Transport Canada Transports Canada

Road Safety in Canada - 2000

TP 13951E

ISBN: T46-31/2000E-IN
Cat.no: 0-662-32863-9

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October 2003

Prepared For:
The Canadian Council of Motor Transport Administrators (CCMTA)
Standing Committee on Road Safety Research and Policies

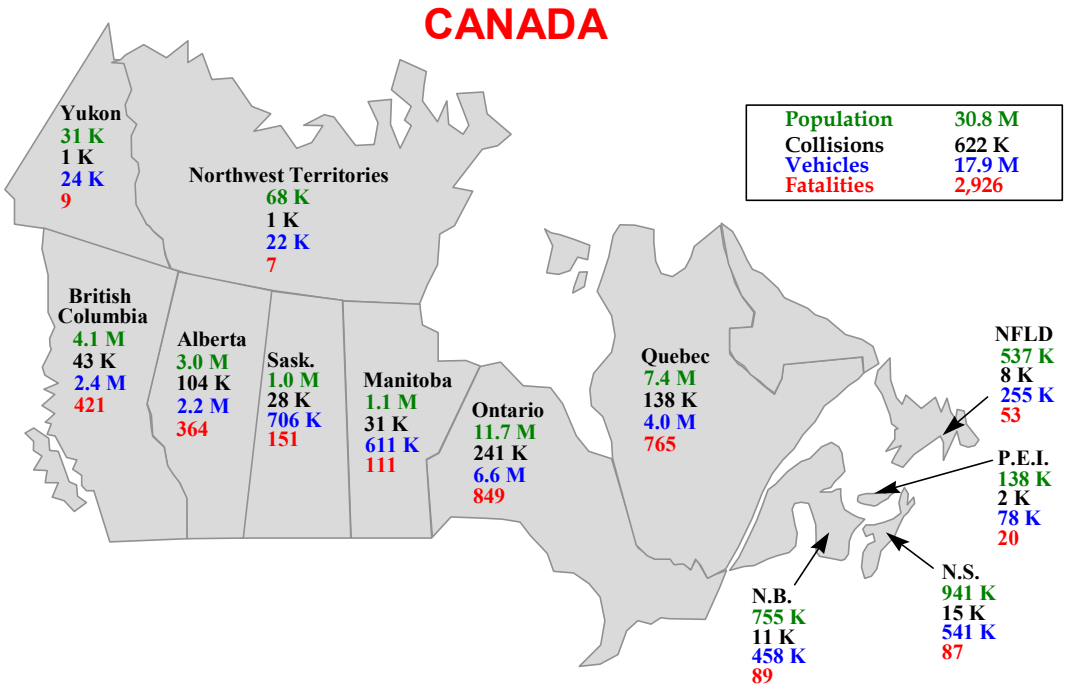
Prepared by:
Transport Canada
Road Safety and Motor Vehicle Regulations Directorate

Canada

Road Safety in Canada: A Shared Responsibility

In Canada, responsibility for road safety is shared among the federal, provincial/territorial and municipal levels of government. The federal government is responsible for new motor vehicle safety standards (*the Motor Vehicle Safety Act*), as well as interprovincial commercial vehicle safety fitness (*the Motor Vehicle Transport Act*).

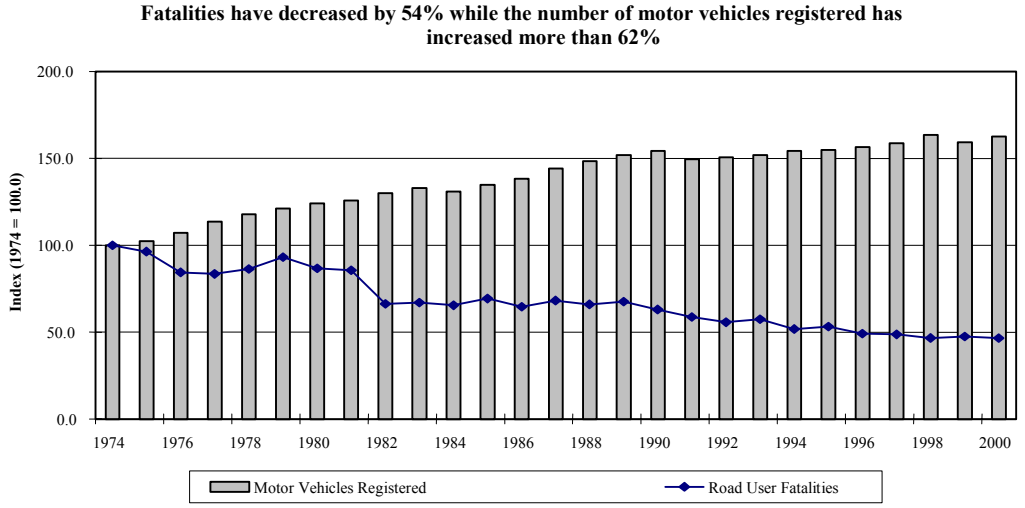
Provinces, territories and municipalities are responsible for highway development and maintenance, commercial vehicle operations, driver and vehicle licensing and the development and implementation of local safety initiatives. The Canadian Council of Motor Transport Administrators along with key non-governmental agencies, such as the Canadian Association of Chiefs of Police and the Canadian Automobile Association, also play an important role in the development and delivery of safety programs.



Canadians are among the most mobile people on earth

Motor vehicles help Canadians overcome two fundamental features of the country: vast geography and harsh climate. Our country has more than 1,420,000 kilometres (two-lane equivalent kilometres) of roadway, and the roads are busier than ever.

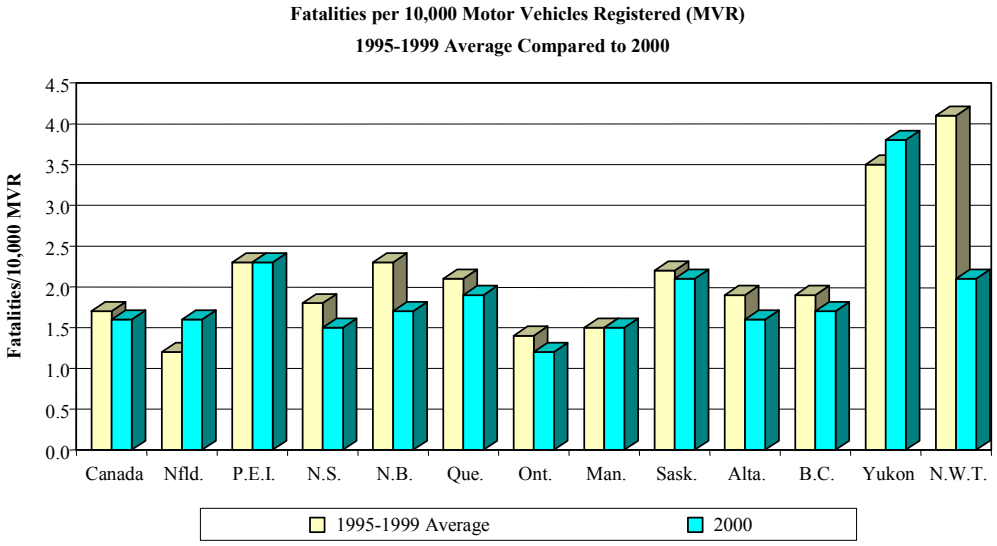
Canada had almost 21 million licensed drivers in 2000 - 10 million more than in 1974, a 79 percent increase compared to an increase in the population of 35 percent. In 2000, Canadians registered 17.9 million road motor vehicles - 7.0 million more vehicles than in 1974, a 63 percent increase.



