

**ESTIMATING THE NUMBER AND COST
OF IMPAIRMENT-RELATED TRAFFIC
CRASHES IN CANADA: 1999 TO 2009**

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EXECUTIVE SUMMARY

Between 1999 and 2009, traffic crashes involving alcohol and/or drugs resulted in an estimated 13,174 deaths, 777,183 injuries and damage to 2,568,526 vehicles in property-damage only (PDO) crashes alone. It is also estimated that there were 10,978 fatal impaired driving crashes, 531,247 injury-only impaired crashes and 1,689,818 PDO impaired crashes, totalling 2,232,043 crashes. Using a social cost model, these deaths, injuries and PDO crashes cost Canadians an estimated \$225.5 billion. Based on a population of 33 million people, that represents a cost of about \$6,832 per Canadian.

Given the relative stability of the impairment-related crash deaths, injuries, PDO crashes and costs during the eleven-year period, it seems reasonable to express the statistics in terms of an annual average. During this period, impairment-related crashes resulted in an average of 1,198 deaths, 70,653 injuries and damage to 233,502 vehicles in PDO crashes a year. On average, there were 998 fatal impaired driving crashes, 48,295 injury-only impaired crashes and 153,620 PDO impaired crashes a year, totalling an average of 202,913 impaired driving crashes. These deaths, injuries and PDO crashes cost Canadians an estimated average of \$20.50 billion a year, or about \$621 per Canadian.

In 2009, the most recent year for which there is data, impairment-related crashes resulted in an estimated 1,074 fatalities, 63,338 injuries and damage to 209,336 vehicles in PDO crashes. There were a total of 181,911 crashes, costing an estimated \$20.15 billion.

SECTION I: THE MODEL¹

The more serious a crash, the more likely it is that it will be reported or otherwise become known to the police, motor vehicle branches, insurance companies, the coroner, and other authorities. Serious crashes are also more likely to be investigated by one or more of those bodies. Consequently, Canadian data on whether a fatally-injured person had a measurable blood-alcohol concentration (BAC) is relatively reliable.² In contrast, the data on whether a fatally-injured person might have been impaired by drugs is incomplete, primarily due to a lack of testing and testing sensitivity.

¹ In 2002, MADD Canada commissioned G. Mercer and M. Marshall of Applied Research and Evaluation Services (ARES) at the University of British Columbia to estimate the number and cost of impairment-related crashes in Canada for 1999: G. Mercer & M. Marshall, “Estimating the Presence of Alcohol and Drug Impairment in Traffic Crashes and their Cost to Canadians: A Discussion Paper” (Vancouver: ARES, December 2002). That paper contains a detailed discussion of the authors’ methodology: see www.madd.ca/english/research/magnitude_report2k2.doc (accessed 28 November 2011). Some of the methodology and calculations for 1999 to 2006 in this Report are based on the 2002 paper and a subsequent related report: G. Mercer, “Estimating the Presence of Alcohol and Drug Impairment in Traffic Crashes and their Costs to Canadians: 1999 to 2006” (Vancouver: ARES, 2009).

² The model used in this Report relies on the Fatality Database developed and maintained by the Traffic Injury Research Foundation (TIRF). Given the inherent limitations in this database, it likely significantly understates the total number of alcohol-related deaths in Canada. For example, if an impaired driver crashes into a vehicle, killing its sober driver and two occupants, it is only the dead driver’s BAC that would be reported in the Fatality Database. Unless the police recorded the crash as being due to the surviving driver’s impairment, all three deaths would be recorded as being non-alcohol-related. Similar problems arise when intoxicated drivers survive crashes in which they kill sober passengers, pedestrians or bicyclists. See H. Simpson, *Drinking-Driving Statistics in Canada: does anyone really know how big the problem is?* (Ottawa: TIRF, 1997) at 53-56.

