified as alcohol related.

Under the Criminal Code of Canada, the maximum permissible blood alcohol content (BAC) when driving is 0.8 g/l. However, in most provinces and territories, there is an administrative maximum level of 0.5 g/l (0.4 g/l in Saskatchewan, and in Quebec the 0.5 g/l limit only applies to commercial vehicles). In addition, most provincial/territorial jurisdictions have a zero BAC limit for young (under 21) and/or novice drivers.

Penalties under these administrative programmes are significant but do not match the seriousness of a full Criminal Code of Canada charge. Penalties in both situations increase for repeat offenders.

On 17 October 2018, cannabis became legalised in Canada and on 18 December 2018, new laws under the Criminal Code of Canada associated with **drug impaired driving** came into force. Provinces and territories have been updating their administrative sanctions in response to these changes. The Canadian Council of Motor Transport Administrators (CCMTA) recognises that the legal changes brought forth by cannabis legalisation will have far-reaching implications for jurisdictions. Legalisation will have multiple impacts – from information and technology systems, to the training of personnel, to legislative, regulatory, enforcement and program changes – that will require changes so that they align with and support federal legislation.

There are two prohibited levels for THC, the primary psychoactive component of cannabis: it is a less serious offence to have between 0.002 g/l and 0.005 g/l of THC. It is a more serious offence to have 0.005 g/l of THC or more. In December 2019, new regulation for the production and sale of edible and topical products came into force.

The prohibited level of alcohol and cannabis, when found in combination, is 0.050 g/l or more of alcohol and 0.0025 g/l or more of THC.

Transport Canada, in co-operation with provincial and territorial jurisdictions, regularly conducts roadside surveys to assess the rates of impaired driving by alcohol or drugs during night-time periods. Some daytime surveys have also taken place. The Traffic Injury Research Foundation maintains the Fatality Database, which tracks toxicology results on fatally-injured pedestrians and drivers in motor vehicle collisions.

Distraction driving happens when a driver's attention is taken away from the driving task because they are focused on something else. This could be, for example: texting, talking on the phone or to passengers, eating or drinking, and using the entertainment or navigation system.

Individual provinces and territories regulate the use of mobile phones or other electronic devices while driving. Penalties include fines, licence demerit points and the possibility of licence suspension.

According to data from Transport Canada's National Collision Database, distracted driving contributed to an estimated 20% of fatal collisions and 21% of serious injury collisions in 2018. These statistics are part of an upward trend of distracted driving-related collisions, up from 16% of fatal collisions and 17% of serious injury collisions a decade earlier.

The Minister of Transport chaired a National Roundtable on Distracted Driving in Montreal on 28 June 2018. Presentations were made by the Canadian Vehicle Manufacturers Association, the Global Automakers of Canada and the Canadian Wireless Telecommunications Association. The meeting culminated in agreement to develop a national action plan, based on the foundational work of the CCMTA, emphasising early deliverables with respect to research and data collection.

In addition, Transport Canada has worked with partners on the following deliverables:

- CCMTA conducted a survey of electronic device use by drivers across Canada (Reports, when available, can be found at: <https://www.ccmta.ca/en/publications/ccmta-reports/distracted-driving>)
- CCMTA, with the assistance of Transport Canada, is working on three key initiatives:
 - an on-road survey of electronic device use while driving;
 - estimating the impact of these devices on collisions;
 - an examination of distracting technologies currently available.

Transport Canada has completed guidelines to limit distraction from visual displays and is working on a report examining cellular phone use by Canadians and Americans at naturalistic driving sites from the SHRP2 data. Transport Canada reports and work can be found at <https://tc.canada.ca/en/search/site?key=distracted%20driving>.

It is estimated that about 20% of fatal collisions involve driver **fatigue**, calculated by eliminating other possible causes such as alcohol impairment, speeding, unsafe passing, etc. (CCMTA, 2010).

The North American **Fatigue Management Program** is a comprehensive educational website that provides motor carriers, their drivers, dispatchers and managers with all the necessary information to mitigate driver fatigue over and above Hours of Service Regulations.