Travel is safer than it has been in 25 years

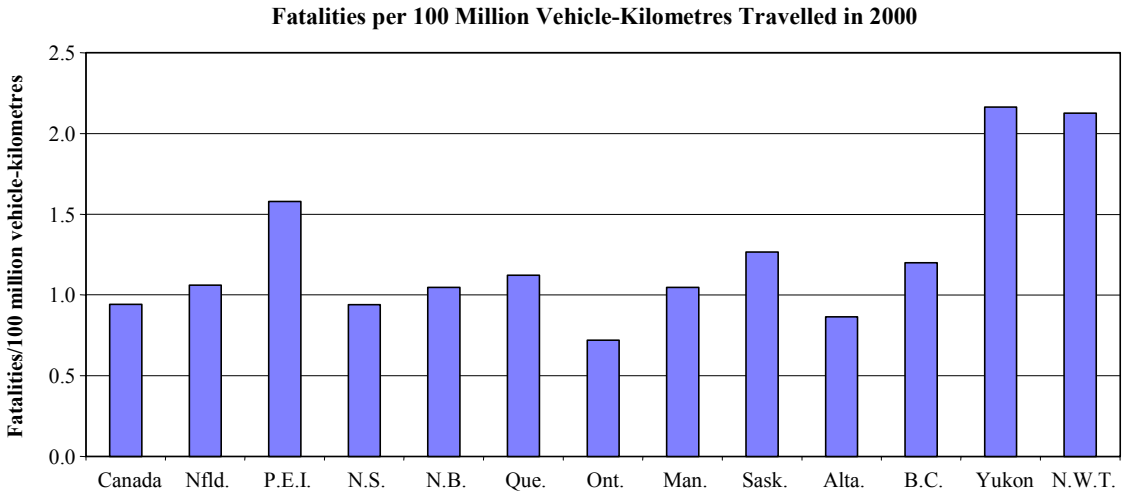
Despite steady increases in the number of drivers and vehicles, travel on Canadian roads is safer today than ever before.

Traffic fatalities in 2000 were less than half of the 6,290 deaths in 1974 and were at the lowest level since 1954. For the last few years, the number of persons injured hovered around the 220,000 mark, but increased in 2000 to 227,500. Throughout the 1990s, Canada's safety record continued to improve. During this decade, fatalities resulting from collisions decreased 26 percent and injuries dropped 13 percent.



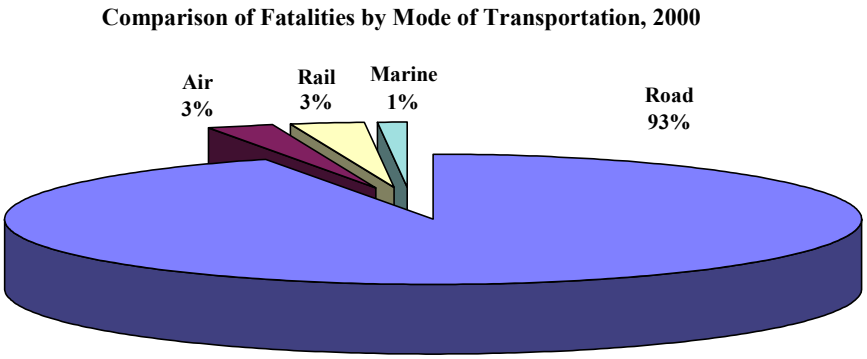
In the chart above, the territory of Nunavut (with a fatality rate in 2000 of 10.4) was omitted in order to avoid obscuring the fatality rates for the other jurisdictions. In terms of fatalities per 10,000 motor vehicles registered, the downward trend continued.

The fatality rates remained unchanged or were lower in 2000 compared to the 1995 to 1999 average in ten of the twelve jurisdictions shown. Ideally, the fatality rates for each jurisdiction would be calculated based on distance travelled to provide a measure of exposure to risk. Vehicle kilometres travelled were available for the first time for 2000 from the Canadian Vehicle Survey (Statistics Canada) for each province and territory.



Despite huge improvements in road safety, nearly 3000 Canadians die on the roads every year

Improvements notwithstanding, casualty figures are a grim reminder of the high price Canadians pay for their mobility. Traffic fatalities accounted for 93 percent of transportation fatalities nationwide in 2000. Traffic collisions in Canada claimed the lives of 2,926 road users and injured another 227,403 in 2000.



A profile of collisions in Canada

In Canada, there were approximately 1,700 motor vehicle collisions every day during 2000, of which about 75 percent resulted in property damage only, and 25 percent involved an injury or a death.

The human toll is great. In 2000, eight people died on our roads every day, and 623 were injured, at a cost to society of approximately $26 million in current dollars each day. The dollar amount was calculated based on the assumptions that the costs of a fatality and an injury were $1.5 million and $11,000, respectively, in 1991.

Single-vehicle collisions accounted for half of all fatal collisions

On average for the past 10 years, single-vehicle collisions accounted for 50 percent of all fatal collisions, 31 percent of collisions involving personal injury and 25 percent of property damage collisions.

Two-thirds of fatal collisions occurred on rural roads

Most deadly collisions took place on rural roads - primary and secondary highways and local roads where speed limits exceed 60 km/hr (usually 80-90 km/hr). Approximately 67 percent of the 2,566 fatal collisions occurred on rural roads in 2000. Of all injury collisions, 42,700 or 28 percent occurred on rural roads, while the majority occurred in urban areas where the posted speed limit was 60 km/h or less.

Motor Vehicle Traffic Collisions 1991-2000

Year	Fatal	Non-Fatal Injury	Property Damage	Total Collisions
1991	3,228	170,693	535,484	709,405
1992	3,073	169,640	516,666	689,379
1993	3,121	168,106	504,323	675,550
1994	2,869	166,780	505,027	674,676
1995	2,854	164,190	495,379	662,423
1996	2,708	156,282	476,422	635,412
1997	2,647	150,118	465,953	618,718
1998	2,612	148,414	450,286	601,312
1999	2,636	151,110	442,816	596,562
2000	2,566	155,933	463,409	621,908

Three out of four serious collisions occurred in clear weather

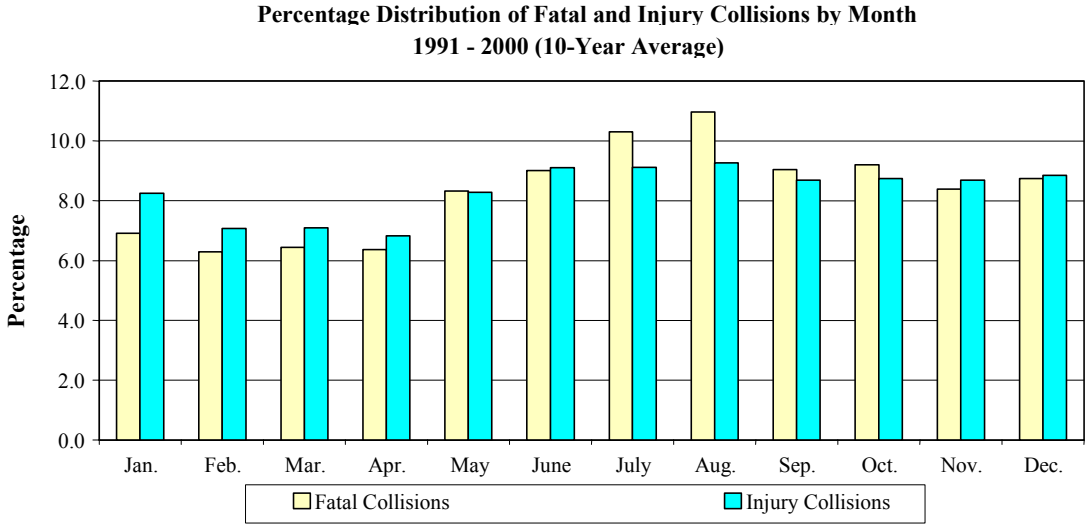
Many people blame Canada's weather and its road conditions for traffic deaths and injuries. But, in fact, the majority of collisions causing death and injury occurred in clear weather on straight, level roads with a dry road surface. More than half of fatal collisions and two thirds of the injury collisions occurred on such roads and the proportion of crashes on these roads has been on the increase.