Moreover, research indicates that police frequently fail to detect and report the presence of alcohol. See for example E. Vingilis, E. Adlaf & L. Chung, “Comparison of Age and Sex Characteristics of Police-Suspected Impaired Drivers and Roadside-Surveyed Impaired Drivers” (1982) 14 *Accident Analysis and Prevention* 425; and E. Vingilis & V. Vingilis, “The Importance of Roadside Screening for Impaired Drivers in Canada” (1987) 29 *Can. J. Crim.* 17 at 22-25. Although these sources are dated, police underreporting remains problematic, particularly in Québec.

Québec has a narrower definition of an “alcohol-related death” than the other provinces, excluding deaths among alcohol-impaired pedestrians, deaths in alcohol-related off-road crashes, and alcohol-related deaths involving snowmobiles, ATVs, bicycles and other non-principal vehicle types. See Canadian Council of Motor Transport Administrators (CCMTA), *Alcohol-Crash Problem in Canada: 2009* (Ottawa: TIRF, November 2011) at 133. Moreover, a crash in Québec is only categorized as alcohol-related if the police list alcohol as “a probable cause” of the crash: *ibid.* at 10. Finally, the reported numbers of alcohol-related crash deaths in Québec appear to be somewhat anomalous. For example, the number of traffic deaths involving a drinking driver fell from 175 in 2006 to only 111 in 2007: *ibid.* at 134. Similarly, the CCMTA reported that the total number of alcohol-related crash deaths in Québec for 2009 was 142 (*ibid.* at 126), whereas the Société de l’assurance automobile du Québec reported the number in the same year to be 195 on its official website: www.saaq.gouv.qc.ca/en/accident_prevention/alcohol/index.php (accessed 28 November 2011).

The less serious a crash, the less likely it is that it will be reported, recorded or investigated. In order to assess the magnitude of the traffic crash problem and the role of impairment, a method is needed to estimate the number of less serious crashes and whether they might have been impairment related.

Historically, crashes reported to the police have been used as a measure of crash frequencies and types, with the police forwarding reports to provincial motor vehicle branches for statistical analyses. However, estimates of the number of less serious crashes based on police reports are far lower than estimates based on insurance data.³ This underreporting could be due to a lack of police resources, drivers' reluctance to involve the police (but a desire for financial compensation from insurance companies), or both. Certainly, some crashes will be resolved privately without any official report being made. Nevertheless, the insurance data appear to be far more comprehensive than the police data.

Insurance and other data suggest that there is a relatively stable relationship between the number of traffic fatalities and the number of both traffic injuries and vehicles damaged in property-damage only (PDO) crashes. For each fatality there appears to be about 118 injuries and 650 vehicles damaged in PDO crashes (PDO vehicles).⁴ Using these ratios, one can estimate from the number of fatalities the number of non-fatal injuries and PDO vehicles.

Similarly, the BAC levels at different levels of injury severity can provide an estimate of the proportion of alcohol-related crash fatalities to alcohol-related crash injuries. This data indicates that as crash severity lessens, so does alcohol involvement. The BAC data suggest that for every 1% of crash deaths that are alcohol-related, 0.5% of crash injuries and 0.3% PDO vehicles are alcohol-related.⁵ In other words, if alcohol-related crash deaths went up 10%, alcohol-related injuries would go up 5% and PDO vehicles would go up 3%. Again, using these ratios, one can estimate from the number of alcohol-related fatalities the number of alcohol-related injuries and PDO vehicles.

Finally, studies on drug and alcohol-related crashes indicate that where there is a positive BAC, about 75% of the cases involve alcohol alone and about 25% also involve drugs. In addition, there are another 10% of crashes that involve drugs alone.⁶

SECTION II: CALCULATION OF FREQUENCIES

To estimate the number of injuries and PDO vehicles, it was assumed that there were 118 injuries and 650 PDO vehicles for every fatality. Those ratios were applied to the known

³ Mercer & Marshall, *supra* note 1 at 7-10.