Seat belt use was made compulsory in Canadian jurisdictions between 1976 and 1988. The laws around the use of seat belts and child restraints are provincial or territorial. All provinces and territories have had laws in place mandating the use of child restraints since

the 1980s, and they are occasionally updated. In most cases, the driver is responsible for ensuring that a child is correctly restrained.

In Canada, child restraint use is promoted in four stages: rear facing; forward facing; booster seats; three-point seat belt in the rear seat. Graduation from one stage to another is based on the seat involved and the weight and height of the child. Use of Stage 1 and Stage 2 seats is very high but only some provinces/territories have legislation requiring booster seats.

Seat belt use in Canada over the last few years was approximately 95%. A 2016 urban survey of front seat occupants in Canada indicates seat belt wearing rates held at 97.5%. However, more than 30% of occupants killed in 2018 were unbelted at the time of the crash. This represents a slight improvement since 2011, when 31% of occupants killed were unbelted.

A 2010 observational study of child restraint use in Canada indicates that incorrect use of child restraints increases with the age of the child. The most significant incorrect usage issue is premature graduation from one stage to another, which reduces safety for the child (Snowdon et al., 2011).

Table 4. Seat belt wearing rates
Percentages

	2000	2010	2018
Front seats			
Driver	91	96	97.5
Urban roads (driver)	92	96	..

Road safety management and strategies

There are several **influencing factors on Canada’s road safety performance** as captured by the above indicators. Increased efforts by key stakeholders contributed to the overall progress through the development and implementation of road safety strategies, plans and countermeasures that focused on key areas of concern, such as speeding, impaired driving and unbelted occupants. Other contributors include improvements in vehicle safety features and equipment.

The overall long-term progress was achieved despite ongoing growth over this period in the Canadian population, the number of licensed drivers, the number of registered vehicles and vehicle kilometres travelled.

In terms of progress made on national road safety plans, the progress that was achieved in the closing years of the Road Safety Vision 2010 has so far kept its momentum going over the course of Road Safety Strategy 2015 and into Road Safety Strategy 2025.

In Canada, the **responsibility for road safety** is divided among different levels of government and other road safety and private sector partners.

Federal, provincial and territorial departments responsible for transport and highway safety work together through various committees and associations that report to the Council of Ministers responsible for Transportation and Highway Safety. This council is assisted by the Council of Deputy Ministers responsible for Transportation and Highway Safety. Within this structure, four committees co-ordinate multi-jurisdictional views and efforts (Canadian Council of Motor Transport Administrators, Engineering and Research Support Committee, Task Force on Vehicle Weights and Dimensions, and the Policy and Planning Support Committee). In addition, the Transportation Association of Canada, which also includes a number of municipal partners, addresses infrastructure issues.

This structure is designed to promote national consistency, provide a platform to share information and assist jurisdictions in addressing issues within their specific mandate. Ultimately, the responsibility for implementation remains with the appropriate jurisdictions.

The Federal Government is responsible for regulations and standards related to the manufacture and import of motor vehicles, tyres and child restraints. Provincial and territorial governments are responsible for licensing drivers, registering vehicles and administering justice and jurisdictional road safety programmes. They are also responsible for policy and regulations regarding the roadways. In many cases, the road authority responsible for the operations of the road may be regional or municipal governments, which must operate within the provincial guidelines.

Canada's fourth **national road safety plan**, the Road Safety Strategy (RSS) 2025 was launched by the Council of Ministers responsible for Transportation and Highway Safety in early 2016. The goal remains to achieve downward trends in fatalities and serious injuries throughout a five-year duration, comparing multi-year rolling averages with the established baseline period.

The new plan has a greater emphasis on vehicle technologies and roadway infrastructure. Canada has adopted the Vision Zero approach as an inspirational goal. A database of proven and promising road safety initiatives is maintained as a part of the strategy and each jurisdiction is encouraged to develop their own road safety plan based on regional needs and conditions.

The aspirational goal of RSS 2025 is zero fatalities and serious injuries. The Canadian Council of Motor Transport Administrators, with assistance from Transport Canada, reports annually on progress toward the goals of fatality and injury reduction. A number of rate-based measures are used to focus on progress in specific areas such as impaired driving, speeding and unbelted occupants.

