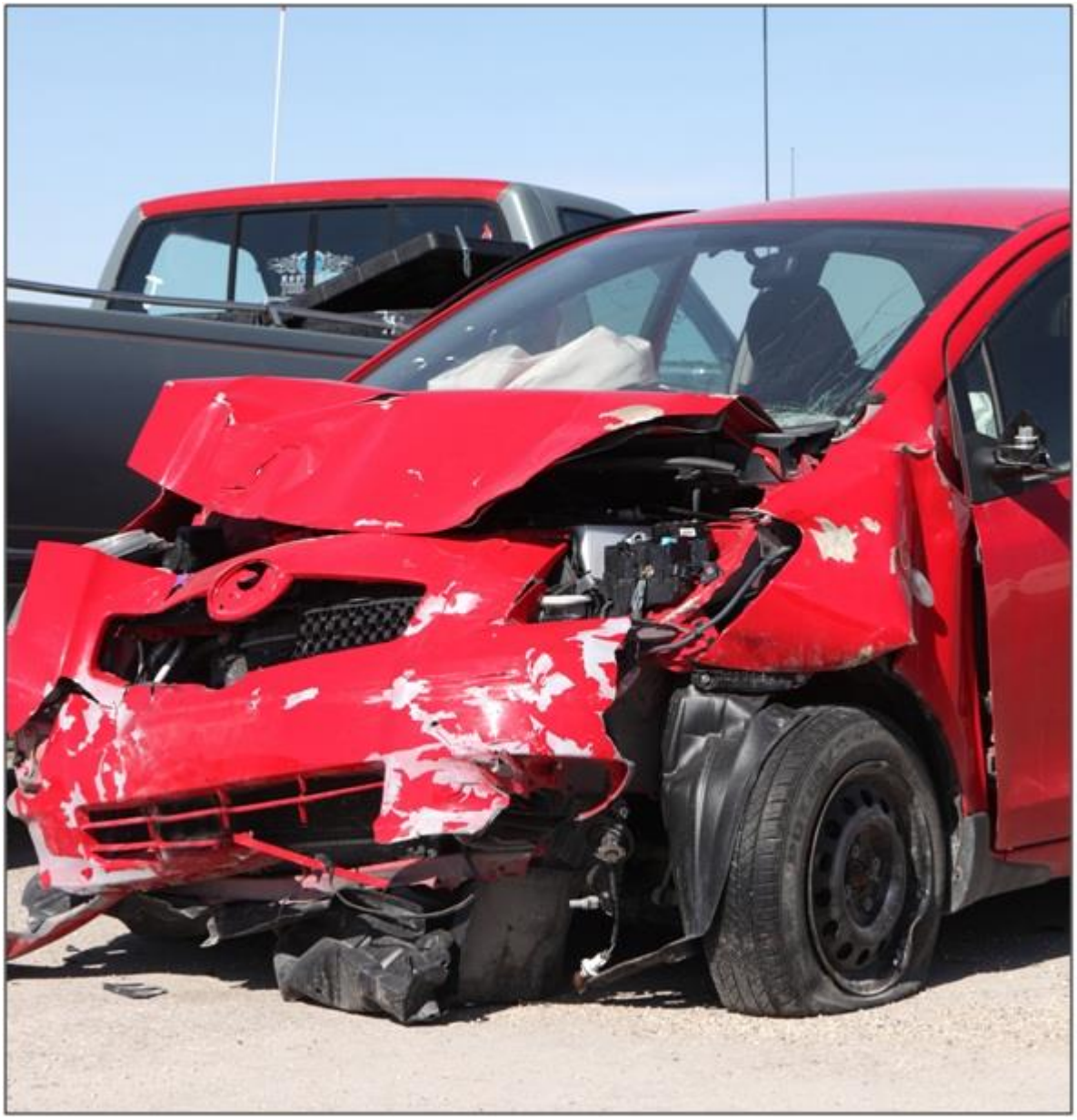
MANITOBA PUBLIC INSURANCE

2017

TRAFFIC COLLISION STATISTICS REPORT

MANITOBA
PUBLIC INSURANCE

Executive Summary



2017 Traffic Collision Statistics Report – Executive Summary

Motor vehicle collisions resulting in a fatality, injury or property damage only are required by law to be reported to either a law enforcement agency and/or to Manitoba Public Insurance. Subsequently, a Traffic Accident Report (TAR) for the collision is created. The *Traffic Collision Statistics Report* deals with these reportable collisions and the TARs arising from them.