⁴ *Ibid.* at 16.

⁵ *Ibid.* at 18-19.

⁶ *Ibid.* at 23.

number of motor vehicle-related deaths in Canada as reported by the Traffic Injury Research Foundation of Canada.⁷

Table 1: Estimated Number of Fatalities, Injuries & PDO Vehicles: 1999 to 2009

Year	Fatalities	Injuries @ 118	PDO Veh. @ 650
1999	3,315	391,170	2,154,750
2000	3,162	373,116	2,055,300
2001	3,021	356,478	1,963,650
2002	3,197	377,246	2,078,050
2003	3,124	368,632	2,030,600
2004	3,013	355,534	1,958,450
2005	3,226	380,668	2,096,900
2006	3,122	368,396	2,029,300
2007	3,045	359,310	1,979,250
2008	2,694	317,892	1,751,100
2009	2,575	303,850	1,673,750

The percentage of people killed in alcohol-related traffic crashes can be used as a starting point for estimating the number of people injured and the number of PDO vehicles. As indicated, we estimated that for every 1% of crash deaths that are alcohol-related, 0.5% of crash injuries and 0.3% PDO vehicles are alcohol-related. These percentages are set out in Table 2.

⁷ D. Mayhew, S. Brown & H. Simpson, *The Alcohol-Crash Problem in Canada: 1999* (Ottawa: TIRF, 2001); CCMTA, *The Alcohol-Crash Problem in Canada: 2000* (Ottawa: TIRF, December 2002); CCMTA, *The Alcohol-Crash Problem in Canada: 2001* (Ottawa: TIRF, July 2003); CCMTA, *The Alcohol-Crash Problem in Canada: 2002* (Ottawa: TIRF, October 2004); CCMTA, *The Alcohol-Crash Problem in Canada: 2003* (Ottawa: TIRF, October 2005); CCMTA, *The Alcohol-Crash Problem in Canada: 2004* (Ottawa: TIRF, November 2006); CCMTA, *The Alcohol-Crash Problem in Canada: 2005* (Ottawa: TIRF, January 2008); CCMTA, *The Alcohol-Crash Problem in Canada: 2006* (Ottawa: TIRF, January 2009); CCMTA, *The Alcohol-Crash Problem in Canada: 2007* (Ottawa: TIRF, March 2010); CCMTA, *The Alcohol-Crash Problem in Canada: 2008* (Ottawa: TIRF, December 2010); and CCMTA, *Alcohol-Crash Problem in Canada: 2009* (Ottawa: TIRF, November 2011).

Table 2: Estimated Percentage of Alcohol-Related Fatalities, Injuries & PDO Vehicles: 1999 to 2009

Year	Fatalities	Injuries @ 0.5	PDO Veh. @ 0.3
1999	34.20%	17.10%	10.26%
2000	33.80%	16.90%	10.14%
2001	36.50%	18.25%	10.95%
2002	33.00%	16.50%	9.90%
2003	36.60%	18.29%	10.98%
2004	34.90%	17.45%	10.47%
2005	34.10%	17.05%	10.23%
2006	37.20%	18.60%	11.16%
2007	37.00%	18.50%	11.10%
2008	39.20%	19.60%	11.76%
2009	37.90%	18.95%	11.37%

As noted, it has been estimated that there are another 10% of crashes that involve drugs alone. Accordingly, overall impairment can be estimated by multiplying the data in Table 2 by 1.1 to produce Table 3.⁸

Table 3: Estimated Percentage of Impairment-Related Fatalities, Injuries & PDO Vehicles: 1999 to 2009

Year	Fatalities	Injuries	PDO Veh.
1999	37.62%	18.81%	11.29%
2000	37.18%	18.59%	11.15%
2001	40.15%	20.08%	12.05%
2002	36.30%	18.15%	10.89%
2003	40.25%	20.12%	12.07%
2004	38.39%	19.20%	11.52%
2005	37.51%	18.76%	11.25%
2006	40.92%	20.46%	12.28%
2007	40.70%	20.35%	12.21%
2008	43.12%	21.56%	12.94%
2009	41.69%	20.85%	12.51%

⁸ This assumption is now likely to be very conservative. See G. Mercer & W. Jeffery, "Alcohol, drugs and impairment in fatal traffic accidents in British Columbia" (1995) 27(3) Accident Analysis and Prevention 335-43.