When comparing the 2018 figure (now into the third year of RSS 2025) with the baseline period of 2011-15, fatalities were down 2%, while serious injuries were down by 12%.

Measures

Several measures to improve road safety management have recently been put into place.

Road safety management: Vision Zero is being adopted by a number of safety partners such as municipalities and transportation departments.

Transport Canada is committed to supporting the safe testing and deployment of connected and automated vehicles (CAVs). Transport Canada continues to develop and implement its safety framework for CAVs to establish a stable policy environment and provides a comprehensive overview of the current and planned legislative and regulatory landscape. Furthermore, it points to a range of flexible non-regulatory policy tools that together will serve to manage safety and security issues related to CAVs in the near to medium term. These non-regulatory tools include guidelines for trial organisations testing CAVs, as well as a Safety Assessment tool to assist new vehicle developers to review the safety of components that are not covered in existing regulations (canada.ca/automatedvehicles).

Road users: In 2019, the federal government mandated the use of electronic logging devices (ELDs) by federally-regulated motor carriers and their drivers to better track and monitor a driver's hours of service in an effort to improve compliance, reduce risk of fatigue-related collisions and promote fairer competition between motor carriers. ELDs are tamper-resistant devices that will automatically record information such as driving time, odometer readings and engine power-up to improve the accuracy of the records, reduce the administrative burden on motor carriers and drivers, and to make it easier for enforcement officers to verify the records. The requirement to use ELDs goes into effect on 12 June 2021.

The Canadian Automobile Association (CAA) has produced a mobile online game available on most iOS and Android devices named "TXT U L8R: Drive Like Your Life Depends on it" in order to educate road users on the dangers of distracted driving.

Transport Canada is investigating human performance and driver state in an effort to better understand their role in automated driving systems. This work is contributing to the development of scenarios and testing procedures to assess the safety of human interactions with automated driving systems.

As a follow-on to the vulnerable road user (VRU) challenge, Transport Canada is partnering with Parachute Canada to provide information and evidence regarding the protection of VRUs on the road. The information will be hosted on the ParachuteCanada.org site along with other Vision Zero supporting materials.

Vehicles: Transport Canada introduced a new lighting standard to help vehicles and drivers to see, and be seen. As of 1 September 2021, the Canadian Vehicle Lighting Regulation will require that all new vehicles sold in Canada have one of the following: tail lights that come on automatically with daytime running lights; headlights, tail lights, and side marker lights that are automatically turned on in low-light conditions; or a dashboard

that stays dark to alert the driver to turn on their lights. This standard will apply to all new vehicles (cars, trucks, SUVs, 3-wheeled vehicles, motorcycles and heavy trucks).

Transport Canada continues to evaluate the performance of a variety of new crash avoidance systems, such as Automatic Emergency Braking (AEB), lane support systems and blind spot warning systems, on light and heavy-duty vehicles under various conditions including night-time, rain, snow and ice. Transport Canada is also evaluating technologies that have the potential to make school buses safer. Such technologies includes AEB, 360-degree cameras, pedestrian detection and warning systems, extended stop arms and infraction cameras.

Following numerous years of research and supported by the findings of School Bus Safety and the Vulnerable Road User Task Forces, which highlighted automatic emergency braking (AEB) systems as a promising technology, Transport Canada published a consultation on the Let's Talk Transportation platform (<https://letstalktransportation.ca/road-safety-aeb>). This consultation, published in September 2020, requested comments on mandating AEB on all vehicles including passenger cars, heavy trucks and school buses.

A vulnerable road user pilot study has been implemented at two of the Transport Canada contracted investigation teams located in Quebec and Ontario. The project will determine the performance of the advanced driver assistance systems available today that may prevent or reduce the severity of vehicle-to-vulnerable road user impacts through the use of pedestrian collision avoidance and mitigation systems.

Transport Canada is actively involved in promoting the safety aspects of connected and automated vehicles (CAVs) in Canada through the development of non-regulatory tools and policies that provide guidance to support government and industry stakeholders.

In May 2020, Transport Canada released [Canada's Vehicle Cyber Security Guidance](#), which provides a set of technology-neutral guiding principles to support industry in making sure that vehicles are cyber-safe. The guidance offers best practices on managing cyber security risks and protecting the entire vehicle ecosystem with safeguards, as well as how to detect, monitor, respond to, and recover from vehicle cyber security events.

