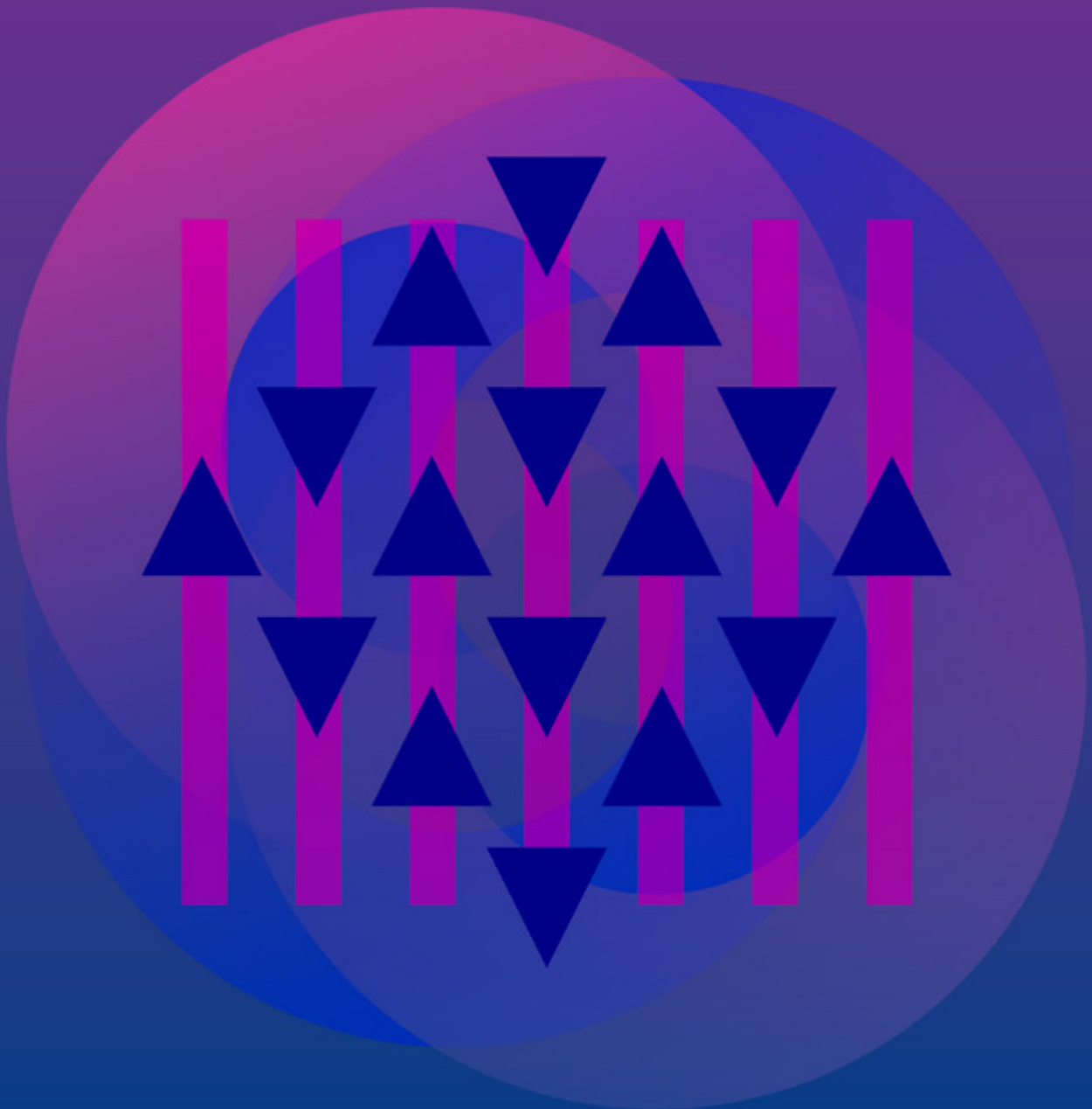


Road Safety Country Profile

Canada 2023



Overview

In 2021, Canada reported 1 768 road deaths, a reduction of 14.8% compared to 2012. Somewhat unlike what was observed in other countries, in 2020, Canada only experienced a slight decrease in road deaths (1 746), even though it was at the height of Covid-19 restrictions. However, the number of casualty road collisions did decrease significantly by approximately 30% during this time. In 2021, the number of vehicle-kilometres driven and fatalities were back to pre-covid levels (2019). 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.