The *Traffic Collision Statistics Report* is the official report of traffic collision statistics in Manitoba. It reports the details surrounding traffic collisions in Manitoba, allowing users to analyze the reasons why collisions occur. Knowing more about collisions helps policy makers, traffic safety experts, public safety programmers and legislators to pinpoint areas for review and create targeted approaches to preventing and reducing traffic collisions.

Due to amendments to the *Highway Traffic Act* that took effect in 2011, this report uses two sources for Traffic Accident Reports (TARs); TARs completed by a law enforcement agency and TARs completed when a collision claim is registered with Manitoba Public Insurance. This change resulted in an increase in minimal injury and property damage only (PDO) collisions in the Traffic Accident Report Database that had previously been underreported.

The following is a presentation of the key highlights of this report for 2017.

Licensed Drivers and Vehicle Registrations
There are 905,365 licensed drivers in Manitoba in 2017, an increase of 1% compared to 2016.

Overall, there are 1,084,536 vehicles registered in Manitoba (commercial and non-commercial, combined) in 2017, a 1% increase from 2016.

Traffic Collisions
In 2017, there are a total of 51,844 traffic collisions reported to Manitoba Public Insurance and law enforcement agencies in Manitoba that conform to the reportable collision requirement for Traffic Accident Reports. Of these:

- 65 involve a fatality (0.1% of all collisions);
- 9,691 involve an injury, but not a fatality (19% of all collisions); and,
- 42,088 involve property damage only (81% of all collisions).

Overall traffic collisions in Manitoba in 2017 increased compared to 2016 and to the previous five year (2012 to 2016) annual average. There are 51,844 collisions in 2017, up from 45,316 collisions in 2016 and from 41,665 on average in the five year period 2012 to 2016. The increase in the total number of collisions in 2017 compared to 2016 is attributable to increases in injury collisions and PDO collisions. There are 31 fewer fatal collisions, 109 more injury collisions, and 6,450 more PDO collisions reported in 2017 than in 2016 (representing proportional changes of -32%, 1%, and 18%, respectively).

People Killed and Injured in Collisions
In 2017, there are 12,659 victims (or casualties) of traffic collisions. Of these:

- 73 are killed (16% fewer than in the previous five years);
- 442 are seriously injured (20% more than in the previous five years);
- 2,026 sustain minor injuries (down nearly 5% from the previous five years);
- 9,836 sustain minimal injuries (11% more than in the previous five years); and,
- 282 sustain injuries that are undefined in terms of severity (35% more than in the previous five years).

The victim involvement rate (per 100,000 people in the general population) in traffic collisions in 2017 (932.9) has decreased by 1% compared to 2016 (944.7), but has increased by 5% compared to the previous five years (2012 to 2016) annual average (891.1). Victim involvement rates in traffic collisions in 2017 where the person:

- Is killed (5.4 in 2017) is 33% lower than in 2016 and 19% lower than in the previous five years; and,
- Is injured, including all levels of severity (but excluding killed; 927.5 in 2017), is 1% lower than in 2016 but 5% higher than in the previous five years.

Traffic collisions in urban locations account for the majority of casualties overall while rural locations account for the majority of people killed and seriously injured. In 2017, 86% of all casualties result from traffic collisions in urban areas. Traffic collisions in rural locations, however, account for 62% of people killed and 42% of people seriously injured. In the previous five year (2012 to 2016) annual average, 86% of all victims are from traffic collisions in urban locations, while 69% of people killed and 43% of people seriously injured are from traffic collisions in rural locations.

Victims in 2017 appear to follow a fairly typical distribution compared to past years in terms of month of occurrence. The months of January, November and December combined account for a disproportionate number of traffic collision victims overall, both in 2017 (33% of all victims) and in the previous five year (2012 to 2016) annual average (33%). In 2017 (similar to the previous five years), the count of victims is lowest in the late spring and summer months (ranging from 6% to 8% of all victims in each month from April to August) and is highest in late fall, winter and early spring (ranging from 7% to 11% of all victims in each month from October to March).

Considering people killed and seriously injured in Manitoba traffic collisions in 2017:

- Drivers account for the largest proportion of people killed (59%) and seriously injured (62%);
- Passengers account for 18% of people killed and 25% of people seriously injured;
- Pedestrians account for 16% of people killed and 5% of people seriously injured;
- Motorcyclists (including motorcycle and moped riders, combined) account for 7% of people killed and nearly 6% of people seriously injured; and,
- Bicyclists account for none killed and 2% of people seriously injured.