Almost one in five fatal collisions occurred on Saturday

A single three-hour time period, from 3 p.m. to 6 p.m., posed the highest risk for fatal crashes and those producing injuries. This high-risk time period was even riskier on weekends. Saturday was the peak day for fatal collisions, although the period from midnight to 3:00 a.m. was the most risky. Friday was the peak day for injuries. Fewer serious crashes occurred on weekdays, with Monday the safest day by a slight edge.

July and August observed the highest frequencies of fatal collisions

On average, the peak months for fatal collisions were July and August. Injury collisions were also consistent: injury collisions involving two vehicles peaked in June, July and August, while single-vehicle injury collisions often peaked in November and December.



Vehicles In Collisions

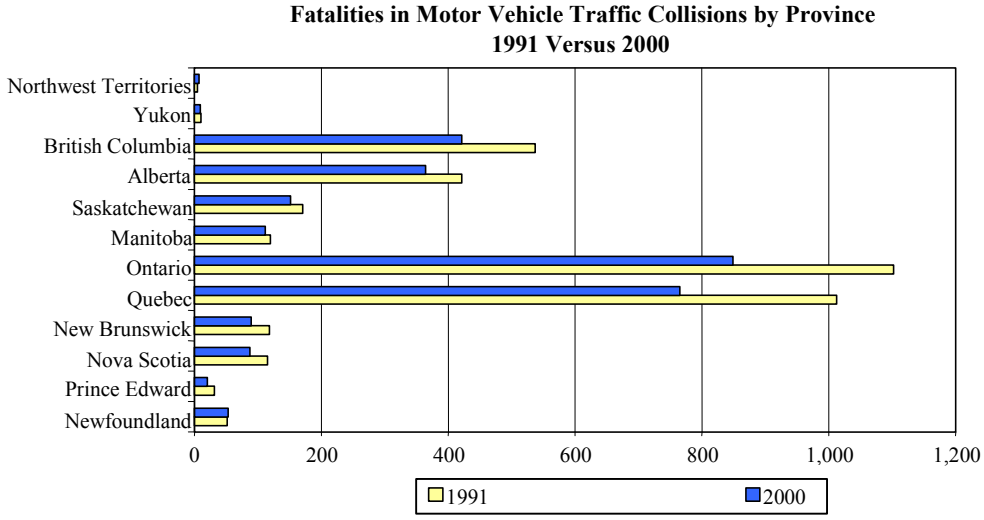
The number of motor vehicles involved in crashes each year was still over 1.1 million in 2000, displayed by collision severity and vehicle type. The table shows that automobiles, light trucks and vans are most frequently involved in collisions.

Number of Motor Vehicles Involved in Collisions by Vehicle Type - 2000

	Fatal	Non-Fatal Injury	Property Damage	Total Collisions
Automobiles	2,182	196,425	536,296	734,903
Light Trucks & Vans	1,079	59,361	203,832	264,272
School Buses	16	494	1,971	2,481
Transit Buses	4	704	1,634	2,342
Intercity Buses	6	185	533	724
Buses - Unspecified	10	584	1,517	2,111
Motorcycles	168	4,809	1,595	6,572
Mopeds	5	489	109	603
Bicycles	45	7,922	885	8,852
Straight Trucks > 4 536 Kg	147	4,450	18,811	23,408
Tractor-Trailers	364	4,275	17,492	22,131
Motorhome	10	149	664	823
Farm & Constr. Equipment	40	735	3,401	4,176
Off-Road Vehicle	22	336	284	642
Snow Vehicle	17	286	245	548
Train, Streetcar	5	30	30	65
Other	57	3,772	43,460	47,289
All Vehicles	**4,177**	**285,006**	**832,759**	**1,121,942**

People at risk

Although the number of fatalities showed major decreases from 1991 to 2000 in most provinces, people are still at risk. From 1991 to 2000, fatalities at the national level decreased 21 percent. Quebec, British Columbia and the Atlantic Provinces except for Newfoundland and Labrador showed percentage decreases in fatalities greater than the national average, while other jurisdictions did not show as much improvement, and fatalities in Northwest Territories and Newfoundland and Labrador increased slightly over the period.



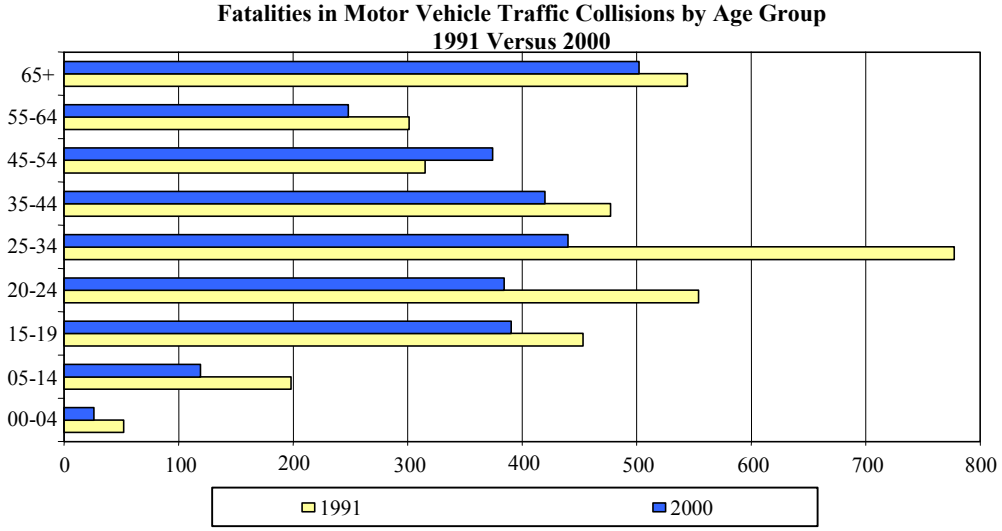
Fatalities in Motor Vehicle Traffic Collisions 1991-2000

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Newfoundland	51	45	45	36	31	47	34	35	41	53
Prince Edward Island	31	13	21	19	19	20	20	21	19	20
Nova Scotia	115	113	100	91	107	113	89	84	97	87
New Brunswick	118	131	138	79	113	94	105	96	110	89
Quebec	1,012	981	982	827	883	887	796	723	763	765
Ontario	1,102	1,090	1,135	999	999	929	900	854	868	849
Manitoba	119	118	134	119	128	93	119	121	113	111
Saskatchewan	170	143	153	151	157	133	165	148	186	151
Alberta	421	368	383	395	403	349	429	429	347	364
British Columbia	537	473	512	534	493	405	389	421	414	421
Yukon	10	15	8	10	13	6	4	12	16	9
Northwest Territories	4	11	4	3	5	15	14	5	11	7
Canada	**3,690**	**3,501**	**3,615**	**3,263**	**3,351**	**3,091**	**3,064**	**2,949**	**2,985**	**2,926**

Note: Fatalities in motor vehicle collisions includes all road users: drivers, passengers, motorcyclists, pedestrians, and cyclists, where death occurred within 30 days of the collision. The exception to this rule is Quebec (8 days).

Of the nine age groups other than 'Unknown age', fatalities over the 10-year period decreased more than the national average of 21 percent in four of the age groups, while four age groups showed smaller decreases. Fatalities in the 00-04 and 05-14 age groups resulting from motor vehicle traffic collisions decreased 50 percent and 40 percent, respectively, from 1991 to 2000. This could be the result of efforts by road safety

professionals to reduce these fatalities through education and publication of information about child restraint systems and the use of clinics to promote the proper use of child restraints. Other age groups showing large decreases in the number of fatalities over the period were the 20-24 and 25-34 age groups at 31 percent and 43 percent, respectively. All other age groups, except the 45-54 age group, showed decreases, but not as impressive. The increase in fatalities in the 45-54 age group reflects an increase in the population as the baby-boomers entered and continue to enter this age group.