Finally, applying the estimated percentages in Table 3 to the estimated number of fatalities, injuries, and PDO vehicles in Table 1 provides the estimated number of impairment-related fatalities, injuries and PDO vehicles in Table 4.

Table 4: Estimated Number of Impairment-Related Fatalities, Injuries & PDO Vehicles: 1999 to 2009

Year	Fatalities	Injuries	PDO Veh.
1999	1,247	73,579	243,185
2000	1,176	69,362	229,248
2001	1,213	71,563	236,522
2002	1,161	68,470	226,300
2003	1,257	74,181	245,174
2004	1,157	68,245	225,555
2005	1,210	71,413	235,901
2006	1,278	75,374	249,117
2007	1,239	73,120	241,666
2008	1,162	68,538	226,522
2009	1,074	63,338	209,336
All	13,174	777,183	2,568,526
Average	1,198	70,653	233,502

The insurance company-generated ratios of 1.2 fatalities per fatal crash, 1.11 injuries per fatal crash, 1.44 injuries per injury crash and 1.52 vehicles per PDO crash can be used to move to crashes as the unit of analysis, as shown in Table 5.⁹

Table 5: Estimated Number of Impairment-Related Fatal, Injury & PDO Crashes: 1999 to 2009

Year	Fatal	Injury	PDO	Total
1999	1,039	50,295	159,990	211,324
2000	980	47,413	150,821	199,214
2001	1,011	48,917	155,606	205,534
2002	967	46,803	148,881	196,651
2003	1,048	50,707	161,298	213,053

⁹ The number of fatalities divided by fatalities per fatal crash produces the number of fatal crashes. The number of injuries, less the number of fatal crashes multiplied by injuries per fatal crash, divided by injuries per injury crash produces the number of injury crashes. The number of PDO vehicles divided by vehicles per PDO crash produces the number of PDO crashes.

Year	Fatal	Injury	PDO	Total
2004	964	46,649	148,391	196,004
2005	1,008	48,815	155,198	205,021
2006	1,065	51,522	163,893	216,480
2007	1,033	49,982	158,991	210,006
2008	968	46,849	149,028	196,845
2009	895	43,295	137,721	181,911
All	10,978	531,247	1,689,818	2,232,043
Average	998	48,295	153,620	202,913

SECTION III: CALCULATION OF COSTS

Based on these crash estimates, different costing approaches including the Real Dollar Estimate, Discounted Future Earnings, and Willingness-to-Pay can be used to estimate the total cost of impairment-related crashes in Canada. This Report adopts the Social Cost Model of Vodden *et al.*¹⁰ which is based on what is described as the “technically-preferred” Willingness-to-Pay approach.¹¹ This model is recent, is based on extensive analysis, and was prepared for the federal Ministry of Transportation. Under this model, the average social cost was estimated to be \$13,600,000 per fatality, \$44,000 per injury,¹² and \$8,000 per PDO crash.¹³ These costs are in 2004 dollars and have been adjusted for inflation in Table 6.¹⁴

¹⁰ K. Vodden *et al.*, *Analysis and Estimation of the Social Cost of Motor Vehicle Collisions in Ontario: Final Report* (Ottawa: Ministry of Transportation, 2007) at Executive Summary i and at 49. The major components of Vodden *et al.*'s Social Cost Model include: fatalities, injuries, property damage, traffic delays, out-of-pocket expenses, hospital/health costs, and police, fire and ambulance costs (*ibid.* at Executive Summary i). While numerous variables are taken into account, it is the human consequences of collisions that make up all but a small fraction of the total costs. For example, fatal and personal injury crashes constituted only 0.32% and 27% of total crashes in Ontario in 2004, but accounted for 64% and 28% respectively of total social costs. The remaining 73% of PDO crashes generated only 8% of the total social costs (*ibid.* at 24 and 3).