In 2017, most victims in traffic collisions were using safety equipment at the time of the collision (99% of all victims where safety equipment use is known). However, 49% of the people killed in traffic collisions and 6% of the people seriously injured in traffic collisions are recorded as not wearing or using the available safety equipment at the time of the collision.

Drivers and Vehicles Involved in Collisions

In 2017, there are 68,447 drivers involved in traffic collisions. Of these:

- 85 are involved in fatal collisions;
- 16,531 are involved in injury collisions; and,
- 51,831 are involved in PDO collisions.

The driver involvement rate (per 10,000 licensed drivers) in traffic collisions in 2017 is 756.0, an increase of 6% compared to the rate in 2016 (712.6) and an increase of 7% from the previous five year (2012 to 2016) annual average (707.9). In 2017, driver involvement in:

- Fatal collisions (0.9) decreased by 39% from 2016 and by 27% compared to the previous five years;
- Injury collisions (182.6) decreased by 2% from 2016 and is relatively unchanged compared to the previous five years; and,
- PDO collisions (572.5) increased by 9% from 2016 and by 9% compared to the previous five years.

Young drivers have a much higher rate of involvement in traffic collisions than older drivers. In 2017, drivers aged 16 to 24 years old have an involvement rate (per 10,000 licensed drivers) in traffic collisions of 1,103.0. This is:

- 1.2 times that of drivers aged 25 to 34 (rate of 914.3);
- 1.3 times that of drivers aged 35 to 44 (rate of 842.5);
- 1.5 times that of drivers aged 45 to 54 (rate of 742.8);
- 1.9 times that of drivers aged 55 to 64 (rate of 575.4); and,
- More than two-and-a-half times that of drivers aged 65 and older (rate of 432.0).

The reader should note that neither the count of drivers involved in collisions nor the calculated rate of involvement takes into account exposure to risk in terms of hours of driving, kilometres driven or driving situations.

In 2017, there are 72,055 vehicles involved in traffic collisions. Of these:

- 88 are involved in fatal collisions;
- 16,748 are involved in injury collisions; and,
- 55,219 are involved in PDO collisions.

Vehicle involvement in traffic collisions per 10,000 registered vehicles (vehicle involvement rate) has increased in 2017 compared to 2016 and to the previous five year (2012 to 2016) annual average. The vehicle involvement rate in collisions in 2017 for:

- Total collisions is 796.2 – increased by 8% from 2016 and by 10% from the previous five years;
- Fatal collisions is 1.0 – decreased by 39% from 2016 and by nearly 28% from the previous five years;
- Injury collisions is 185.1 – decreased by 2% from 2016, but increased by nearly 1% from the previous five years; and,
- PDO collisions is 610.1 – increased by 11% from 2016 and by 13% from the previous five years.

Contributing Factors to Collisions

In 2017, 64% of all collisions have some at-fault contributing factor recorded (92% of fatal collisions; 77% of injury collisions). In 2017:

- A driver action is a contributing factor in 56% of all **collisions** (77% of fatal collisions; 74% of injury collisions; 52% of PDO collisions);
- A human condition is a contributing factor in nearly 1% of all **collisions** (40% of fatal collisions; 1% of injury collisions; 0.4% of PDO collisions); and,
- Environmental conditions are contributing factors in 13% of all **collisions** (12% of fatal collisions; 8% of injury collisions; 14% of PDO collisions).

The most prevalent **contributing factors recorded for collisions** in 2017 include:

- Distracted driving – 30% of all collisions (40% fatal; 36% injury; 28% PDO);
- “Following too closely” – 12% of all collisions (nearly 2% fatal; 24% injury; 9% PDO);
- Speed – 7% of all collisions (nearly 19% fatal; 9% injury; 7% PDO);
- “Backing unsafely” – 7% of all collisions (no fatal; 3% injury; 8% PDO);
- The actions of a wild animal – 7% of all collisions (nearly 2% fatal; 1% injury; 8% PDO);
- “Turning improperly” – 5% of all collisions (5% fatal; nearly 9% injury; 5% PDO);
- “Fail to yield right-of-way” – 5% of all collisions (15% fatal; nearly 10% injury; 4% PDO);
- “Changing lanes improperly” – 4% of all collisions (3% fatal; 4% injury; 4% PDO);
- “Slippery road surface” – 4% of all collisions (nearly 2% fatal; 5% injury; 4% PDO); and,
- “Lost control/Drive off the road” – 3% of all collisions (nearly 19% fatal; 3% injury; 2% PDO).