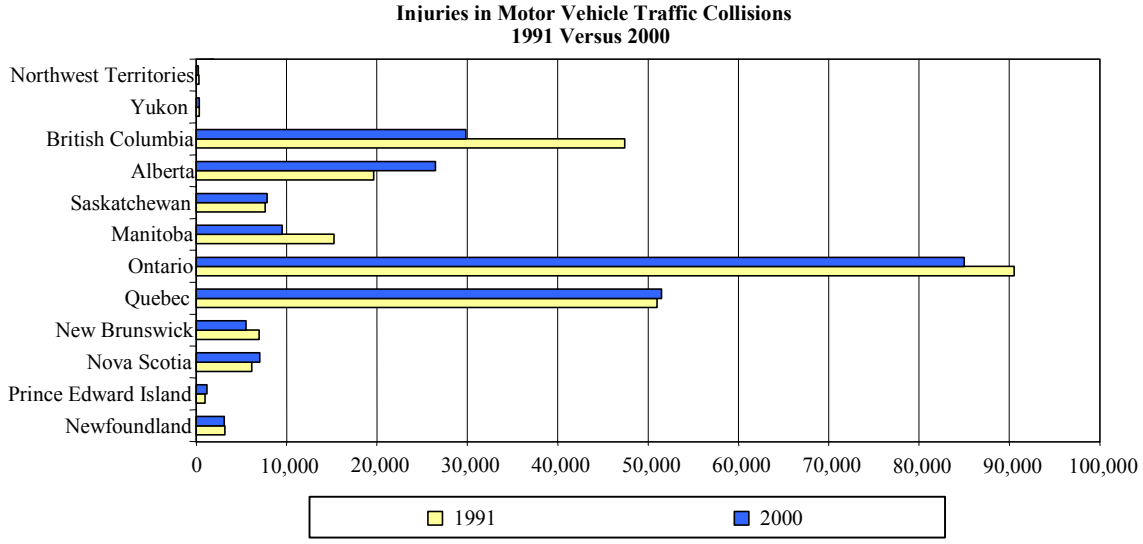


Fatalities in Motor Vehicle Traffic Collisions by Age Group 1991-2000

Age Group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
00-04	52	62	60	68	70	39	61	40	48	26
05-14	198	173	158	142	150	130	144	119	128	119
15-19	453	404	472	416	420	380	408	326	410	390
20-24	554	488	470	418	431	395	379	384	359	384
25-34	777	708	750	598	636	539	511	506	475	440
35-44	477	495	512	466	502	431	430	439	416	420
45-54	315	332	379	328	332	346	319	327	344	374
55-64	301	278	272	266	241	264	268	236	252	248
65+	544	544	527	530	544	549	519	556	536	502
Unknown	19	17	15	31	25	18	25	16	17	23
Total	**3,690**	**3,501**	**3,615**	**3,263**	**3,351**	**3,091**	**3,064**	**2,949**	**2,985**	**2,926**

Note: Fatalities in motor vehicle collisions includes all road users: drivers, passengers, motorcyclists, pedestrians, and cyclists, where death occurred within 30 days of the collision. The exception to this rule is Quebec (8 days).

Overall, injuries declined 9 percent with British Columbia, Manitoba, New Brunswick and Northwest Territories showing improvements greater than the national percentage change. Ontario and Newfoundland and Labrador showed smaller improvements, while Alberta, Prince Edward Island, Nova Scotia, Quebec, Yukon and Saskatchewan showed increases in the number of persons injured.



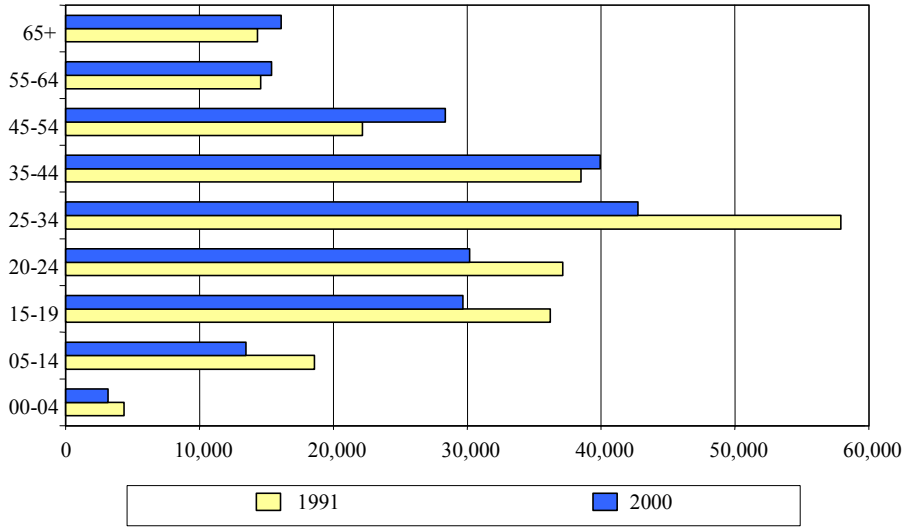
Injuries in Motor Vehicle Traffic Collisions 1991-2000

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Newfoundland	3,145	3,093	2,991	2,767	2,453	2,605	2,701	2,577	2,980	3,068
Prince Edward Island	975	890	895	862	833	819	894	931	1,080	1,189
Nova Scotia	6,141	6,145	6,516	6,246	6,286	6,288	6,452	6,529	6,867	6,999
New Brunswick	6,930	6,112	5,643	5,307	5,504	4,781	5,115	5,259	5,414	5,498
Quebec	51,004	50,666	49,884	48,756	48,623	47,634	47,861	47,009	48,299	51,489
Ontario	90,519	91,025	91,176	90,063	89,612	88,445	85,565	83,320	84,107	85,009
Manitoba	15,250	16,104	15,617	13,832	12,138	10,467	9,148	9,531	9,697	9,485
Saskatchewan	7,622	8,000	8,032	8,197	7,466	6,793	7,594	7,211	7,995	7,832
Alberta	19,646	18,685	19,252	20,169	20,866	22,268	23,916	24,935	25,451	26,464
British Columbia	47,386	48,438	46,952	48,299	47,473	40,190	31,501	29,911	29,963	29,838
Yukon	303	357	306	294	384	334	320	304	353	310
Northwest Territories	296	308	324	318	297	266	282	286	345	222
Canada	**249,217**	**249,823**	**247,588**	**245,110**	**241,935**	**230,890**	**221,349**	**217,803**	**222,551**	**227,403**

Note: Injuries in motor vehicle collisions includes all road users: drivers, passengers, motorcyclists, pedestrians and cyclists, all those who suffer any visible injury or complain of pain.

As mentioned above, overall, injuries decreased 9 percent since 1991. All age groups up to and including the 25-34 years showed decreases of 18 percent or more, while older age groups showed either small declines or increases in the number of persons injured.

