

**LIVES SAVED IN CANADA DUE TO REDUCTIONS
IN ALCOHOL-RELATED CRASH
DEATHS, 1982-2014: 43,247**

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INTRODUCTION

There have been sharp declines in alcohol-related traffic fatalities in Canada during the past three decades. However, there is no precise estimate of the total number of lives that have been saved as a result. Such an estimate is important in documenting the progress that has been made and determining the measures that must be implemented to achieve further substantial reductions.

James Fell, an internationally-respected traffic safety expert and former Chief of Research and Evaluation for the United States National Highway Traffic Safety Administration, developed a method for estimating the number of lives saved in the United States. Given the similarities between Canada and the United States in drinking and driving patterns, collision rates and other relevant variables, MADD Canada has adopted Fell's approach to estimate the number of lives saved in Canada since 1982.

The starting point for the analysis is the 1982 crash statistics. According to Transport Canada, there were 4,169 fatalities on Canadian roads in that year. The Traffic Injury Research Foundation (TIRF) estimated that 60% (2,501) of these fatalities were alcohol related and that 40% (1,668) were not alcohol related. Fell's approach assumes that if there were no declines in alcohol-related fatalities, this 60/40 ratio would remain constant. Using the number of crash fatalities that were not alcohol related as the base, we calculated the number of fatalities that would have occurred had the 60/40 ratio remained constant. The difference between this figure and the actual number of traffic fatalities provides an estimate of the number of lives saved due to the reduction in alcohol-related fatalities. These calculations are presented in the following Chart.

MADD Canada is gratified to see that its efforts, along with those of other organizations and agencies, have contributed to reducing alcohol-related traffic deaths. However, we must be mindful that more than 45,000 Canadians were killed in alcohol-related crashes from 1982 to 2014. Impaired driving remains a major criminal cause of death in Canada, claiming almost twice as many lives per year as all categories of homicide combined. Moreover, Canada has a very poor impaired driving record among comparable developed countries. Consistent with earlier studies, the U.S. Centers for Disease Control and Prevention recently reported that Canada had the highest percentage of alcohol-related crash deaths (33.6%) among 20 high-income countries in 2013.¹ While Canadians drink considerably less than the inhabitants of most of these other countries, they are much more likely to die in an alcohol-related crash. For example, Canada's per capita rate of alcohol-related crash deaths in 2013 was almost five times that of Germany,² even though Canadians consumed 33% less alcohol per capita.³

¹ E. Sauber-Schatz *et al.*, "Vital Signs: Motor Vehicle Injury Prevention – United States and 19 Comparison Countries" (2016) 65(27) *Morbidity and Mortality Weekly Report* 672 at 675. The mean percentage of alcohol-related crash deaths in the other 19 countries was 18.9%.

² *Ibid* at 674-75.

³ Organization for Economic Co-Operation and Development, OECD.Stat, Health Status, Non-Medical Determinants of Health: Alcohol Consumption, online: <http://stats.oecd.org/Index.aspx?DataSetCode=HEALTH_STAT>.

Chart I is based on published reports from Transport Canada⁴ and TIRF.⁵ The numbers in Chart I for the years 2011 to 2014 are higher than those in the TIRF reports. These TIRF reports did not include current British Columbia fatality data because the province's statistics were not available at the time of publication. In order to address this gap, we have added the latest available British Columbia fatality statistics, which are from 2010, to the reported Canadian totals.⁶

It should be noted that the annual number of traffic deaths listed in Chart I are based on deaths occurring within 30 days of a collision. TIRF reported that deaths occurring within 30 days of a crash in 2014 made up only 83.3% of the crash deaths occurring within 12 months.⁷

Deaths resulting from on-road and off-road crashes were included in the reported traffic deaths for 1982 to 2012, but not for 2013 and 2014. Had off-road crash deaths been included in these latter years, the reported traffic deaths would have been considerably higher. For example, TIRF reported that off-road crashes in 2012 accounted for 203 deaths in Canada (excluding British Columbia), of which approximately 106 were alcohol related.⁸

⁴ For the number of total traffic deaths from 1982 to 2010, see Transport Canada, *Canadian Motor Vehicle Traffic Collision Statistics: 2001* (Ottawa: Transport Canada, 2003); and Transport Canada, *Canadian Motor Vehicle Traffic Collision Statistics: 2013* (Ottawa: Transport Canada, 2015).

⁵ For the number of total traffic deaths from 2011 to 2014, see TIRF, *Alcohol and Drug-Crash Problem in Canada: 2011 Report* (Ottawa: Canadian Council of Motor Transport Administrators (CCMTA), 2015) at 11; TIRF, *Alcohol and Drug-Crash Problem in Canada: 2012 Report* (Ottawa: CCMTA, 2016) at 4 [*Crash Problem 2012*]; TIRF, *Alcohol and Drug-Crash Problem in Canada: 2013 Report* (Ottawa: CCMTA, 2017) at 4 [*Crash Problem 2013*]; TIRF, *Alcohol and Drug-Crash Problem in Canada: 2014 Report* (Ottawa: CCMTA, 2018) at 4 [*Crash Problem 2014*].