The most prevalent contributing factors recorded for collisions where **people are killed or seriously injured** in 2017 include:

- Distracted driving – 41% of people killed and 42% of people seriously injured;
- Impaired – nearly 32% of people killed and 6% of people seriously injured;
- Speed – 18% of people killed and 16% of people seriously injured;
- "Fail to yield right-of-way" – 16% of people killed and 14% of people seriously injured;
- "Lost control/Drive off the road" – 16% of people killed and 11% of people seriously injured;
- "Turning improperly" – 8% of people killed and 8% of people seriously injured;
- "Disobey traffic control" – 8% of people killed and 6% of people seriously injured;
- "Drive wrong way on roadway" – 8% of people killed and 2% of people seriously injured;
- "Loss of consciousness" – nearly 6% of people killed and 2% of people seriously injured;
- "Pedestrian error/confusion" – nearly 6% of people killed and nearly 1% of people seriously injured;
- "Leave stop sign before safe to do so" – 4% of people killed and 4% of people seriously injured; and,
- "View obstructed" – 4% of the people killed and 2% of people seriously injured.

Off-Road Vehicle (ORV) Collisions

In 2017, there are 168 off-road vehicle collisions, involving 43 victims, 182 vehicles and 177 drivers. Of these:

- 6 are fatal collisions, involving 7 vehicles and 7 drivers, resulting in 6 people killed and 2 people injured;
- 32 are injury collisions, involving 34 vehicles and 34 drivers, resulting in 35 people injured; and,
- 130 are PDO collisions, involving 141 vehicles and 136 drivers.

Alcohol-related Criminal Code Convictions

In 2016[1], there are a total of 1,862 alcohol-related Criminal Code offence convictions, including:

- 1,060 convictions for driving with a blood alcohol concentration (BAC) over .08;
- 698 convictions for impaired driving; and,
- 104 convictions for refusing to provide a breath or blood sample.

In the 20-year period from 1997 to 2016, total alcohol-related Criminal Code convictions decreased by 42%, from 3,202 in 1997 to 1,862 in 2016. Total convictions in 2016 (1,862) decreased by a count of 2 compared to 2015 (1,864); the count decreased by nearly 5% compared to the previous five year (2011 to 2015) annual average (1,950).

Licensed drivers up to the age of 44 are overrepresented in alcohol-related Criminal Code convictions.

- Drivers under age 25 represented 14% of the licensed drivers in 2016, but accounted for 25% of convictions.
- Drivers aged 25 to 44 represented 34% of the licensed drivers in 2016, but accounted for 53% of convictions.

Over the past 10 years, from 2006 to 2016, there was a 19% decrease in the rate of first offences. Rates of recidivism, indicated by second, and third and subsequent offences, decreased at a rate of 10% in second alcohol-related Criminal Code offences in 2016, but increased at a rate of 11% in third and subsequent offences in 2016 compared to 2006.

[1] There is a one-year lag in the statistics reported to allow for court processing time. Therefore, 2016 is the most current year for which these statistics are available.

Preface

Motor vehicle collisions resulting in a fatality, injury or property damage are required by law to be reported to either a law enforcement agency and/or to Manitoba Public Insurance. Subsequently, a Traffic Accident Report (TAR) for the collision is created. The *Traffic Collision Statistics Report* deals with these reportable collisions and the TARs arising from them.

The *Traffic Collision Statistics Report* is the official report of traffic collision statistics in Manitoba. It reports the details surrounding traffic collisions in Manitoba, allowing users to analyze the reasons why collisions occur. Knowing more about collisions helps policy makers, traffic safety experts, public safety programmers and legislators to pinpoint areas for review and create targeted approaches to preventing and reducing traffic collisions.

Annual collision statistics, such as those contained in the *Traffic Collision Statistics Report*, are used to:

- Indicate trends;
- Identify driver and vehicle factors in accidents;
- Evaluate current programs and new provincial road safety initiatives;
- Monitor commercial vehicle collisions in accordance with the National Safety Code; and,
- Guide development of new policies and programs to reduce the frequency and severity of traffic collisions in the province.

A brief Synopsis of each section of this Report can be found below.