Quick facts: Canada (all data from 2021, unless otherwise stated)

Population	38.9 million (2022)				
GDP per capita	USD 54 966 (2022)				
Road network	1 304 100 km				
Total number of motor vehicles	26.2 million				
	Cars	Motorcycles	Goods vehicles	Buses	
	92%	3%	5%	0.2%	
Volume of traffic	+31.7% (2000-22)				
Speed limits	Urban roads	Rural roads		Motorways	
	40-70 km/h	80-90 km/h		100-110 km/h	
Limits on blood alcohol content	General drivers		Professional drivers	Novice drivers	
	0.8 grams/litre (g/l); administrative maximum level of 0.5 g/l or 0.4 g/l in most provinces		0.0 g/l in most provinces	0.0 g/l in most provinces	
Road fatalities	1 768				
	Pedestrians	Cyclists	Car occupants	Motorised two-wheelers	Other and unknown
	17%	3%	57%	13%	10%
Road fatalities per 100 000 population	4.6				
Road fatalities per 10 000 vehicles	0.7				
Cost of road crashes	1.8% of GDP				

Short-term trends

Road deaths in 2022

In 2022, Canada recorded 1 934 road deaths, a 9.4% increase compared to 2021. Total road deaths in 2020 and 2021 were low when the Covid-19 pandemic and subsequent mobility restrictions hit the country. However, in 2022, road deaths increased by 4.4% compared to the average in 2017-19.

Table 1. Road fatalities in Canada, 2017-2022

	2017	2018	2019	Average 2017-19	2020	2021	2022	2022 compared with 2017-19 average
January	120	139	116	125	126	108	106	-15.2%
February	93	118	92	101	103	83	104	3.0%
March	123	115	95	111	84	87	96	-13.5%
April	117	135	97	116	79	99	114	-2.0%
May	135	162	135	144	130	157	151	4.9%
June	142	201	170	171	171	152	181	5.8%
July	217	214	189	207	194	170	247	19.5%
August	203	202	199	201	212	220	245	21.7%
September	184	172	168	175	195	164	172	-1.5%
October	200	179	176	185	172	221	203	9.7%
November	153	166	175	165	161	166	162	-1.6%
December	174	136	144	151	119	141	153	1.1%
Total	1 861	1 939	1 756	1 852	1 746	1 768	1 934	4.4%

Road deaths in 2021

Mobility and road safety in Canada were significantly impacted by the Covid-19 pandemic that hit the world in 2020. Figure 1 illustrates the number of road deaths in 2020, 2021 and 2022 compared to the linear trend before the pandemic. It shows that road death figures for 2020 and 2021 were very much below the trend.

Due to the impact of the Covid-19 pandemic on mobility and road crashes, the data for 2020 and 2021 represent a poor reference point for benchmarking. Therefore, for short-term trends, this report compares data for 2022 and 2021 with the average for 2017-19.

Canada recorded 1 768 road deaths in 2021, a decrease of 4.5% compared to the average for 2017-19. The number of motorcyclists and cyclists killed respectively increased by 15% and 14%, while the number of car occupants and pedestrians killed decreased respectively by 10% and 2%. Road deaths strongly decreased (-27%) among young people aged 18-20 (Figure 2).

In 2021, Canada had a mortality rate of 4.6 road deaths per 100 000 population (5 in 2022). The fatality risk was 0.7 road deaths per 10 000 registered vehicles and 4.3 road deaths per billion vehicle kilometres (Figures 3, 4 and 5).

Figure 6 illustrates the breakdown of the fatalities by user category, and Figure 7 shows the breakdown by type of road.

Young people aged 21 to 24 are the most at risk in road traffic, with a mortality rate of 7.2 deaths per 100 000 population. The second group the most at risk is the senior population, characterised as above the age of 75 (Figure 8).

Figure 1. Road fatalities in Canada in 2020 and 2021 compared to the linear trend since 2012