¹¹ Vodden *et al.* discuss at length different ways of valuing the human consequences of collisions and provide high, low and medium costing scenarios for the Willingness-to-Pay approach (*ibid.* at Appendix B). Ultimately Vodden *et al.* use the medium costing scenario in their national, provincial and territorial estimates of the total social costs of collisions.

¹² Vodden *et al.*, *ibid.*, separate injuries into three categories: major (average social cost of \$280,000); minor (average social cost of \$48,000); and minimal (average social cost of \$18,000). Based on 5,279 major, 60,726 minor and 58,822 minimal injuries (*ibid.* at 24), the average social cost per injury is \$43,675.

¹³ It should be noted that this model estimates costs per death and per injury, but not per damaged vehicle. Rather, vehicle damage is estimated per crash.

Table 6: Social Costs Adjusted for Inflation (Base Year 2004)

Year	Fatalities	Injuries	PDO Crashes
1999	\$12,053,135	\$38,995	\$7,090
2000	\$12,440,019	\$40,247	\$7,318
2001	\$12,517,628	\$40,498	\$7,363
2002	\$13,071,876	\$42,291	\$7,689
2003	\$13,277,680	\$42,957	\$7,810
2004	\$13,600,000	\$44,000	\$8,000
2005	\$13,870,640	\$44,876	\$8,159
2006	\$14,063,442	\$45,499	\$8,273
2007	\$14,410,809	\$46,623	\$8,477
2008	\$14,694,702	\$47,542	\$8,644
2009	\$14,815,209	\$47,932	\$8,715

These costs can then be multiplied by the annual number of fatalities (Table 4), injuries (Table 4) and PDO collisions (Table 5) to produce Table 7.

Table 7: Social Costs of Fatalities, Injuries and PDO Crashes: 1999 to 2009

Year	Fatalities	Injuries	PDO Crashes	Total
1999	\$15,030,259,345	\$2,869,213,105	\$1,134,329,100	\$19,033,801,550
2000	\$14,629,462,344	\$2,791,612,414	\$1,103,708,078	\$18,524,782,836
2001	\$15,183,882,764	\$2,898,158,374	\$1,145,726,978	\$19,227,768,116
2002	\$15,176,448,036	\$2,895,664,770	\$1,144,746,009	\$19,216,858,815
2003	\$16,690,043,760	\$3,186,593,217	\$1,259,737,380	\$21,136,374,357
2004	\$15,735,200,000	\$3,002,780,000	\$1,187,128,000	\$19,925,108,000
2005	\$16,783,474,400	\$3,204,729,788	\$1,266,260,482	\$21,254,464,670
2006	\$17,973,078,876	\$3,429,441,626	\$1,355,886,789	\$22,758,407,291
2007	\$17,854,992,351	\$3,409,073,760	\$1,347,766,707	\$22,611,832,818

¹⁴ Based on <http://www.bankofcanada.ca/rates/related/inflation-calculator> (accessed 28 November 2011 for 2009).

Year	Fatalities	Injuries	PDO Crashes	Total
2008	\$17,075,243,724	\$3,258,433,596	\$1,288,198,032	\$21,621,875,352
2009	\$15,911,534,466	\$3,035,917,016	\$1,200,238,515	\$20,147,689,997
All	\$178,043,620,066	\$33,981,617,666	\$13,433,726,070	\$225,458,963,802
Average	\$16,185,783,642	\$3,089,237,970	\$1,221,247,825	\$20,496,269,437

CONCLUSION

Between 1999 and 2009, traffic crashes involving alcohol and/or drugs resulted in an estimated 13,174 deaths, 777,183 injuries and damage to 2,568,526 vehicles in property-damage only (PDO) crashes alone. It is also estimated that there were 10,978 fatal impaired driving crashes, 531,247 injury-only impaired crashes and 1,689,818 PDO impaired crashes, totalling 2,232,043 crashes. Using a social cost model, these deaths, injuries and PDO crashes cost Canadians an estimated \$225.5 billion. Based on a population of 33 million people, that represents a cost of about \$6,832 per Canadian.