Section 1 – Drivers, Vehicle and Collision Rates: Historical Trends
This section calculates involvement rates for total collisions as well as for fatal, injury, and property damage only (PDO) collisions using licensed drivers and vehicles registered for the years 2007 to 2017, inclusive. This section also deals with relative involvement rates of drivers by specific age groups.

Section 2 – Licensed Drivers
This section deals with Active and Suspended Drivers by specific Age Groups, Gender and Manitoba Licence Class.

Section 3 – Vehicle Registrations
This section deals with vehicle registrations and examines these by three major categories: Commercial; Non-commercial; and, Snowmobiles (Recreational).

Section 4 – Traffic Collisions
This section counts the number of collisions in Manitoba and provides detail for collisions of different severity; fatal, injury and property damage only (PDO). Historical information regarding the number of collisions, victims, vehicles and drivers involved in collisions over the ten year period 2007 to 2016 is presented and compared to 2017. Details are provided for 2017 traffic collisions in terms of the month of occurrence, day of the week, time of day, weather and road conditions, location and type of collision.

Section 5 – Collision Victims
This section counts the number of victims killed and injured in traffic collisions and examines the severity of the injury received by the victim. Month, time and day of occurrences are examined, as well as the age of the victim. Victim involvement rates in traffic collisions per 100,000 people in the general population are also calculated.

Section 6 – Pedestrian Victims
This section counts the number of pedestrian victims killed and injured in traffic collisions and examines the severity of the injury received by the pedestrian victim. Month, time and day of occurrence are examined and breaks are provided for the age of the pedestrian. The specific pedestrian actions taken immediately prior to the collision are also presented. Pedestrian involvement rates in traffic collisions per 100,000 people in the general population are also calculated.

Section 7 – Vehicle Involvement
This section counts the number of vehicles involved in traffic collisions. Vehicle involvement in a collision is calculated for each vehicle type (such as passenger vehicles, vans, pick-up trucks, types of emergency vehicles). Vehicle involvement rates in traffic collisions per 10,000 registered vehicles are also calculated.

Section 8 – Driver Involvement
This section counts the number of drivers involved in traffic collisions and breaks this down by age and gender of the driver. Driver involvement rates in traffic collisions per 10,000 licensed drivers are also detailed.

Section 9 – Contributing Factors
This section examines the contributing factors to traffic collisions as reported on the Traffic Accident Report (TAR). Detail is provided at the collision level and for collision severity, at the victim level and for victims of each casualty type, and at the driver level by collision severity. Driver involvement rates (per 10,000 licensed drivers) in collisions with specific contributing factors are calculated and discussed.

Section 10 – National Safety Code Monitoring Report
This section counts the number of commercial vehicles involved in collisions, the severity of those collisions and the victims killed and injured in those collisions.

Section 11 – Off-Road Vehicle Collisions
This section counts the number of off-road vehicle (ORV) collisions in Manitoba and provides detail for collisions of different severity: fatal, injury and property damage only (PDO). Information regarding the number of ORV collisions, victims, vehicles, and drivers involved over the six year period 2012 to 2017 is presented. Details are provided for 2017 ORV collisions in terms of the month of occurrence, day of the week, time of day, weather and road conditions, location, and type of collision.

Section 12 – Alcohol-Related Criminal Code Convictions
This section counts the number of drivers convicted of alcohol-related Criminal Code offences for the year 2016 by age at the time of the offence and includes historical statistics for the period 1997 to 2015. Details are provided for ‘first’, ‘second’ and ‘third and subsequent’ (i.e., third, fourth, fifth, etc. combined) offences and whether or not a youth was present in the vehicle at the time of the offence.

Table of Contents

SECTION 1 – Drivers, Vehicle and Collision Rates: Historical Trends

Introduction

This section calculates involvement rates for total collisions as well as for fatal, injury and property damage only (PDO) collisions using licensed drivers and vehicles registered for the years 2006 to 2017. This section also presents involvement rates for drivers by specific age groups.

Key Highlights

In 2017, there are a total of 51,844 traffic collisions reported to Manitoba Public Insurance and law enforcement agencies in Manitoba that conform to the reportable collision requirement for Traffic Accident Reports. Of these:

- 65 involve a fatality (0.1% of all collisions);
- 9,691 involve an injury, but not a fatality (19% of all collisions); and,
- 42,088 involve property damage only (81% of all collisions).