Through the Canadian Council of Motor Transport Administrators (CCMTA), Transport Canada along with provincial and territorial road transportation officials also developed the "[Canadian Jurisdictional Guidelines for the Safe Testing and Deployment of Highly Automated Vehicles](#)". The Jurisdictional Guidelines advance a consistent approach to connected and automated vehicle policy across jurisdictions, and advises on policy, regulatory and administrative issues that jurisdictions may need to consider as they support the testing and deployment of these technologies.

Transport Canada launched a public awareness campaign focused on driver assistance technologies (DAT). This effort comprised three parts: i) an updated TC website focused on [Driver Assistance Technologies](#); ii) a paid advertising campaign on YouTube promoting ADAS safety videos; and iii) ADAS safety messaging on social media. These efforts aim to

aid in reducing driver confusion about ADAS terms and define the functions of these systems in a consistent manner.

Transport Canada is investigating rider perceptions of low-speed automated shuttles. User surveys and interviews were conducted during public on-road automated shuttle trials to measure perceptions of safety, interactions and acceptance. This work will help to inform policy and contribute to the development of safety measures for low-speed automated shuttles to increase public acceptance and appropriate use of these vehicles.

Continuing to work towards implementation of the electronic logging device (ELD) mandate, in October 2020, Transport Canada announced the accreditation of the first certification body for ELDs in Canada. This important milestone marks the start of the certification process in a concerted effort with provinces and territories, the Canadian Council of Motor Transport Administrators as well as industry stakeholders, to improve commercial motor vehicle safety by replacing paper logs with ELDs.

In addition to its domestic activities, Transport Canada continues to strengthen its engagement in international fora to develop globally consistent safety requirements for automated vehicles, including: the United Nations' Global Forum for Road Traffic Safety (Working Party 1) and the World Forum for Harmonization of Vehicle Regulations (Working Party 29). Of note, Canada recently became co-chair of the informal working group on Validation Methods for Automated Driving (VMAD) at WP.29.

Going forward, Transport Canada will continue to work with diverse stakeholders to develop non-regulatory tools to support the development of CAV regulations.

Infrastructure: The Transportation Association of Canada (TAC) has released the 2017 edition of the Geometric Design Guide for Canadian Roads (GDG). The Guide is a fundamental reference document for roadway design practitioners in the consistent and safe development and expansion of regional, provincial and national roadway and highway systems in Canada.

Complementary to the GDG is the Canadian Roundabout Design Guide (CRDG), which provides information and guidance related to the planning, design, construction, operation, maintenance and safety of roundabouts in Canada. The CRDG has been written and compiled based on review of national and international best practice documents and research, while considering the experience of Canadian jurisdictions with roundabouts already in service.

The Transport Association of Canada has completed a report on study findings to help practitioners evaluate the safety performance of bicycle facilities within their jurisdiction.

The TAC has released the Canadian Guide to Traffic Calming (Second edition), which presents traffic calming as a method to reduce the speed and/or volume of non-local traffic infiltrating into neighbourhoods. It explains principles and suggests a process for introducing and implementing traffic calming, and describes the applicability,

effectiveness, and design principle for a wide range of traffic-calming devices. The devices are categorised in terms of vertical deflection, horizontal deflection, roadway narrowing, surface treatment, pavement markings, access restriction, gateways, enforcement, education, shared space, and emerging technologies and measures.

Definition, methodology, data collection

Key definitions:

- **Road fatality:** a person who died immediately or within 30 days of a crash.
- **Seriously injured:** a person admitted to hospital for treatment or observation.
- **Slight injury:** if “minimal” then no immediate medical attention was required, but would include minor abrasions, bruises and complaint of pain. If “minor” the person went to the hospital, was treated but not admitted.

Transport Canada has a well-established road safety data program and has been reporting on motor vehicle crash statistics since the 1970s. Police-reported road traffic crash information is collected and processed by provinces and territories and is then sent to Transport Canada for final processing and for compilation of national crash statistics.

