

BUSINESS OF AUTO | SAFETY

Advancements slash fatalities

Number of people hurt in accidents is up, but deaths and serious injuries are declining

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SPECIAL TO THE SUN

In a world where we've become accustomed to rising prices, higher taxes, and generally getting less for more, it seems impossible that something bad is declining in frequency.

Auto safety experts say the number of people killed on North America's roads has declined dramatically in the last 40 years, due to more widespread use of seatbelts, safer roads, better-built cars with airbags and other passive restraints.

"Seatbelts have been crucial. People are walking away from crashes today that would have seriously injured or killed them 15 or 20 years ago," says Russ Rader, senior vice-president of communications for Insurance Institute for Highway Safety, a leading non-profit research and educational group based in Arlington, Va.

In 1975, the first year the U.S. federal government started to comprehensively track fatalities in crashes, 30,601 people died in the U.S. as occupants of passenger vehicles, he said.

By 2013, the most recent figures available, the number of deaths had declined to 21,268. That is a record low, even though people are driving more and there are many more vehicles on the roads, he said.

A similar trend has been occurring in Canada where Transport Canada figures show that in 1975, 4,628 people died in traffic accidents. By 2012, that figure had dropped to 2,077, less than half the deaths in 1975.

Rader, Transport Canada, and other highway safety organizations attribute the decline to a number of factors that generally fall into three categories: greater use of improved passive restraint

systems in cars (mainly seat belts and airbags); safer vehicle construction including high-strength steel and improved passenger compartments; and Electronic Stability Control, a computerized technology that improves a car's stability by detecting and reducing loss of traction due to skidding.

They say the best is yet to come. A wave of new advances in wireless communications, known as vehicle-to-vehicle technology — cars talking to cars — which promises to ultimately make collisions a thing of the past.

One thing Rader doesn't see as a major factor is improved driving habits.

"I don't think there is evidence that people are becoming better drivers," he said. "Prior to the 1960s, the idea of how we should improve highway safety campaigns was to try to get drivers to 'do better.' It didn't work."

What has worked is adopting a scientific approach to highway safety that looks at the problem more broadly, he said.

"All crashes are preventable, but it requires vehicle improvements. There are laws we can enact and vigorously enforce to change driver behaviour. And there are roadway design changes we can make."

"All of these things taken together have improved safety over the last three or four decades."

Interestingly, Rader says while it is clear that distractions are at the root of many crashes, there is no clear evidence showing cellphones and other electronic devices are making the problem worse.

"Distractions are not new," he said. "People have always driven and distracted themselves with something. There were efforts back in the 1930s to ban car radios for fear that drivers

YEAR	COLLISIONS		VICTIMS		
	FATAL ¹	PERSONAL INJURY ²	FATALITIES ³	SERIOUS INJURIES ⁴	INJURIES ⁵ (TOTAL)
1993	3,322	168,036	3,615	23,902	247,553
1994	2,837	164,635	3,230	21,564	241,899
1995	2,818	162,014	3,313	20,188	238,456
1996	2,740	153,944	3,129	18,734	227,283
1997	2,660	147,549	3,076	17,294	217,401
1998	2,583	145,615	2,999	16,410	213,319
1999	2,632	148,683	2,980	16,187	218,457
2000	2,548	153,290	2,904	15,581	222,848
2001	2,415	149,023	2,758	15,296	216,542
2002	2,583	153,832	2,921	15,894	222,665
2003	2,487	150,493	2,777	15,310	216,123
2004	2,438	143,150	2,735	15,572	206,104
2005	2,551	145,559	2,898	15,792	204,701
2006	2,586	142,517	2,871	15,879	199,976
2007	2,455	138,635	2,753	14,216	192,745
2008	2,397	127,672	2,431	12,674	176,512
2009	2,014	123,561	2,236	11,780	170,912
2010	2,020	123,628	2,238	11,625	172,100
2011	1,837	121,159	2,023	10,794	166,725
2012	1,823	122,340	2,077	10,656	165,572

1. "Fatal collisions" include all reported motor vehicle crashes that resulted in at least one death, where death occurred within 30 days of the collision, except in Quebec, before 2007 (night days).
 2. "Personal injury collisions" include all reported motor vehicle crashes which resulted in at least one injury but not death, within 30 days of the collision, except in Quebec, before 2007 (night days).
 3. "Fatalities" include all those who died as a result of a reported traffic collision within 30 days of its occurrence, except in Quebec, before 2007 (night days).
 4. "Serious injuries" include persons admitted to hospital for treatment or observation. Serious injuries were estimated from 1993 to 2012 because several jurisdictions under-reported these numbers.
 5. "Total injuries" include all reported severities of injuries ranging from minimal to serious.
- Source: Statistics Canada

were distracted. There were even concerns when windshield wipers first came in that they would lull drivers into a trance."

Rader prefers to describe electronic devices as a "replacement distraction," which along with drivers grooming themselves, fiddling with the radio, eating, talking to passengers and daydreaming, can lead to crashes.

"Certainly cellphones and texting are distractions that lead to crashes, but the singular focus on electronic devices probably misses the larger picture, which is that we have a lot of drivers who are not paying attention to the road for a lot of different reasons."

ICBC spokesman Adam Grossman said the B.C. experience

has been similar to the U.S. with a dramatic decline in B.C. auto fatalities over the past two decades, attributable in part to improvements in vehicle safety and design. That trend has continued during the past five years for which figures are available with the number of deaths dropping to 269 in 2013 from 363 in 2009.

However, he notes the number of people injured in accidents in B.C. has increased to 85,000 in 2013 from 73,000 in 2009. Unlike its U.S. counterparts, ICBC attributes it to the rapid adoption of personal electronic devices behind the wheel, the amount of time drivers are on the road, driving behaviours, weather and road conditions, the volume of pedestrians and cyclists, and more relatively minor injury claims from small crashes.

"Our injury claims costs, which cover payouts for pain and suffering, future care and loss of wages, topped \$2 billion in a single year for the first time last year — \$2.13 billion in 2014; up by more than \$200 million from 2013 and more than \$600 million from just five years ago," he said in an email.

"There are various factors contributing to the increasing cost of injury claims we pay out, including higher legal and medical costs and the type and complexity of the injury claims we are receiving."

Seat belts are probably the best safety device that has ever been invented because they have reduced injuries tremendously, says Diane Mackay, ICBC's safety officer. And those devices have undergone further improvements by evolving into three-point seatbelts and enhanced headrests that move in a collision to reduce soft-tissue injuries.