In 2017, overall traffic collisions in Manitoba increased compared to 2016 and compared to the previous five year (2012 to 2016) annual average. There are:

- 51,844 collisions in 2017;
- 45,316 collisions in 2016; and,
- 41,665 collisions on average in the five year period 2012 to 2016.

Involvement in traffic collisions in Manitoba increased from 2016 and from the previous five year (2012 to 2016) annual average. Involvement in collisions (per 10,000 licensed drivers) is:

- 572.6 in 2017;
- 505.8 in 2016; and,
- 479.9 on average in the five year period 2012 to 2016.

The increase in the total number of collisions in 2017 compared to 2016 is attributable to increases in injury and PDO collisions. There are 31 fewer fatal collisions, 109 more injury collisions, and 6,450 more PDO collisions reported in 2017 than in 2016 (representing proportional changes of -32%, 1%, and 18%, respectively).

Major Elements Examined

Counts of collisions in Manitoba for 2017 and previous years are taken from Traffic Accident Reports (TARs) generated by Manitoba Public Insurance and law enforcement agencies, and compiled by Manitoba Public Insurance. These counts are presented for all reportable collisions, fatal collisions, injury collisions, and property damage only (PDO) collisions. To be included in the Traffic Accident Database, these reportable collisions must occur on a public roadway.

Involvement in collisions is calculated for total collisions and for collisions of different severity (fatal, injury and PDO). It is calculated both for licensed drivers and for vehicles registered. Involvement per 10,000 licensed drivers by different age groups is also examined.

Due to the small numbers of fatal collisions, fluctuations year-over-year could be dramatic; a small change in the total count of these types of collisions could have a significant effect on statistics such as percentage change to previous years and involvement rates. Therefore, the reader is strongly cautioned when interpreting results regarding fatal collisions.

Terms and Definitions

"Reportable Collision"

- Prior to a change in the Highway Traffic Act (which took effect in October of 2011), motor vehicle collisions resulting in a fatality, injury or property damage in excess of $1,000 were required by law to be reported to a law enforcement agency. Subsequently, the law enforcement agency completed a Traffic Accident Report for the collision.
- Amendments to the Highway Traffic Act (which received Royal Ascent in June 2011 and took effect in October of 2011) changed the definition of a reportable collision to require a police report be made if the driver is aware, has reason to believe, or is later made aware, that a collision involves: a fatality; an injury requiring admittance to hospital for observation or treatment; another driver not having a valid driver's licence; another vehicle not validly registered; the driver of another vehicle not providing the required particulars; the driver of another vehicle not stopping at the scene of the accident; or, alcohol or another intoxicating substance as a factor in the accident.
- As of October 2011, all accidents occurring on a public roadway where the above conditions are not met are reported through the claim registration process with Manitoba Public Insurance.
- As of 2012 and consistent with other jurisdictions in Canada, it is a requirement that a minimum of $2,000 damage (all vehicles combined) is necessary for property damage only (PDO) collisions to be included in this report.
- This report deals with these reportable collisions and the TARs arising from them, regardless of whether the TAR is generated by law enforcement agencies or by Manitoba Public Insurance.

"Public Roadway"

- A public roadway in Manitoba is considered to be any provincial road (PR), provincial trunk highway (PTH) or municipal road, including the entrances to and exits from these roadways. This excludes all off-road areas, parking lots, private property and First Nation Reserve roads (unless the road is a PR or PTH running through, across or on Reserve lands).

"Fatal Collision"

- A motor vehicle collision in which at least one person is killed as a result of the collision. The death must have occurred within thirty days of the collision occurrence. Fatal collisions resulting from suicide, where the fatality occurs because of a medical condition and collisions that do not occur on public roadways are excluded.

"Injury Collision"

- A motor vehicle collision in which at least one person has been recorded as sustaining some level of personal injury, but in which no one is fatally injured or killed. Levels of injury include: 'major' (admitted to hospital); 'minor' (treated and released from hospital); and, 'minimal' (no hospital treatment required).

"Property Damage Only (PDO) Collision"

- A motor vehicle collision in which no injury or fatality is sustained and only property damage is the result.

"Involvement"

- A calculation of the number of collisions per specific unit of licensed drivers or registered vehicles. For the purposes of this report, involvement is calculated per 10,000 licensed drivers or registered vehicles.