Transport Canada considers the motor vehicle crash data to be relevant, of good quality overall and reliable for most analytical purposes. However, there are areas for improvement as some specific data variables are not provided by certain jurisdictions or consistently reported by all of them. In some cases, where data has not been received from all jurisdictions within Canada, methodologies are used to ensure that national estimates take into account any non-reporting.

Transport Canada is currently working with provincial and territorial road safety partners in the area of electronic data collection and other initiatives aimed at improving the timeliness and accuracy of motor vehicle crash data. Efforts are also being made in creating methodologies to potentially estimate for missing collision data to improve overall quality.

Currently, serious injury data are collected through the same reporting mechanism as for all crash data. Transport Canada is in the initial stages of trying to improve the quality of the injury data, and is currently undertaking an environmental scan and consultation process as part of its efforts.

The National Collision Database online web application is a query tool that contains national-level statistics on vehicle crashes occurring on public roads in Canada. Approximately 23 of the data elements in the National Collision Database are available to users, so that they can select and extract data of interest to them.

Resources

Recent research

There are a number of research projects managed by various levels of government and/or safety associations. There are some specific Transport Canada research activities in the areas of connected and autonomous vehicles, distracted driving and vulnerable road users that are in progress. Updates on road safety research and their findings/results can be found at:

- Transport Canada: <https://www.tc.gc.ca/eng/motorvehiclesafety/menu.htm>
- Canadian Association of Road Safety Professionals Conference: <http://www.carsp.ca/>

Road Safety driver and vehicle policy, regulations and research:

<http://www.ccmta.ca/en/>

Recent survey results have been released with respect to the use of electronic communications devices (e.g. mobile phones) on Canadian roads in the years 2016-17: <https://www.ccmta.ca/en/publications/road-safety-research/canadian-motor-vehicle-traffic-collision-statistics/item/use-of-electronic-communication-devices-by-canadian-drivers-combined-urban-rural-sites-2016-2017>

Infrastructure projects: <https://www.tac-atc.ca/>

- Canadian Model Rules of the Road (2018): http://www.tac-atc.ca/sites/default/files/site/doc/Bookstore/english_for_publishing.pdf
- Pedestrian Crossing Control Guide (2018): <https://www.tac-atc.ca/en/publications/ptm-pccq18-e>

Council of Ministers Responsible for Transportation and Highway Safety:

<https://comt.ca/Reports-e.htm>

- Safety Measures for Cyclists and Pedestrians Around Heavy Vehicles Summary Report (2018): <https://comt.ca/Reports/Vulnerable%20Road%20Users%202018.pdf>
- Automated and Connected Vehicles Policy Framework for Canada (2019): <https://comt.ca/Reports/AVCV%20Policy%20Framework%202019.pdf>
- The Future of Automated Vehicles in Canada (2018): <https://comt.ca/Reports/The%20Future%20of%20Automated%20Vehicles%20in%20Canada%202018.pdf>
- Active Transportation: A Survey of Policies, Programs and Experience (2018): <https://comt.ca/Reports/Active%20Transportation%202018.pdf>

Traffic Injury Research Foundation: <http://tirf.ca/>

- Road Safety Monitor 2017: Drugs & Driving in Canada (2017): <http://tirf.ca/wp-content/uploads/2018/10/RSM-Drugs-and-Driving-in-Canada-2017-9.pdf>

Canadian Centre for Substance Abuse and Addiction:

- Clearing the Smoke on Cannabis – Cannabis Use and Driving: <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Cannabis-Use-Driving-Report-2017-en.pdf>
- Impaired Driving in Canada (2020): <https://www.ccsa.ca/impaired-driving-canada-topic-summary>

Websites

Transport Canada: <http://www.tc.gc.ca/>

Transport Canada Distracted Driving: <https://www.tc.gc.ca/en/services/road/stay-safe-when-driving/distracted-driving.html>

Road Safety Strategy 2025: <http://roadsafetystrategy.ca/en/>

Transport Association of Canada: <https://www.tac-atc.ca/>

National Collision Database on-line Web application: <http://wwwapps2.tc.gc.ca/Saf-Sec-Sur/7/NCDB-BNDC/p.aspx?l=en>

North American Fatigue Management Program: <https://www.fmcsa.dot.gov/safety/research-and-analysis/north-american-fatigue-management-program-nafmp>