⁶ It is important to note that British Columbia's 2010 crash data provide only a rough estimate of the actual number of traffic deaths in the province from 2011 to 2014. British Columbia enacted comprehensive alcohol-related administrative licence suspension and vehicle impoundment legislation in 2010 which significantly reduced rates of impaired driving and related crashes, injuries and deaths. S. Macdonald *et al.*, "The impact on alcohol-related collisions of the partial decriminalization of impaired driving in British Columbia, Canada" (2013) 59 *Accident Analysis and Prevention* 200; and D. Beirness & E. Beasley, "An Evaluation of Immediate Roadside Prohibitions for Drinking Drivers in British Columbia: Findings from Roadside Surveys" (2014) 15 *Traffic Injury Prevention* 228.

⁷ *Crash Problem 2014*, *supra* note 5 at 4. Similarly, the 30-day crash deaths constituted only 84.1% of the 12-month crash deaths in 2013. *Crash Problem 2013*, *supra* note 5 at 4.

⁸ *Crash Problem 2012*, *supra* note 5 at 14

Chart I: Lives Saved Due to Reductions in Alcohol-Related Crash Deaths: 1982-2014⁹

Year	Reported Traffic Deaths	Alcohol-Related Deaths ¹⁰		Non-Alcohol-Related Deaths		Deaths if the 60/40 Ratio Remained at the 1982 Level	Lives Saved Due To Reductions in Alcohol-Related Deaths
		Count	Percentage	Count	Percentage		
1982	4,169	2,501	60.0%	1,668	40.0%	4,170	
1983	4,216	2,441	57.9%	1,775	42.1%	4,438	222
1984	4,120	2,324	56.4%	1,796	43.6%	4,490	370
1985	4,364	2,265	51.9%	2,099	48.1%	5,248	884
1986	4,068	2,132	52.4%	1,936	47.6%	4,840	772
1987	4,286	2,293	53.5%	1,997	46.6%	4,993	707
1988	4,154	2,127	51.2%	2,027	48.8%	5,068	914
1989	4,246	1,991	46.9%	2,255	53.1%	5,638	1,392
1990	3,963	1,767	44.6%	2,196	55.4%	5,490	1,527
1991	3,690	1,793	48.6%	1,897	51.4%	4,743	1,053
1992	3,501	1,642	46.9%	1,859	53.1%	4,648	1,147
1993	3,615	1,565	43.3%	2,050	56.7%	5,125	1,510
1994	3,230	1,408	43.6%	1,818	56.3%	4,545	1,315
1995	3,313	1,391	42.0%	1,922	58.0%	4,805	1,492
1996	3,129	1,258	40.2%	1,871	59.8%	4,678	1,549
1997	3,076	1,150	37.4%	1,926	62.6%	4,815	1,739
1998	2,919	1,118	38.3%	1,801	61.7%	4,503	1,584
1999	2,980	963	32.3%	2,014	67.6%	5,035	2,055
2000	2,904	1,013	34.9%	1,891	65.1%	4,728	1,824
2001	2,758	1,015	36.8%	1,743	63.2%	4,358	1,600
2002	2,921	979	33.5%	1,942	66.5%	4,855	1,934
2003	2,777	1,066	38.4%	1,713	61.7%	4,283	1,506
2004	2,735	930	34.0%	1,805	66.0%	4,513	1,778
2005	2,898	1,026	35.4%	1,869	64.5%	4,673	1,775
2006	2,871	1,051	36.6%	1,820	63.4%	4,550	1,679
2007	2,753	1,008	36.6%	1,745	63.4%	4,363	1,610
2008	2,431	924	38.0%	1,505	61.9%	3,763	1,332
2009	2,216	847	38.2%	1,369	61.8%	3,423	1,207
2010	2,238	846	37.8%	1,392	62.2%	3,480	1,242
2011	2,385	860	36.1%	1,525	63.9%	3,813	1,428
2012	2,391	908	38.0%	1,483	62.0%	3,706	1,317
2013	2,060	673	32.7%	1,387	67.3%	3,468	1,408
2014	1,931	609	31.5%	1,322	68.5%	3,305	1,374
Totals	105,308	45,884	43.6%	59,418	56.4%	148,555	43,247
Total Lives Saved = 43,247							

⁹ The numbers and percentages in the Chart have been rounded.

¹⁰ Unfortunately, there is no estimate of the percentage of total traffic fatalities (*i.e.* drivers, passengers, pedestrians, and other road users) that are alcohol related. We have based our estimate on the reported percentage of fatally-injured **drivers** of highway vehicles who are positive for alcohol. See D. Mayhew, D. Beirness & H. Simpson, “Trends in Drinking-Driving Fatalities in Canada – Progress Continues” (Ottawa: TIRF, 2000) (for 1982 to 1986); *Crash Problem 2012*, *supra* note 5 at 35, “Table 3-9 Alcohol Use Among Fatally Injured Drivers of Highway Vehicles: Canada, 1987-2012” (for 1987 to 2012); *Crash Problem 2013*, *supra* note 5 at 35, “Table 3-9 Alcohol Use Among Fatally Injured Drivers of Highway Vehicles: Canada, 1996-2013” (for 2013); and *Crash Problem 2014*, *supra* note 5 at 18, “Table 3-2 Alcohol Use Among Fatally Injured Drivers of Highway Vehicles: Canada, 2014 (excluding British Columbia)” (for 2014).