"Licensed drivers"

- A count of all Manitobans aged 16 and older who hold a valid licence within the licensing year including active and suspended drivers. (See *Section 2 Licensed Drivers* for more information)

Table 1-1 Fatal, Injury and Property Damage Collisions by Total Licensed Drivers

Table 1-1
Fatal, Injury, and Property Damage Collisions by Total Licensed Drivers: 2007 to 2017

Year	Licensed Drivers	Total Collisions	Collisions /10,000 Drivers	Total Fatal	Fatal /10,000 Drivers	Total Injury	Injury /10,000 Drivers	Total PDO	PDO /10,000 Drivers
2007	752,398	29,494	392.0	96	1.3	6,415	85.3	22,983	305.5
2008	765,014	27,092	354.1	85	1.1	5,974	78.1	21,033	274.9
2009	776,209	26,578	342.4	83	1.1	5,396	69.5	21,099	271.8
2010	790,330	27,172	343.8	78	1.0	5,386	68.1	21,708	274.7
2011	813,691	34,302	421.6	94	1.2	6,309	77.5	27,899	342.9
2012	838,481	38,972	464.8	89	1.1	8,280	98.8	30,603	365.0
2013	855,791	41,819	488.7	69	0.8	8,729	102.0	33,021	385.9
2014	869,239	40,672	467.9	64	0.7	9,023	103.8	31,585	363.4
2015	881,338	41,548	471.4	69	0.8	9,127	103.6	32,352	367.1
2016	895,880	45,316	505.8	96	1.1	9,582	107.0	35,638	397.8
2017	**905,365**	**51,844**	**572.6**	**65**	**0.7**	**9,691**	**107.0**	**42,088**	**464.9**
2012-2016 Average	868,146	41,665	479.9	77	0.9	8,948	103.1	32,640	376.0

Relative to ten years ago, the total number of collisions in 2017 has increased by 76% (51,844 in 2017 compared to 29,494 in 2007). Crash involvement per 10,000 licensed drivers has increased by 46% in the same time period (572.6 in 2017 compared to 392.0 in 2007). Compared to 2016, total collisions have increased by 14% (up from a total of 45,316) and involvement has increased by 13%. Compared to the previous five year (2012 to 2016) annual average, total collisions have increased 24% and involvement has increased by 19%.

Compared to recent historical figures, in 2017:

- Fatal collisions have decreased by 32% compared to 2007, by 32% compared to 2016, and by 16% compared to the previous five year (2012 to 2016) annual average.
- Injury collisions have increased by 51% compared to 2007, by 1% compared to 2016 and by 8% compared to the previous five year (2012 to 2016) annual average.
- PDO collisions have increased by 83% compared to 2007, by 18% compared to 2016 and by 29% compared to the previous five year (2012 to 2016) annual average.

Differences in the crash counts and rates in 2012 through 2017 compared to 2007 through 2011 are at least somewhat affected by the reporting change that took effect late in 2011. Please see the definition of “Reportable Collision” for detail regarding this change.

Table 1-2 Percentage Change Year-over-Year in Relative Involvement Rate (per 10,000 Licensed Drivers) in Fatal, Injury, and Property Damage Only Collisions

Table 1-2

Percentage Change Year-Over-Year in Relative Involvement Rate (per 10,000 Licensed Drivers) in Fatal, Injury, and PDO Collisions: 2007 to 2017

Year	Collisions /10,000 Drivers	% change to previous year	Fatal /10,000 Drivers	% change to previous year	Injury /10,000 Drivers	% change to previous year	PDO /10,000 Drivers	% change to previous year
2007	392.0	-	1.3	-	85.3	-	305.5	-
2008	354.1	-9.7%	1.1	-12.9%	78.1	-8.4%	274.9	-10.0%
2009	342.4	-3.3%	1.1	-3.8%	69.5	-11.0%	271.8	-1.1%
2010	343.8	0.4%	1.0	-7.7%	68.1	-2.0%	274.7	1.0%
2011	421.6	22.6%	1.2	17.1%	77.5	13.8%	342.9	24.8%
2012	464.8	10.3%	1.1	-8.1%	98.8	27.4%	365.0	6.4%
2013	488.7	5.1%	0.8	-24.0%	102.0	3.3%	385.9	5.7%
2014	467.9	-4.2%	0.7	-8.7%	103.8	1.8%	363.4	-5.8%
2015	471.4	0.8%	0.8	6.3%	103.6	-0.2%	367.1	1.0%
2016	505.8	7.3%	1.1	36.9%	107.0	3.3%	397.8	8.4%
2017	**572.6**	**13.2%**	**0.7**	**-33.0%**	**107.0**	**0.1%**	**464.9**	**16.9%**
2012-2016 Average*	479.9	19.3%	0.9	-19.5%	103.1	3.8%	376.0	23.6%

* "% change" in this line compares the current year to the 5-year average

Recognizing that collision counts could be impacted either positively or negatively by changing population demographics, involvement rates per 10,000 licensed drivers are examined to provide a standardized collision rate comparison. This eliminates the effect of changing population size and focuses on how many drivers are being involved in collisions instead of simply a raw count of collisions overall.