Royal Canadian Mounted Police: <http://www.rcmp-grc.gc.ca/ts-sr/index-eng.htm>

Department of Justice – Impaired Driving Laws: <https://www.justice.gc.ca/eng/cj-jp/sidl-rlcfa/>

Distracted Driving Laws: <https://www.caa.ca/distracted-driving/distracted-driving-laws-in-canada/>

Canadian Centre on Substance Use and Addiction (CCSA): <https://www.ccsa.ca/>

Traffic Injury Research Foundation (TIRF): <https://tirf.ca/>

Public Safety Canada – Impaired Driving (PSC): <https://www.canada.ca/en/services/policing/police/community-safety-policing/impaired-driving.html>

References

CCMTA (2010), *Canadian fatigue related collisions: Fatality estimates 2000-2005*.

Snowdon, A., A. Hussein and E. Ahmed (2011), *Canadian National Survey on Child Restraint Use 2010*, completed for Transport Canada, in partnership with AUTO21, <https://www.tc.gc.ca/eng/motorvehiclesafety/resources-researchstats-child-restraint-survey-2010-1207.htm>.

Road safety and traffic data

	1990	2000	2010	2017	2018	2018 % change over			
						2017	2010	2000	1990
Reported safety data									
Fatalities	3 963	2 904	2 238	1 856	1 922	3.6%	-14.1%	-33.8%	-51.5%
Injury crashes	181 960	155 838	125 636	114 408	112 302	-1.8%	-10.6%	-27.9%	-38.3%
Injured persons hospitalised	25 020	13 439	11 290	9 596	8 969	-6.5%	-20.6%	-33.3%	-64.2%
Deaths per 100,000 population	14.3	9.5	6.6	5.1	5.2	2.1%	-21.2%	-45.2%	-63.8%
Deaths per 10,000 registered vehicles	2.3	1.6	1.0	0.8	0.8	1.5%	-25.1%	-52.8%	-67.1%
Deaths per billion vehicle kilometres	..	9.3	6.7	4.9	4.9	1.3%	-26.2%	-47.3%	..
Fatalities by road user									
Pedestrians	584	373	306	302	323	7.0%	5.6%	-13.4%	-44.7%
Cyclists	106	40	61	40	41	2.5%	-32.8%	2.5%	-61.3%
Moped riders	8	5	5	3	3	0.0%	-40.0%	-40.0%	-62.5%
Motorcyclists	252	166	188	194	182	-6.2%	-3.2%	9.6%	-27.8%
Passenger car occupants	2 244	2 052	1 481	1 143	1 184	3.6%	-20.1%	-42.3%	-47.2%
Other road users	769	268	197	174	189	8.6%	-4.1%	-29.5%	-75.4%
Fatalities by age group									
0-14 years	305	144	63	75	57	-24.0%	-9.5%	-60.4%	-81.3%
15-17 years	223	183	114	54	63	16.7%	-44.7%	-65.6%	-71.7%
18-20 years	382	293	193	112	115	2.7%	-40.4%	-60.8%	-69.9%
21-24 years	444	294	211	144	145	0.7%	-31.3%	-50.7%	-67.3%
25-64 years	2 004	1 461	1 220	1 084	1 091	0.6%	-10.6%	-25.3%	-45.6%
65-74 years	..	225	191	184	198	7.6%	3.7%	-12.0%	..
≥ 75 years	..	280	235	189	234	23.8%	-0.4%	-16.4%	..
Fatalities by road type									
Urban roads	1 282	796	640	555	589	6.1%	-8.0%	-26.0%	-54.1%
Rural roads	1 957	1 163	792	619	624	0.8%	-21.2%	-46.3%	-68.1%
Motorways	570	374	343	297	306	3.0%	-10.8%	-18.2%	-46.3%
Traffic data									
Registered vehicles (thousands)	16 981	17 882	21 848	24 567	25 060	2.0%	14.7%	40.1%	47.6%
Vehicle kilometres (millions)	..	311 334	335 900	382 510	390 859	2.2%	16.4%	25.5%	..
Registered vehicles per 1,000 population	613.2	582.7	642.5	672.3	676.3	0.6%	5.3%	16.0%	10.3%