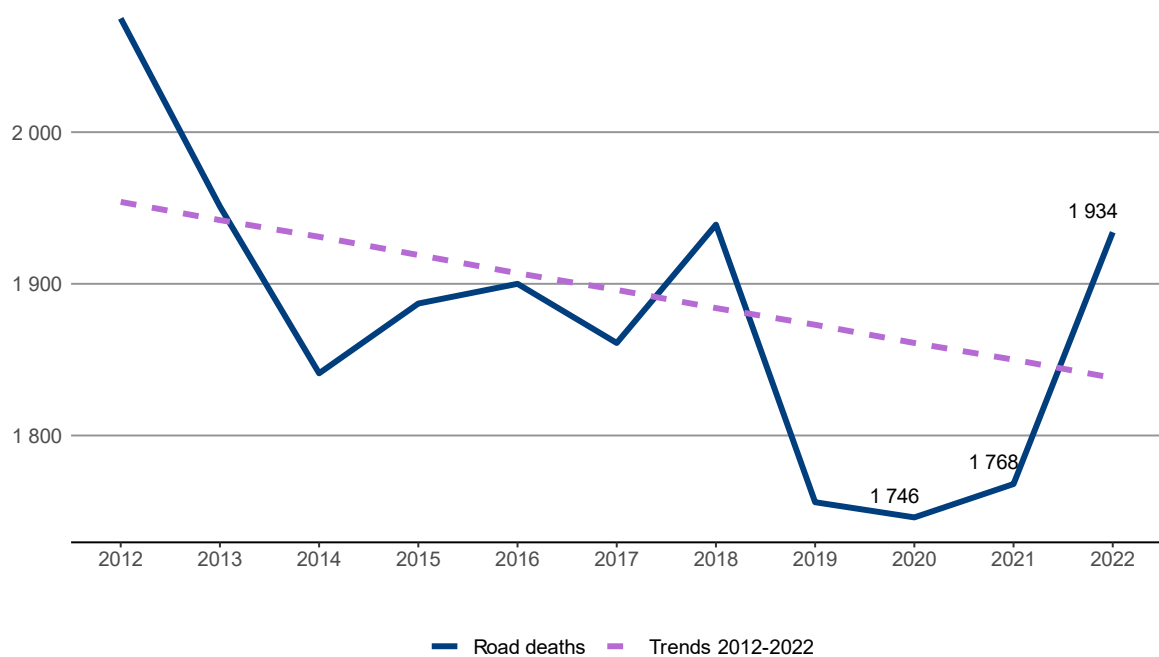


Figure 2. Evolution of road fatalities in Canada by user category, age group and road type, 2021 compared to the average 2017-19

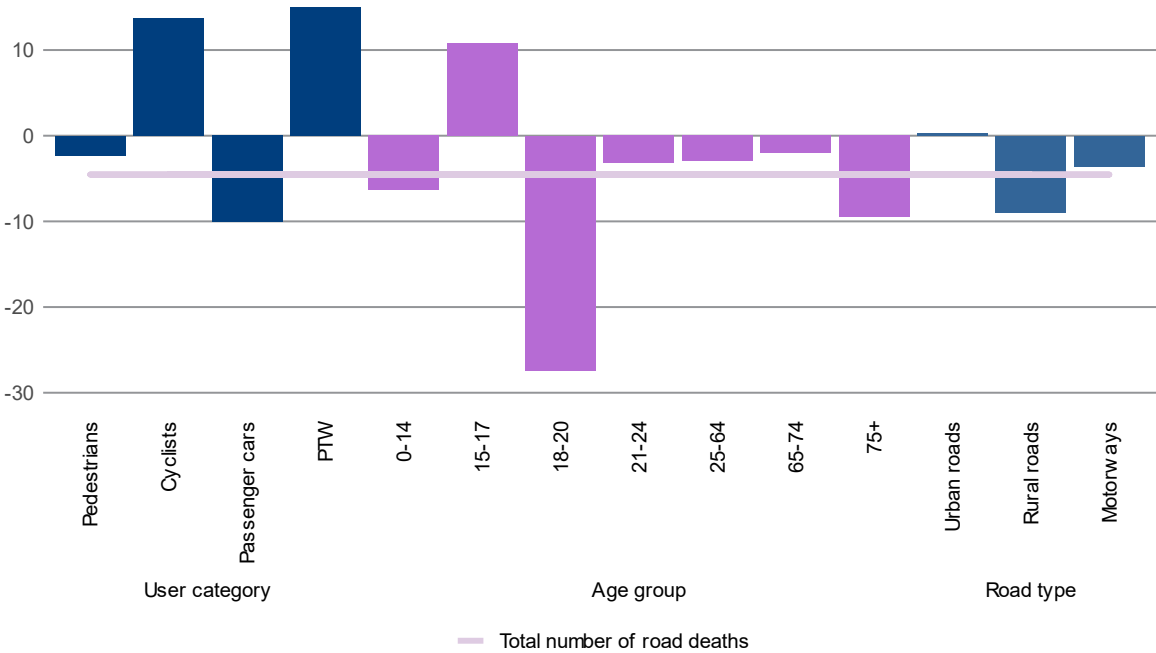


Figure 3. Road fatalities per 100 000 inhabitants in Canada compared to other IRTAD countries, 2022