Injuries in Motor Vehicle Traffic Collisions by Age Group 1991-2000



Injuries in Motor Vehicle Traffic Collisions by Age Group 1991-2000

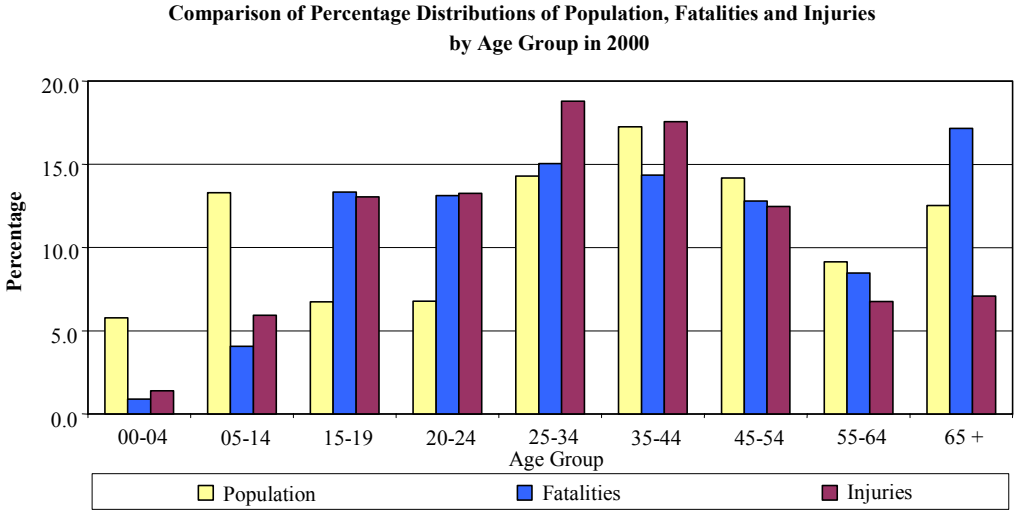
Age Group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
00-04	4,354	4,257	4,132	4,015	4,003	3,645	3,421	3,202	3,339	3,146
05-14	18,565	18,192	17,495	17,540	16,814	15,614	14,990	14,582	14,106	13,462
15-19	36,188	35,715	35,273	34,370	32,755	29,863	28,883	28,852	29,385	29,674
20-24	37,132	36,699	35,334	33,594	32,735	30,172	28,387	27,950	28,886	30,166
25-34	57,902	57,983	56,114	53,937	53,014	49,538	45,684	42,960	42,833	42,746
35-44	38,475	39,078	39,295	39,971	40,337	39,629	38,451	38,160	39,202	39,935
45-54	22,151	23,304	24,455	25,494	25,955	25,952	25,901	26,057	27,164	28,353
55-64	14,562	14,580	14,672	14,530	14,634	14,432	13,786	14,165	14,665	15,361
65+	14,324	14,766	15,146	15,576	15,553	15,606	15,394	15,248	16,202	16,095
Unknown	5,564	5,247	5,672	6,083	6,135	6,439	6,452	6,627	6,769	8,465
Total	**249,217**	**249,821**	**247,588**	**245,110**	**241,935**	**230,890**	**221,349**	**217,803**	**222,551**	**227,403**

Note: Injuries in motor vehicle collisions includes all road users: drivers, passengers, motorcyclists, pedestrians and cyclists, all those who suffer any visible injury or complain of pain.

Road User Fatalities and Injuries by Age Group Compared to Canada's Population in 2000

Age Group	Fatalities	% Distribution of Fatalities	Injuries	% Distribution of Injuries	Population	% Distribution of Population
00-04	26	0.9	3,146	1.4	1,781,610	5.8
05-14	119	4.1	13,462	5.9	4,094,687	13.3
15-19	390	13.3	29,674	13.0	2,073,341	6.7
20-24	384	13.1	30,166	13.3	2,085,882	6.8
25-34	440	15.0	42,746	18.8	4,399,739	14.3
35-44	420	14.4	39,935	17.6	5,306,948	17.2
45-54	374	12.8	28,353	12.5	4,360,940	14.2
55-64	248	8.5	15,361	6.8	2,812,753	9.1
65 & over	502	17.2	16,095	7.1	3,853,769	12.5
Unkown	23	0.8	8,465	3.7		
Total	2,926	100.0	227,403	100.0	30,769,669	100.0

Despite the proven success of graduated licensing programs in many jurisdictions, young Canadians in the 15-19 and 20-24 age groups were consistently over-represented in fatalities and injuries. These teens and young adults accounted for about 14 percent of Canada's population, yet they accounted for about 26 percent of traffic deaths and injuries. The 65 + age group accounted for 18 percent of fatalities but represented only 12 percent of the population.



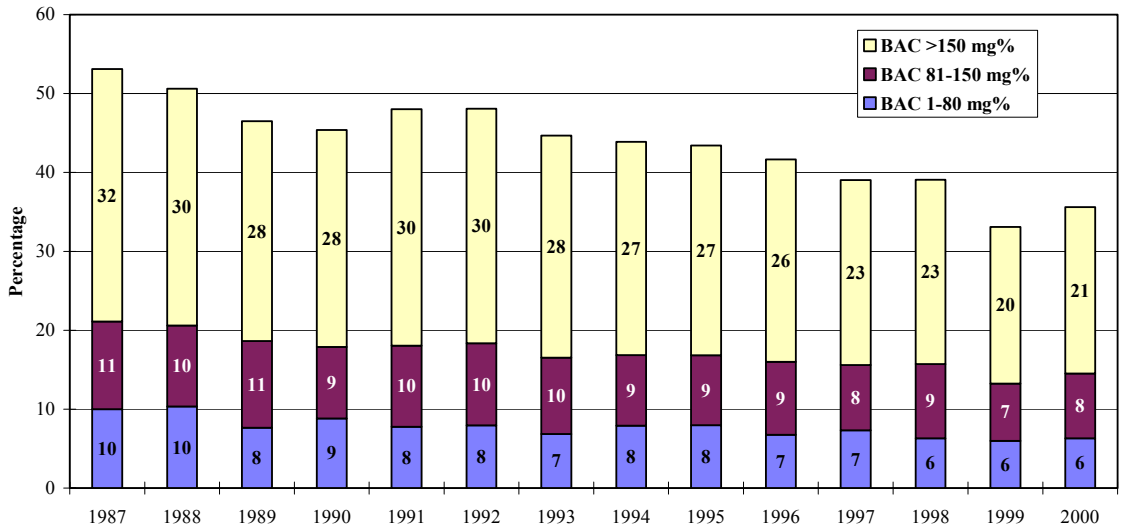
High-risk behaviour on our roads

Much of this carnage is preventable. The same high-risk behaviours continued to plague Canadian roads in 2000-impaired driving, non-use of seat belts and excessive speed.

Alcohol: unsafe at any speed

In 1987, 43 percent of Canadian drivers fatally injured and tested for alcohol were found to have a blood alcohol concentration (BAC) over the legal limit of .08 (80 mg%). During the 1990s, the percentage of fatally injured drivers in this category slowly decreased and accounted for 27 percent of those fatally injured drivers tested by 1999, but increased to 29 percent in 2000. Those who had been drinking (>0 mg%) declined from 53 percent to 35 percent between 1987 and 2000.