Given the relative stability of the impairment-related crash deaths, injuries, PDO crashes and costs during the eleven-year period, it seems reasonable to express the statistics in terms of an annual average. In an average year, impairment-related crashes resulted in an average of 1,198 deaths, 70,653 injuries and damage to 233,502 vehicles in PDO crashes a year. On average, there were 998 fatal impaired driving crashes, 48,295 injury-only impaired crashes and 153,620 PDO impaired crashes a year, totalling an average of 202,913 impaired driving crashes. These deaths, injuries and PDO crashes cost Canadians an estimated average of \$20.50 billion a year, or about \$621 per Canadian.

In 2009, the most recent year for which there is data, impairment-related crashes resulted in an estimated 1,074 fatalities, 63,338 injuries and damage to 209,336 vehicles in PDO crashes. There were a total of 181,911 crashes, costing an estimated \$20.15 billion.

APPENDIX A: PROVINCIAL AND TERRITORIAL DATA

As noted, these figures should be viewed as order-of-magnitude approximations. Applied to the entire country, they can give an idea of the scope and cost of impaired driving crashes. However, when applied at the provincial and territorial level, they become less reliable, as there are likely differences among the provinces and territories in the ratio of injuries to fatalities and in the medical, repair and other costs associated with crashes. Nonetheless, there is some benefit to providing provincial and territorial calculations. Consequently, the 2009 crash number and costing calculations described above are presented for each province and collectively for the territories.¹⁵

Table 8: Estimated Number of Fatalities, Injuries & PDO Vehicles: 2009

Jurisdiction	Fatalities	Injuries @ 118	PDO Veh. @ 650
British Columbia	416	49,088	270,400
Alberta	394	46,492	256,100
Saskatchewan	175	20,650	113,750
Manitoba	111	13,098	72,150
Ontario	711	83,898	462,150
Québec	530	62,540	344,500
New Brunswick	84	9,912	54,600
Nova Scotia	81	9,558	52,650
Prince Edward Island	12	1,416	7,800
Newfoundland & Labrador	45	5,310	29,250
Yukon, NW Territory & Nunavut	16	1,888	10,400
Canada	2,575	303,850	1,673,750

Table 9: Estimated Percentage of Alcohol-Related Fatalities, Injuries & PDO Vehicles: 2009

Jurisdiction	Fatalities	Injuries @ 0.5	PDO Veh. @ 0.3
British Columbia	35.10%	17.55%	10.53%
Alberta	48.50%	24.25%	14.55%
Saskatchewan	45.10%	22.55%	13.53%
Manitoba	48.50%	24.25%	14.55%
Ontario	33.90%	16.95%	10.17%

¹⁵ The data for Canada is drawn from the earlier part of this Report. Due to rounding, the sum of the numbers for all provinces and territories may not precisely equal the numbers for Canada.