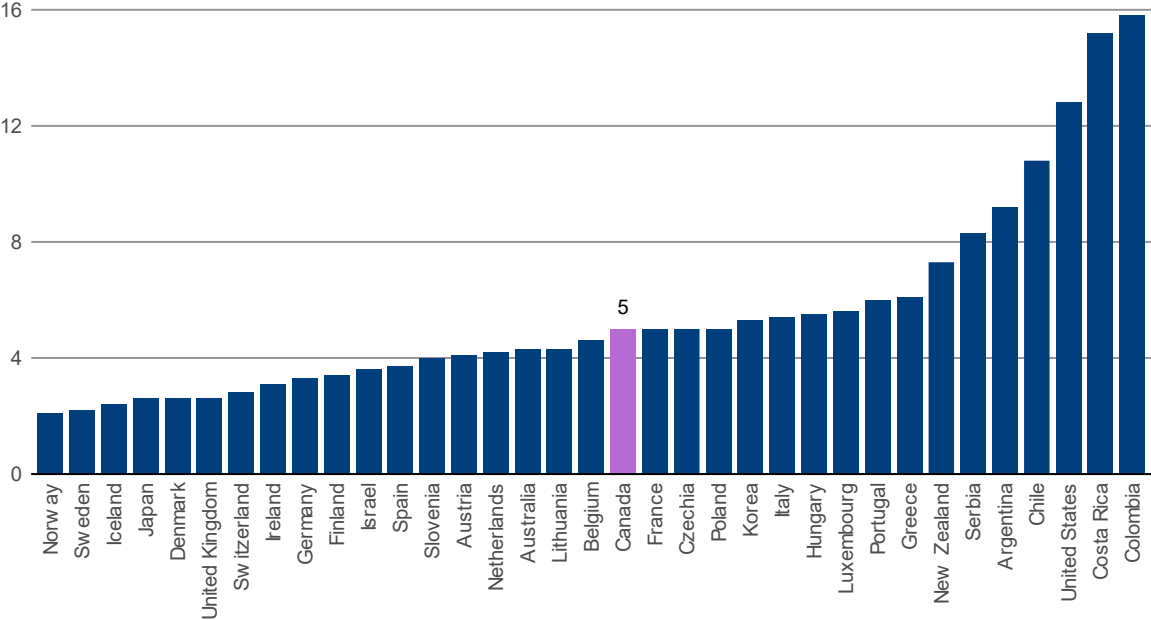
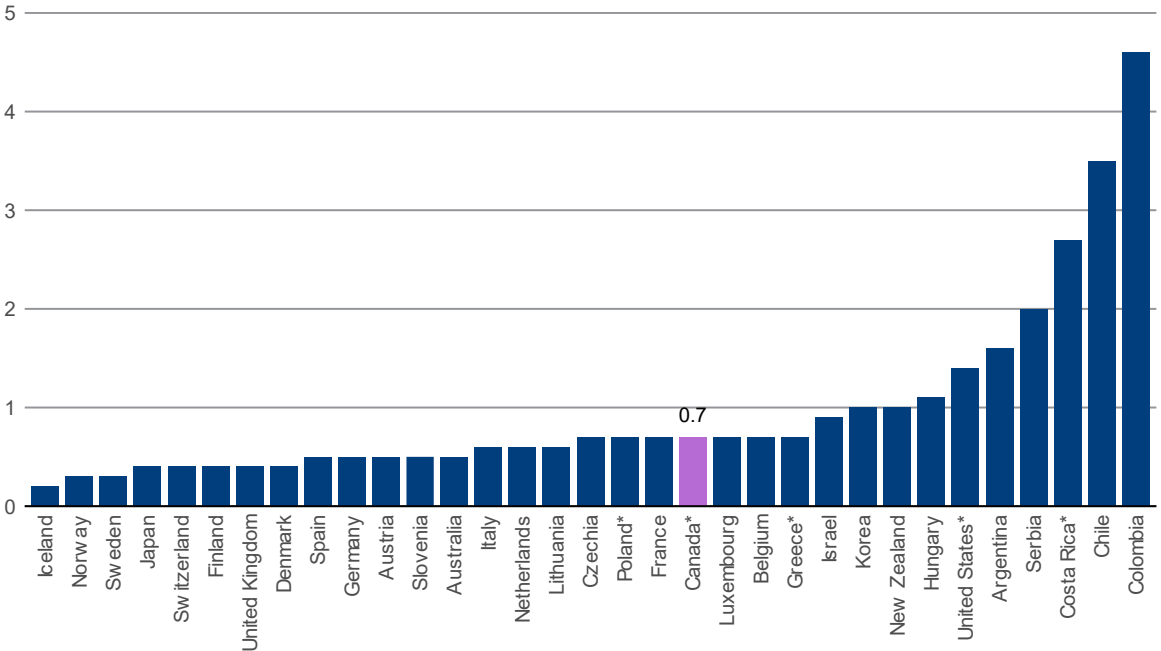


Figure 4. Road fatalities per 10 000 vehicles in Canada compared to other IRTAD countries, 2022



Note: in Belgium, Denmark, Germany and Hungary, registered vehicles do not include mopeds. * 2021 data.

Figure 5. Road fatalities per billion vehicle-kilometres in Canada compared to other IRTAD countries, 2021