Percentage of Fatally Injured Drivers Tested and Found to Have Been Drinking

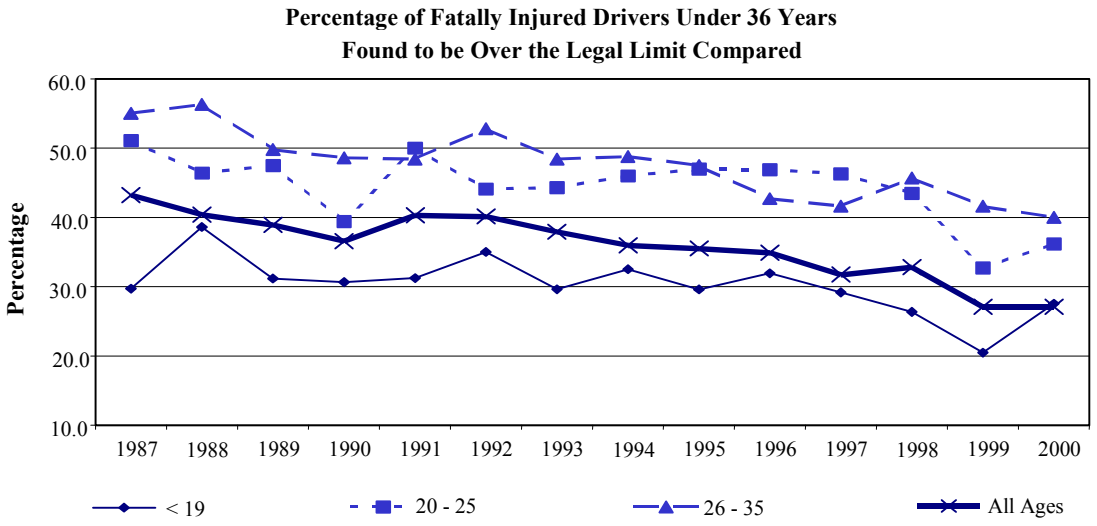


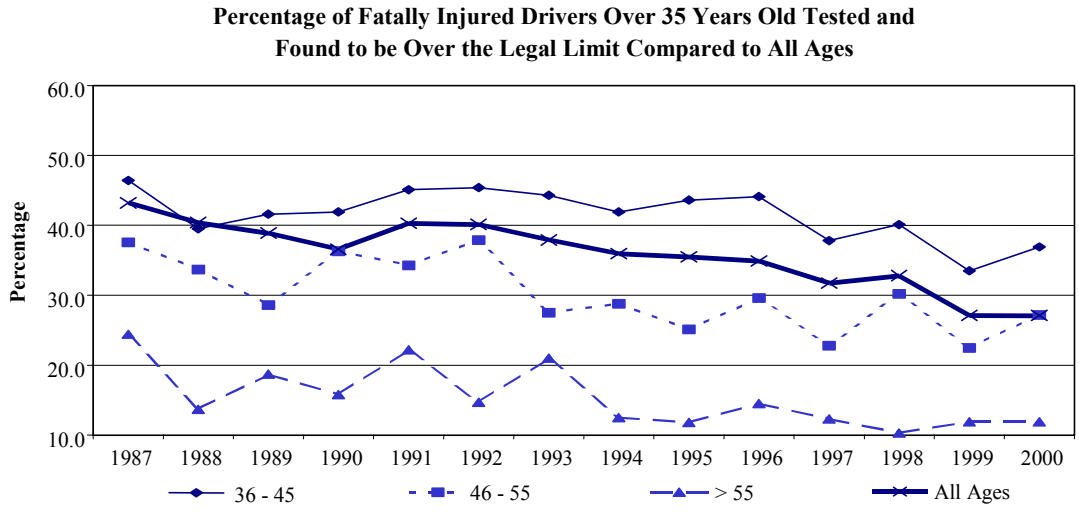
BAC: Blood Alcohol Concentration
mg%: Weight of alcohol in the bloodstream stated as milligrams in 100 millilitres of blood.

While the percentage of fatally injured drivers tested and found to be over the legal blood alcohol limit has generally declined over the years, there are significant variations among age groups, which are presented in the following two charts. The first chart compares fatally injured drivers in age groups less than 36 years of age with the average across all age groups; the second compares age groups over 35 years of age with the average across all age groups.

Percentage of Fatally Injured Drivers Tested and Found to be Over the Legal Limit (BAC >80 mg%)

Age Group	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
< 19	29.7	38.6	31.2	30.6	31.2	35.0	29.6	32.5	29.6	31.9	29.2	26.3	20.5	27.5
20 - 25	51.1	46.4	47.5	39.4	50.0	44.1	44.3	46.0	47.0	46.9	46.3	43.5	32.7	36.2
26 - 35	55.0	56.3	49.8	48.6	48.4	52.8	48.4	48.8	47.5	42.7	41.6	45.7	41.6	40.0
36 - 45	46.4	39.5	41.6	41.9	45.1	45.4	44.3	41.9	43.6	44.1	37.8	40.1	33.5	36.9
46 - 55	37.6	33.7	28.6	36.3	34.3	37.9	27.5	28.8	25.1	29.6	22.8	30.2	22.5	27.2
> 55	24.4	13.7	18.7	15.8	22.2	14.7	21.0	12.5	11.8	14.5	12.3	10.3	11.9	11.9
Total	43.2	40.4	38.9	36.6	40.3	40.1	37.9	36.0	35.5	34.9	31.7	32.8	27.1	27.1





The alcohol-related casualty figures remain grim. Of almost 3000 road users killed in 2000, alcohol was a factor in approximately 1000 deaths. Many of the fatally injured drivers who had consumed alcohol were severely impaired.

9 out of 10 Canadians buckle up!

Seat belt use by Canadians is ranked among the highest in the world. Fifteen years ago, fewer than 3 out of 4 people buckled up. Since then, seat belt use has climbed steadily. More than 90 percent of all Canadians travelling in cars, vans and light trucks regularly use their seat belts. Among drivers, rates are even better, with some 92 percent buckling up in 2000. These new highs are encouraging, since in the late 1990s, rates seemed to plateau and even decrease slightly. However, seat belt wearing rates are not consistent across the Canadian provinces and territories.

Few other countries can measure up to Canada's record. In the United States, for example, rates of seat belt use are improving, but reached only 71 percent nationwide in 2000.

Estimates of Seat Belt Use
Percentage of All Occupants Wearing Seat Belts in Light-Duty Vehicles**

	1992	1993	1994	1996	1997	1998	1999	2000	2001
Newfoundland	90.4	94.5	93.6	91.9	92.4	86.4	82.9	92.7	92.1
Prince Edward Island	76.9	77.8	84.5	87.5	82.6	82.7	88.5	85.7	86.7
Nova Scotia	82.1	83.5	83.2	88.2	87.1	88.5	86.6	86.5	88.0
New Brunswick	77.9	82.1	84.9	86.6	86.5	87.9	85.9	91.5	91.4
Quebec	86.0	88.8	89.8	90.3	91.7	92.3	93.0	91.4	89.0
Ontario	76.6	79.4	86.3	89.9	89.2	89.1	91.0	91.7	92.5
Manitoba	76.5	80.2	82.6	82.4	84.8	84.4	85.3	84.2	82.3
Saskatchewan	88.7	89.4	87.7	89.6	91.7	89.7	88.2	90.0	91.7
Alberta	80.3	81.0	83.1	85.1	83.7	82.4	89.3	87.2	84.9
British Columbia	87.1	86.4	88.3	88.7	89.4	89.7	89.2	88.7	90.8
Yukon	60.1	72.8	68.2	81.2	83.4	82.1	82.1	79.3	78.1
Northwest Territories	68.7	51.5	67.4	54.9	64.3	52.6	61.1	60.7	62.7
Nunavut									13.4
Canada	**81.4**	**83.4**	**86.8**	**88.7**	**88.9**	**88.7**	**90.1**	**90.1**	**89.9**

1992 is the first available year for this data. In 1992, the seat belt survey was expanded from driver only to occupants of the vehicle. This survey was not conducted in 1995.

** Light-duty vehicles include passenger cars, passenger vans and light trucks.

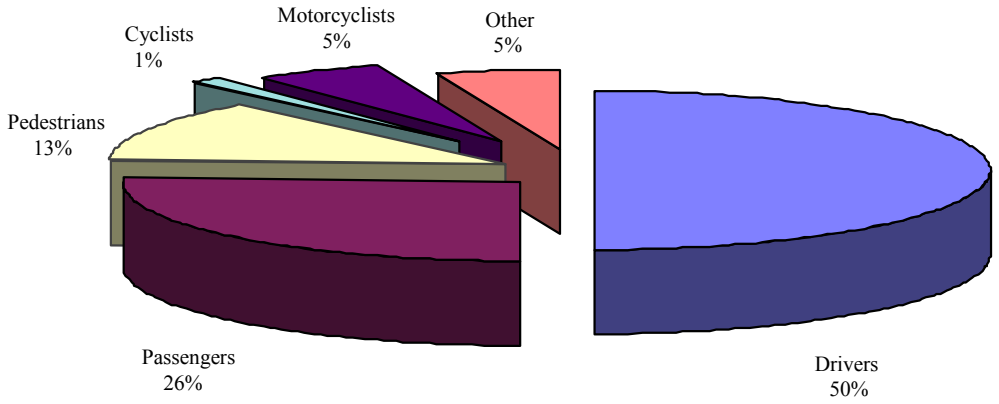
40 percent of Canadians killed had not buckled up

Most Canadians believe that seat belts will reduce the risk of death and injury; yet, almost 40 percent of motor vehicle occupants who died were not wearing a seat belt at the time of the collision. Among those seriously injured, 20 percent were not wearing their seat belts.