Jurisdiction	Fatalities	Injuries @ 0.5	PDO Veh. @ 0.3
Québec	28.90%	14.45%	8.67%
New Brunswick	45.10%	22.55%	13.53%
Nova Scotia	48.70%	24.35%	14.61%
Prince Edward Island	58.30%	29.15%	17.49%
Newfoundland & Labrador	29.70%	14.85%	8.91%
Yukon, NW Territory & Nunavut	31.25%	15.63%	9.38%
Canada	37.90%	18.95%	11.37%

Table 10: Estimated Percentage of Impairment-Related Fatalities, Injuries & PDO Vehicles: 2009

Jurisdiction	Fatalities	Injuries	PDO Veh.
British Columbia	38.61%	19.31%	11.58%
Alberta	53.35%	26.68%	16.01%
Saskatchewan	49.61%	24.81%	14.88%
Manitoba	53.35%	26.68%	16.01%
Ontario	37.29%	18.65%	11.19%
Québec	31.79%	15.90%	9.54%
New Brunswick	49.61%	24.81%	14.88%
Nova Scotia	53.57%	26.79%	16.07%
Prince Edward Island	64.13%	32.07%	19.24%
Newfoundland & Labrador	32.67%	16.34%	9.80%
Yukon, NW Territory & Nunavut	34.38%	17.19%	10.31%
Canada	41.69%	20.85%	12.51%

Table 11: Estimated Number of Impairment-Related Fatalities, Injuries & PDO Vehicles: 2009

Jurisdiction	Fatalities	Injuries	PDO Veh.
British Columbia	161	9,476	31,320
Alberta	210	12,402	40,989
Saskatchewan	87	5,122	16,929
Manitoba	59	3,494	11,548
Ontario	265	15,643	51,701
Québec	168	9,941	32,855

Jurisdiction	Fatalities	Injuries	PDO Veh.
New Brunswick	42	2,459	8,126
Nova Scotia	43	2,560	8,461
Prince Edward Island	8	454	1,501
Newfoundland & Labrador	15	867	2,867
Yukon, NW Territory & Nunavut	6	325	1,073
Canada	1,074	63,338	209,336

Table 12: Estimated Number of Impairment-Related Fatal, Injury & PDO Crashes: 2009

Jurisdiction	Fatal	Injury-only	PDO	Total
British Columbia	134	6,477	20,605	27,216
Alberta	175	8,477	26,966	35,618
Saskatchewan	73	3,501	11,138	14,712
Manitoba	49	2,388	7,597	10,034
Ontario	221	10,693	34,014	44,928
Québec	140	6,795	21,615	28,550
New Brunswick	35	1,680	5,346	7,061
Nova Scotia	36	1,750	5,566	7,352
Prince Edward Island	7	310	988	1,305
Newfoundland & Labrador	13	593	1,886	2,492
Yukon, NW Territory & Nunavut	5	221	706	932
Canada	895	43,295	137,721	181,911

Table 13: Social Costs of Fatalities, Injuries and PDO Crashes: 2009

Jurisdiction	Fatalities	Injuries	PDO Crashes	Total
British Columbia	\$2,385,248,649	\$454,203,632	\$179,572,575	\$3,019,024,856
Alberta	\$3,111,193,890	\$594,452,664	\$235,008,690	\$3,940,655,244
Saskatchewan	\$1,288,923,183	\$245,507,704	\$97,067,670	\$1,631,498,557
Manitoba	\$874,097,331	\$167,474,408	\$66,207,855	\$1,107,779,594
Ontario	\$3,926,030,385	\$749,800,276	\$296,432,010	\$4,972,262,671
Québec	\$2,488,955,112	\$476,492,012	\$188,374,725	\$3,153,821,849
New Brunswick	\$622,238,778	\$117,864,788	\$46,590,390	\$786,693,956

Jurisdiction	Fatalities	Injuries	PDO Crashes	Total
Nova Scotia	\$637,053,987	\$122,705,920	\$48,507,690	\$808,267,597
Prince Edward Island	\$118,521,672	\$21,761,128	\$8,610,420	\$148,893,220
Newfoundland & Labrador	\$222,228,135	\$41,557,044	\$16,436,490	\$280,221,669
Yukon, NW Territory & Nunavut	\$88,891,254	\$15,577,900	\$6,152,790	\$110,621,944
Canada	\$15,911,534,466	\$3,035,917,016	\$1,200,238,515	\$20,147,689,997