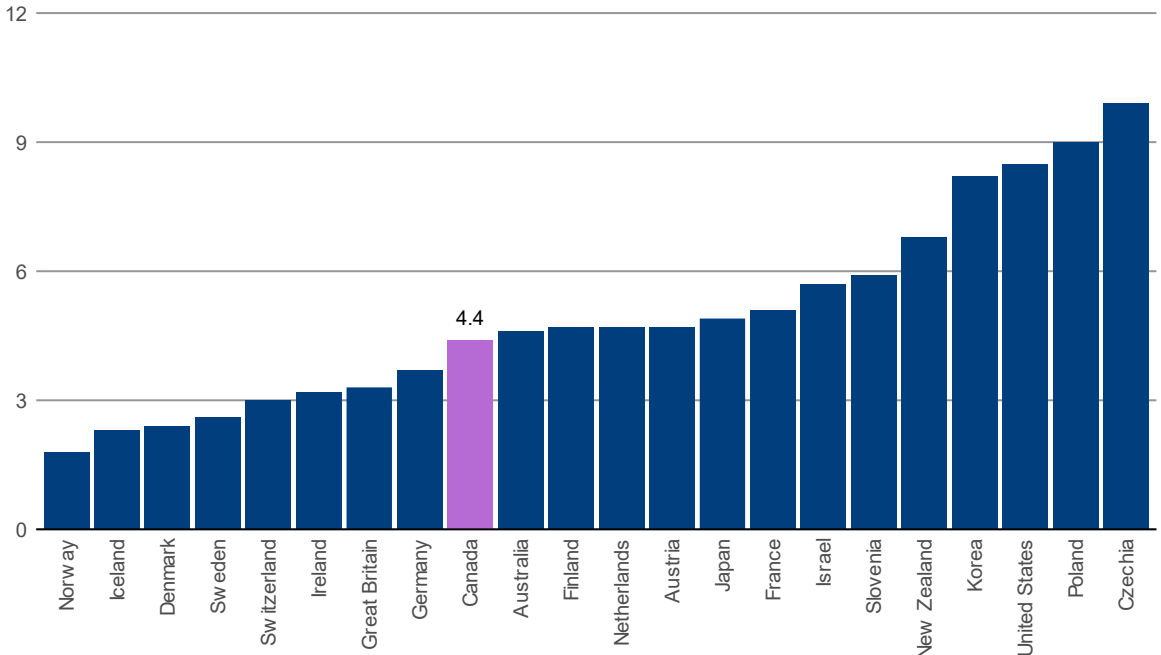


Figure 6. Road fatalities in Canada by user category, 2021

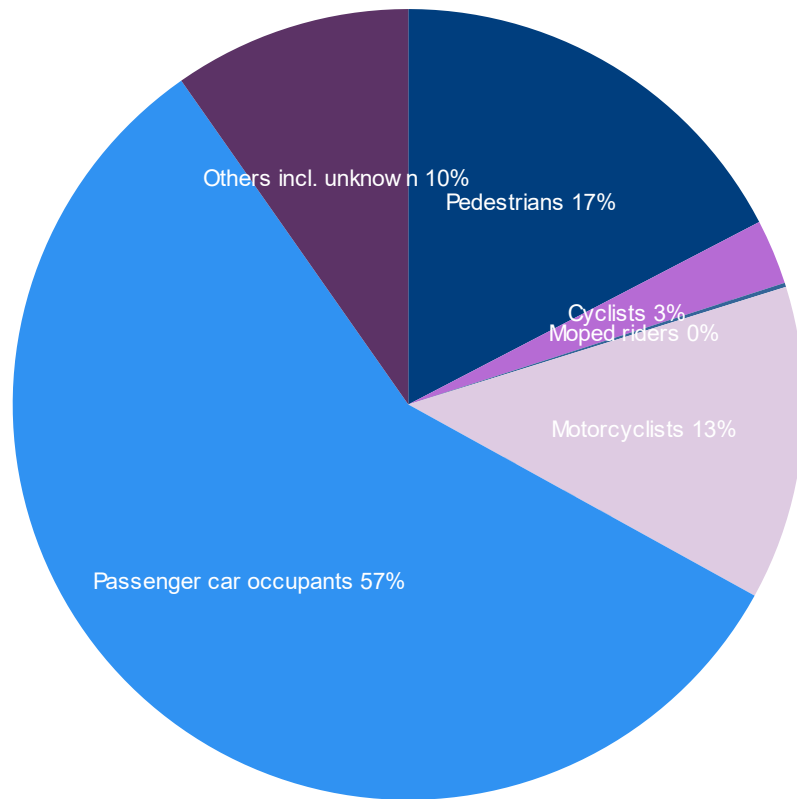


Figure 7. Road fatalities in Canada by road type, 2021

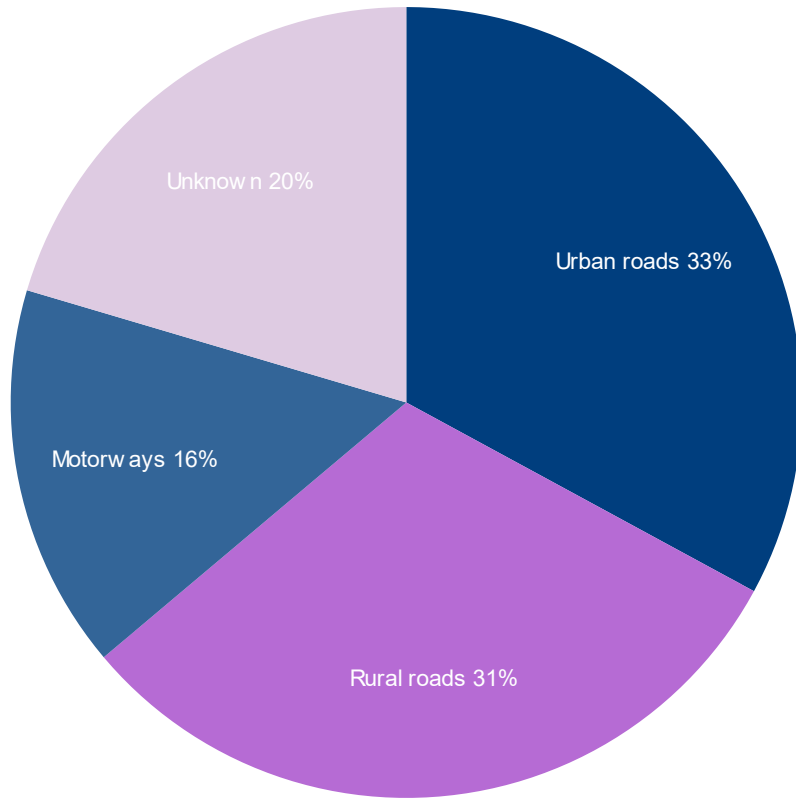
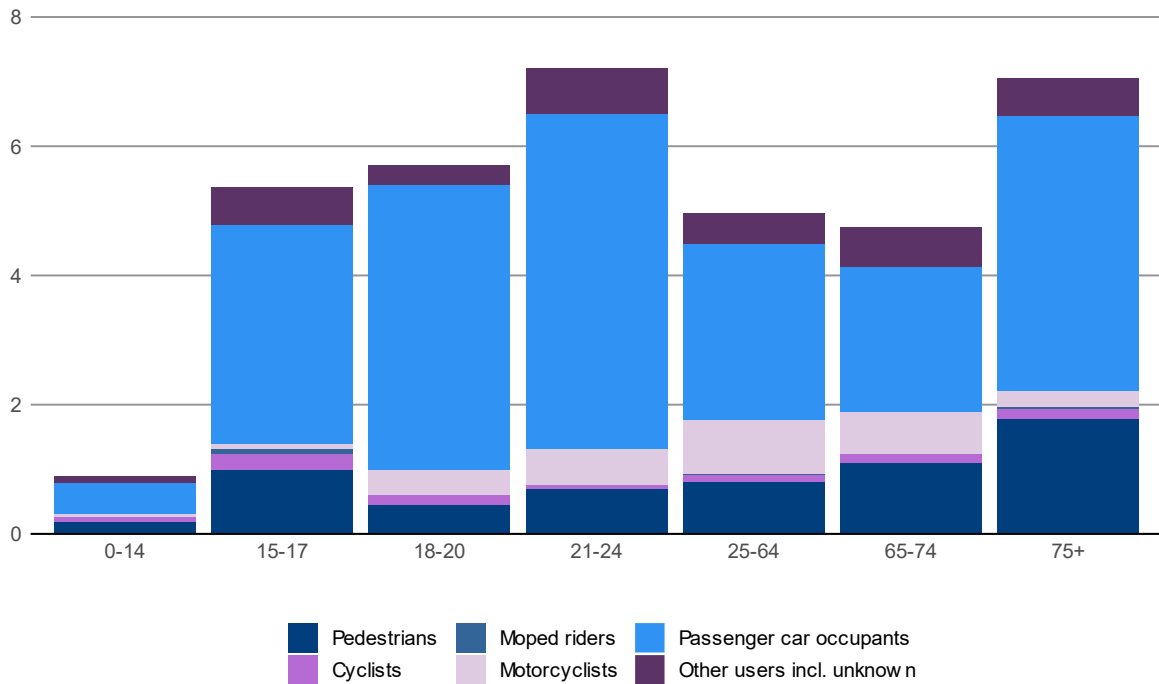


Figure 8. Road fatality rate in Canada by user category and age group, 2021

Rate per 100 000 population in the same age group



Road safety data 2012-21

Between 2012 and 2021, road deaths decreased by 14.8%. During the same period, traffic volume (in vehicle-kilometres) increased by 22% and the number of registered vehicles by 20.1% (Table 2 and Figure 9).

The number of road deaths decreased for cyclists (-24.2%), car occupants (-23.2%) and pedestrians (-6.4%) and increased by 31.4% for motorcyclists (Figure 10).

The number of road deaths decreased for all age categories except for the 65-74 age group, for which an increase of 13.5% was observed. The young people experienced the largest reduction: -62.3% for the 18-20, -35% for the 15-17 and -29.6% for the 21-24 (Figure 10).

Road mortality decreased on all road types, with the strongest decrease on motorways (-20.6%). Road deaths were only reduced by 4% on urban roads (Figure 10).