Drivers and Passengers at Risk

Seventy-six percent of road user fatalities are occupants of motor vehicles. Drivers accounted for 50 percent and passengers 26 percent. The next largest road user class, in terms of fatalities, was pedestrians at 13 percent. Even though motor vehicle occupants make up the largest percentage of road fatalities, they are not the most vulnerable road users. Those road users not protected by a passenger compartment are most vulnerable - pedestrians, bicyclists and motorcyclists.

Fatalities by Road User Class, 2000



Two-thirds of Canada's road victims are male

Although 47 percent of Canada's licensed drivers were female in 2000, 69 percent of fatalities were male. The proportion of males and females injured were split evenly at 50/50 corresponding very closely with the percentage of male and female drivers.

Young drivers are over-represented in fatal and injury-producing collisions

Compared to the overall population of licensed drivers in each age group, drivers 34 and under (15-19, 20-24 and 25-34) were over-represented in collisions resulting in injury and death. The table below demonstrates that younger drivers 24 and under, in particular, were involved in a disproportionately higher number of casualty collisions per 100,000 licensed drivers, than the rate for all age groups in total. Conversely, drivers 35 years of age and over were involved in a disproportionately lower number of casualty collisions than the rate for all age groups in total.

Comparison of Drivers Involved in Fatal and Injury Collisions
Compared to licensed Drivers in 2000

	Drivers Involved			Drivers Involved			Licensed Drivers	
Age Group	In Fatal Collisions	% Dist.	Rate per 100,000 Licensed Drivers	In Injury Collisions	% Dist.	Rate per 100,000 Licensed Drivers	Number	% Dist.
15-19	400	10.1	36.8	26,467	10.2	2,431.7	1,088,418	5.3
20-24	508	12.9	30.0	34,981	13.5	2,065.8	1,693,346	8.2
25-34	792	20.0	20.4	57,015	22.0	1,471.5	3,874,729	18.8
35-44	813	20.6	16.6	59,061	22.8	1,206.2	4,896,352	23.8
45-54	669	16.9	16.5	41,140	15.9	1,011.6	4,066,763	19.8
55-64	361	9.1	14.6	21,435	8.3	868.0	2,469,540	12.0
65 & over	409	10.3	16.4	18,988	7.3	760.5	2,496,849	12.1
Total	**3,952**	**100.0**	**19.2**	**259,087**	**100.0**	**1,258.6**	**20,585,997**	**100.0**

Almost all Canadians, regardless of age group, were safer on the roads

Almost all Canadians, regardless of age group, were safer on the roads, but two age groups showed increases in fatalities of 19 percent and 21 percent in the 45-54 and the unknown age groups, respectively, over the 10-year period. The 45-54 age group posted a strong increase in population as mentioned above.

All age groups under 35 years of age showed strong double-digit decreases in injuries. Injuries in all age groups over 34 years of age increased from 1991 to 2000 and were most notable in the 45-54, 65 and over, and unknown age groups showing increases of 28 percent, 12 percent and 52 percent, respectively.

Commercial vehicle collisions accounted for one in five deaths

In the National Safety Code for Motor Carriers, commercial vehicle is defined as a truck, tractor, or -trailer, or combination thereof exceeding a registered gross weight of 4 500 kilograms; or a bus designed, constructed and used for the transportation of passengers with a designated seating capacity of more than 10, including the driver, but excluding the operation for personal use.

The National Safety Code currently contains 15 standards addressing factors necessary for the safe operation of all commercial vehicles. The federal government has jurisdiction under the *Motor Vehicle Transport Act* to regulate truck and bus carriers that operate beyond the limits of a province. The Act creates a framework for shared responsibility between federal and provincial governments for the safe operation of motor carriers. The provinces and territories regulate the operations of carriers within their respective jurisdictions.

Over the period 1991 to 2000, injuries resulting from commercial vehicle collisions fell from 15,564 to 14,860; and fewer people died - a decrease from 662 to 587.

As impressive as these improvements are, however, commercial vehicle crashes are often deadly, and particularly dangerous to other users of the road. Although commercial vehicles, on average, accounted for approximately 8 to 9 percent of all vehicles involved in crashes, they accounted for an average of 19 percent of all road user fatalities or one in five road fatalities in Canada.

By far the majority of victims in commercial vehicle crashes were the occupants of the other vehicles involved. In 2000, for example, crashes involving commercial vehicles killed 587 persons; 447 of whom were occupants of the other vehicles involved. A report on *Heavy Truck Collisions 1994-1998* (TP 2436), determined that:

> 'Drivers of automobiles, light trucks and vans were recorded as having a driver condition "other than apparently normal" 4.25 times more frequently than the drivers of heavy trucks in these (fatal) collisions.'

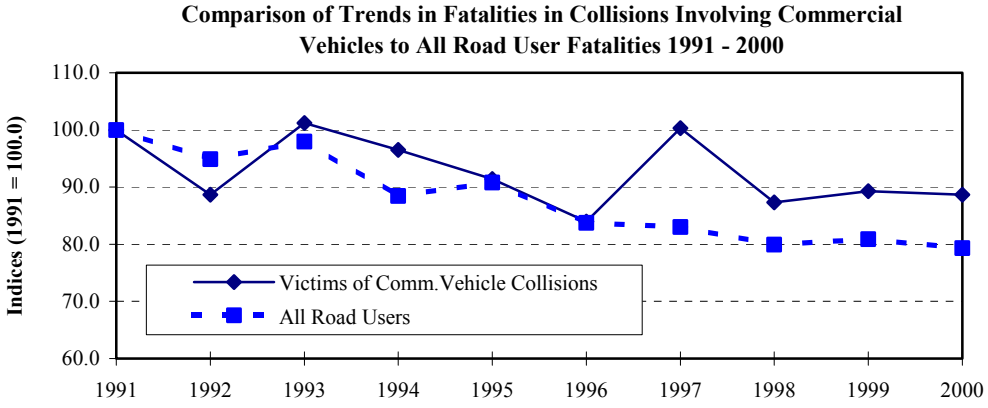
The report also noted that:

> 'In fatal crashes, drivers of automobiles, light trucks and vans were recorded as having a driver action "other than driving properly" 2.74 times more frequently than the drivers of heavy trucks.'

Fatally-Injured Victims of Collisions Involving Commercial Vehicles

Year	Commercial Vehicle Occupants				Occupants of Other Vehicles	Pedestrians	All Victims
	Buses	Straight Trucks	Tractor-Trailers	Total Occupants			
1991	4	28	39	71	514	77	662
1992	5	28	42	75	458	54	587
1993	20	33	44	97	509	64	670
1994	10	40	34	84	496	59	639
1995	6	25	38	69	485	51	605
1996	0	25	33	58	434	64	556
1997	46	18	47	111	492	61	664
1998	4	28	40	72	444	62	578
1999	3	25	44	72	454	65	591
2000	10	30	52	92	447	48	587

The following chart compares the trends in fatalities in collisions involving commercial vehicles to total fatalities.



School bus travel is very safe

The number of school bus occupants fatally injured over the ten-year period was ten, two drivers and eight passengers. From 1995 to 2000, only three passengers of school buses were killed. It is very likely that some of the pedestrian fatalities in school bus collisions were actually occupants who had disembarked the bus and became pedestrians. The Traffic Accident Information Database does not contain this information.

Fatally-Injured Victims of Collisions Involving School Buses

Year	School Bus Occupants			Occupants of Other Vehicles	Pedestrians	All Victims
	Drivers	Passengers	All Occupants			
1991	1	2	3	21	8	32
1992	0	0	0	14	8	22
1993	0	0	0	10	2	12
1994	0	3	3	17	1	21
1995	0	0	0	11	2	13
1996	0	0	0	6	7	13
1997	0	0	0	9	2	11
1998	1	0	1	7	3	11
1999	0	1	1	7	5	13
2000	0	2	2	9	5	16

School buses are designed and manufactured to meet many safety standards to protect the occupants from serious injuries. Safety features include: high-backed, energy-absorbing seats; anchorage of the seats, brake systems, lighting, fuel system protection; emergency exits, tires, the strength of the body structure, stop arms; and special mirrors.

Vulnerable road users

While vehicle occupants account for over 75 percent of the deaths and injuries on Canada's roads, motorcyclists, bicyclists and pedestrians face considerable risks. Crashes involving these vulnerable road users claimed 567 lives in 2000.

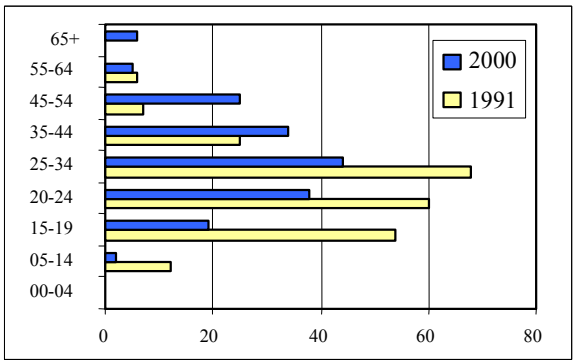
Motorcyclists accounted for one in 18 fatalities

Motorcycle registrations in Canada have decreased from a high of 510,000 in 1983 to a low of 311,000 in 2000. In 2000, there was one motorcycle for every 57 motor vehicles registered. Nonetheless, motorcyclists still accounted for almost six percent (173) of Canada's road user fatalities in 2000.

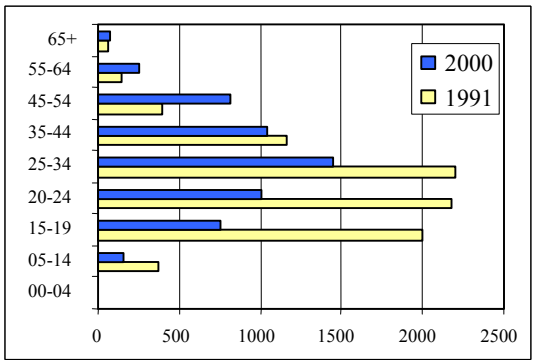
Motorcyclist fatalities reached their lowest level in 1997, then increased again over the next three years to 173. Fatal motorcycle crashes claimed 62 percent fewer lives in 2000 than in 1983 when fatalities were at their highest (450). Motorcyclist fatalities were down significantly in 2000 compared to 1991 for age groups less than 35 and injuries were down for age groups less than 45. The age groups of 35 - 44 and above for fatalities and

45-54 and above for injuries showed increases. The only exception to this was for fatalities in the 55-64 age group, which dropped from 6 to 5 fatalities.

Motorcyclist Fatalities by Age Group, 1991-2000



Motorcyclist Injuries by Age Group, 1991-2000



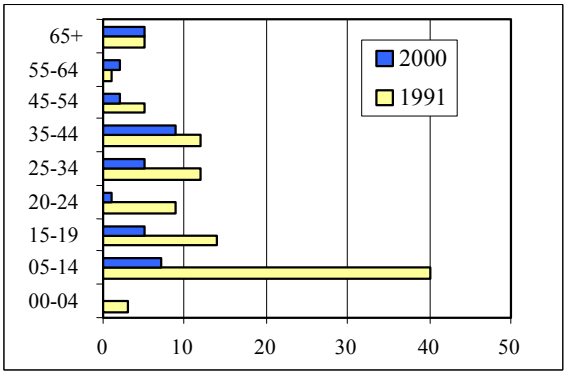
Bicycle deaths cut in half - even for high-risk young boys

The number of Canadians killed on bicycles continued an overall downward trend throughout the 1990s. By 2000, fatalities had decreased 61 percent from the 1991 level.

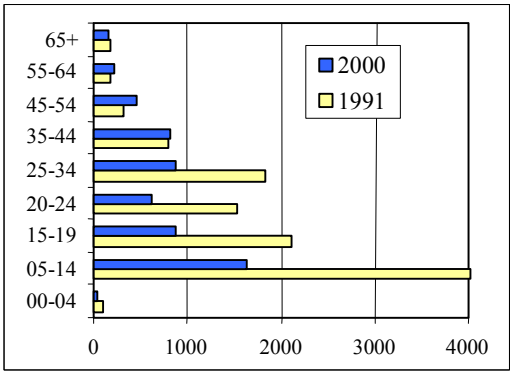
Of the 40 bicyclists killed in 2000, 23 percent were in the 35-44 age group, 18 percent were between 05-14 years of age, 12.5 percent were in each of the 15-19, 25-34, and 65+ age groups and 10 percent were of unknown age. The distribution of injuries was 28 percent unknown, 21 percent in the 05-14 age group, 10 to11 percent in each of the 15-19, 25-34, and 35-44 age groups, 8 percent in the 20-24 age group and 11 percent in age groups greater than 44 years.

Despite helmet laws and education programs, cyclists between 5 and 14 were still the most likely to be injured, accounting for 21 percent of injuries. The majority of these young people - 6 of the 7 fatalities and 3 of 4 injuries were boys.

Bicyclist Fatalities by Age Group, 1991-2000



Bicyclist Injuries by Age Group, 1991-2000



Older pedestrians accounted for one third of all pedestrian fatalities

Across Canada, pedestrian deaths were down by 31 percent, injuries by 10 percent. In 2000, 367 pedestrians were killed and 13,727 were injured. That's 1 pedestrian killed and 38 injured each day, on average. Almost 70 percent were killed in urban areas, almost two-thirds at intersections.

Canada's seniors were particularly vulnerable. People 65 and over accounted for a third of pedestrian fatalities in 2000, even though they represented only 12.5 percent of the population. Pedestrian fatalities among males in the 65+ age group decreased by 4 percent over the 10-year period, while pedestrian fatalities among women of the same age group decreased 40 percent.

Pedestrians Fatalities per 100,000 Population by Age Group, 1991-2000

Age Group	Male		Female		Total	
	1991	2000	1991	2000	1991	2000
00-04	1.3	0.4	0.5	0.1	**0.9**	**0.3**
05-09	2.1	1.2	1.8	0.2	**2.0**	**0.7**
10-14	1.1	1.1	1.0	0.7	**1.1**	**0.9**
15-19	2.5	2.3	0.9	1.1	**1.7**	**1.7**
20-24	2.3	1.2	1.2	0.4	**1.7**	**0.8**
25-34	1.7	1.2	0.8	0.4	**1.3**	**0.8**
35-44	1.7	1.1	0.7	0.5	**1.2**	**0.8**
45-54	1.9	1.1	1.0	0.6	**1.5**	**0.9**
55-64	2.9	1.5	2.1	1.4	**2.5**	**1.5**
65+	5.3	4.1	4.7	2.4	**4.9**	**3.1**
Total	**2.3**	**1.5**	**1.5**	**0.9**	**1.9**	**1.2**

The above extracts from the Traffic Accident Information Database reflect a compilation of the collision statistics most frequently requested through our information desk, web site and communications group.

To find out more about national road safety programs and initiatives, call Transport Canada toll free at **1-800-333-0371** or **(613) 998-8616** if you are calling from the Ottawa area, or e-mail comments or questions to **roadsafetywebmail@tc.gc.ca.** You can also visit the Transport Canada web site at **www.tc.gc.ca**, where you will find links to related sites involving safety, including all provincial sites.

Sources of information:
Transport Canada, Road Safety, Traffic Accident Information Database (TRAID)
Traffic Injury Research Foundation, The Alcohol-Crash Problem in Canada: 2000.
Statistics Canada, Canadian Vehicle Survey: 2000.
Data for 1998 and 1999 in the above tables were restated where necessary due to the receipt of updated information.