Table 2. Crash, casualty and traffic data in Canada, 2012-21

	2012	2019	2020	2021	Evolution 2012-21
Reported safety data					
Fatalities	2 075	1 756	1 746	1 768	-14.8%
Injury crashes	124 682	104 460	79 990	83 590	-33.0%
Injured persons hospitalised	10 725	8 158	7 578	7 901	-26.3%
Deaths per 100 000 population	6.0	4.7	4.6	4.6	-22.6%
Deaths per 10 000 registered vehicles	0.9	0.7	0.7	0.7	-27.3%
Deaths per billion vehicle-kilometres	6.1	4.3	4.6	4.3	-29.1%
Fatalities by road user					
Pedestrians	328	301	286	307	-6.4%
Cyclists	62	39	51	47	-24.2%
Moped riders	6	3	5	3	-50.0%
Motorcyclists	169	192	237	227	34.3%
Passenger car occupants	1 318	1 162	1 010	1 012	-23.2%
Other road users	192	153	157	172	-10.4%
Fatalities by age group					
0-14 years	67	44	48	54	-19.4%
15-17 years	100	58	49	65	-35.0%
18-20 years	199	78	90	75	-62.3%
21-24 years	203	141	157	143	-29.6%
25-64 years	1 109	986	1 021	1 024	-7.7%
65-74 years	171	438	184	194	13.5%
≥ 75 years	217	223	190	197	-9.2%
Fatalities by road type					
Urban roads	606	578	544	582	-4.0%
Rural roads	675	563	585	547	-19.0%
Motorways	350	265	252	278	-20.6%
Traffic data					
Vehicle kilometres (million)	340 475	410 631	378 046	409 029	20.1%
Registered vehicles (thousands)	22 366	25 426	25 744	26 224	17.2%
Registered vehicles per 1 000 population	643.6	676.2	676.8	685.7	6.5%

Figure 9. Evolution of road fatalities, injury crashes, motorisation, traffic and GDP in Canada, 2012-21

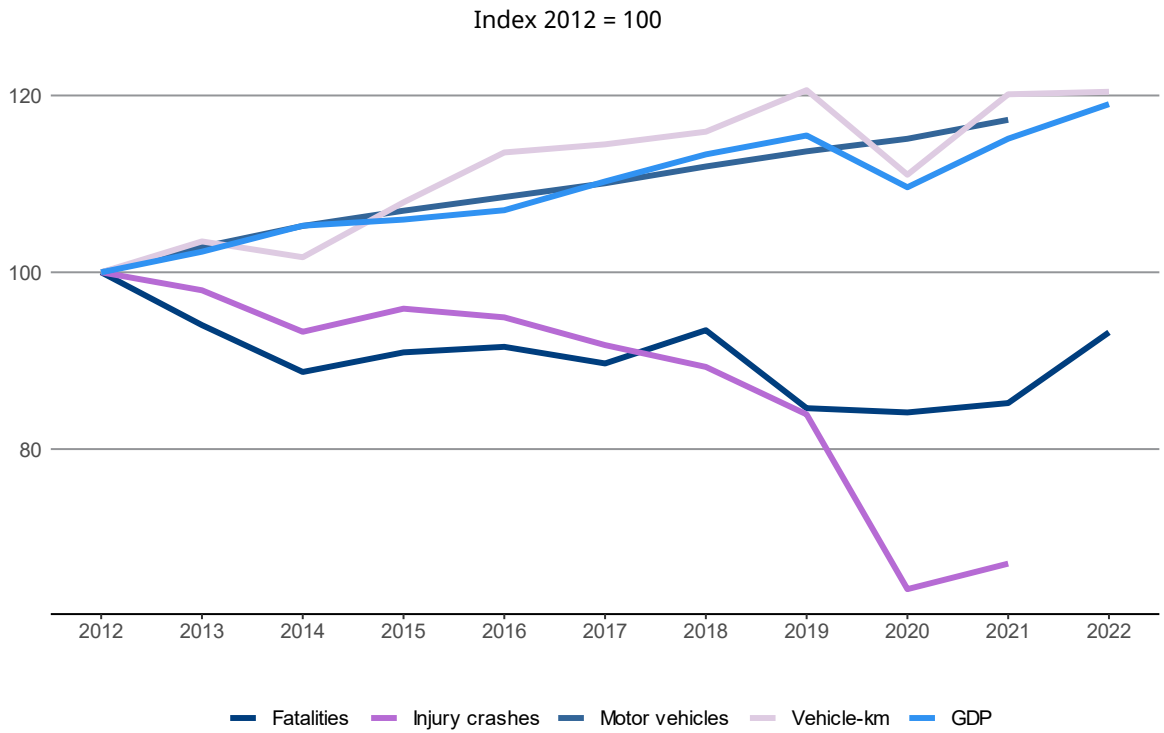


Figure 10. Evolution of road fatalities in Canada by user category, age group and road type, 2012-2021



Safety performance indicators

Speed

In 2021, approximately 25% of fatal crashes involved speeding. Casualty data in 2021 indicated a 6.5% increase in speed-related crashes compared to the 2006-2010 period.

Table 3 summarises the main speed limits for passenger cars in Canada.

Table 3. Passenger car speed limits by road type in Canada, 2023

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

Drink driving

In 2021, 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. Still, 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. Concerning 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 less than 0.8 g/l. However, most provinces and territories have 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.

Drugs and driving

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 updated 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 regulations for producing and selling edible and topical products came into force.

The prohibited level of alcohol and cannabis, when found in combination, is 0.05 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.

Use of mobile phones while driving

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, including distractions from using mobile phones, contributed to an estimated 19.7% of fatal collisions and 26% of serious injury collisions in 2021. These statistics are part of an upward trend of distracted driving-related collisions, up from 16.9% of fatal collisions and 21% of serious injury collisions from the 2006-2010 period.

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

Fatigue

The share of sleepiness and fatigue as a causal factor in crashes is especially challenging to detect.

Seat belt and helmet use

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

Seat belt use in Canada over the last several 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.

Helmet use is compulsory for all riders of powered two-wheelers, whereas helmet use by cyclists is only mandatory in some jurisdictions.

Cost of road crashes

Road traffic collisions represent a high cost for Canada, estimated in 2021 at 1.8% of GDP.

Table 4. Cost of road crashes in Canada, 2021

	Unit Cost (2010 CAD)	Total cost (2010 CAD)
Fatalities	9 068 269	16.03 billion
Hospitalised	1 316 226	10.40 billion
Slight injuries	33 631	3.27 billion
Property damage costs	9 584	4.22 billion
Other	6 129	2.70 billion
Total		36.62 billion
Total as % of GDP		1.8 %

Road safety management and strategy

Developments in road safety

Increased efforts by key stakeholders contributed to the overall progress by developing and implementing 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 in the Canadian population, the number of licensed drivers, the number of registered vehicles and vehicle kilometres travelled.

Regarding progress made on national road safety plans, the progress achieved in the closing years of the Road Safety Vision 2010 has kept its momentum going throughout the Road Safety Strategy 2015 and into the new strategy in 2025.

Governance of road safety

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 includes several 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 manufacturing and importing 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 policies and regulations regarding the roadways. In many cases, the road authority responsible for road operations may be regional or municipal governments, which must operate within provincial guidelines.

National road safety strategy

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. There is no hard quantitative target.

The 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 its road safety plan based on regional needs and conditions.

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

Efforts will begin shortly to develop a successor plan that continues beyond 2025.

Latest road safety measures

Stunt Driving Laws in many provinces have higher penalties and vehicle impounding.

Canada strengthened Impaired Driving legislation, including three cannabis offences, increased fines and faster access to approved ignition interlock programs.

Research and resources

Websites

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

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

Road Safety in Canada 2020: <https://tc.canada.ca/en/road-transportation/publications/road-safety-canada-2020>

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

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

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

Definition, methodology, data collection

Term	Definition
Road death	A person who died immediately or within 30 days of a crash.
Person seriously injured	A person admitted to the hospital for treatment or observation.
Person slightly injured	If "minimal", no immediate medical attention was required, but would include minor abrasions, bruises and complaint of pain. If "minor", the person went to the hospital and 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. It is then sent to Transport Canada for final processing and compilation of national crash statistics.

Transport Canada considers the motor vehicle crash data 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. 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 electronic data collection and other initiatives to improve the timeliness and accuracy of motor vehicle crash data. Efforts are also being made to create methodologies to potentially estimate 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. It 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 to select and extract data of interest.

About the IRTAD Database

The IRTAD Database includes road safety data, aggregated by country and year from 1970 onwards. It provides an empirical basis for international comparisons and more effective road safety policies.

The IRTAD Group validates data for quality before inclusion in the database. At present, the database includes validated data from 35 countries: Argentina, Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, Czechia, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Lithuania, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States.

The data is provided in a common format based on definitions developed and agreed by the IRTAD Group. Selected data is available for free; full online access requires IRTAD membership.

Access the IRTAD Database via the OECD statistics portal:

https://stats.oecd.org/Index.aspx?DataSetCode=IRTAD_CASUAL_BY_AGE

About the International Transport Forum

The International Transport Forum (ITF) is an intergovernmental organisation with 66 member countries that organises global dialogue for better transport. It acts as a think tank for transport policy and hosts the Annual Summit of transport ministers. The ITF is the only global body that covers all transport modes. The ITF is administratively integrated with the OECD, yet politically autonomous.

www.itf-oecd.org

About the IRTAD Group

The International Traffic Safety Data and Analysis (IRTAD) Group is the ITF's permanent working group for road safety. It brings together road safety experts from national road administrations, road safety research institutes, international organisations, automobile associations, insurance companies, car manufacturers, etc. With 80 members and observers from more than 40 countries, the IRTAD Group is a central force in promoting international co-operation on road-crash data and its analysis.

www.itf-oecd.org/irtad

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Data in this country profile have been provided by countries to the database of the International Traffic Safety Data and Analysis (IRTAD) Group. Where data has not been independently validated by IRTAD, this is indicated.

Read more country profiles online:

<https://www.itf-oecd.org/road-safety-annual-report-2023>

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