The involvement in collisions per 10,000 drivers in 2017 is:

- 572.6 for all collisions, up 13% from 2016 and up by 19% compared to the previous five year (2012 to 2016) annual average;
- 0.7 for fatal collisions, down 33% from 2016 and down by nearly 20% compared to the previous five year (2012 to 2016) annual average;
- 107.0 for injury collisions, relatively unchanged from 2016 and up by 4% from the previous five year (2012 to 2016) annual average; and,
- 464.9 for PDO collisions, up 17% from 2016 and up by 24% compared to the previous five year (2012 to 2016) annual average.

Table 1-3 Fatal, Injury, and Property Damage Collisions by Vehicles Registered

Table 1-3
Fatal, Injury, and Property Damage Collisions by Vehicles Registered: 2007 to 2017

Year	Vehicles Registered*	Total Collisions	Collisions /10,000 Vehicles	Total Fatal	Fatal /10,000 Vehicles	Total Injury	Injury /10,000 Vehicles	Total PDO	PDO /10,000 Vehicles
2007	753,705	29,494	391.3	96	1.3	6,415	85.1	22,983	304.9
2008	773,596	27,092	350.2	85	1.1	5,974	77.2	21,033	271.9
2009	783,426	26,578	339.3	83	1.1	5,396	68.9	21,099	269.3
2010	799,327	27,172	339.9	78	1.0	5,386	67.4	21,708	271.6
2011	814,808	34,302	421.0	94	1.2	6,309	77.4	27,899	342.4
2012	838,553	38,972	464.8	89	1.1	8,280	98.7	30,603	364.9
2013	852,105	41,819	490.8	69	0.8	8,729	102.4	33,021	387.5
2014	867,326	40,672	468.9	64	0.7	9,023	104.0	31,585	364.2
2015	881,345	41,548	471.4	69	0.8	9,127	103.6	32,352	367.1
2016	894,690	45,316	506.5	96	1.1	9,582	107.1	35,638	398.3
2017	**905,020**	**51,844**	**572.8**	**65**	**0.7**	**9,691**	**107.1**	**42,088**	**465.1**
2012-2016 Average	866,804	41,665	480.7	77	0.9	8,948	103.2	32,640	376.6

*Vehicles registered exclude off-road vehicles, non-commercial snow vehicles, non-commercial trailers, non-farm tractors and PSV trailers.

Involvement in collisions per 10,000 vehicles registered is another way to view collision rates in a standardized format. It attempts to account for fluctuations in the total number of vehicles registered for use on Manitoba roadways.

In 2017, there are 572.8 collisions for every 10,000 vehicles registered in Manitoba, up 13% compared to the rate in 2016 (506.5) and by 19% compared to the rate in the previous five year (2012 to 2016) annual average (480.7).

The changes in rate of involvement in collisions at each level of severity in 2017 vary compared to recent years. In 2017, there are 0.7 fatal collisions for every 10,000 vehicles, down 33% from 2016 (rate of 1.1), and by 20% from the previous five year (2012 to 2016) annual average (rate of 0.9). The involvement rate for injury collisions (107.1 in 2017) is unchanged compared to 2016 (rate of 107.1) and up 4% from the previous five year (2012 to 2016) annual average (rate of 103.2). Involvement in PDO collisions (465.1 in 2017) is up 17% compared to 2016 (rate of 398.3) and by nearly 24% compared to the previous five year (2012 to 2016) annual average (rate of 376.6).

Involvement rates between 2007 and 2017 for collisions in Manitoba, both per 10,000 licensed drivers and per 10,000 registered vehicles, are noted in Figures 1-1, 1-2, 1-3 and 1-4 on the following pages. The spike in rates for overall collisions, injury collisions, and PDO collisions in 2011 and 2012 is attributable to a change in the reporting requirements, discussed under the “Reportable Collisions” definition. Year over year changes in the 2017 collision rates, however, cannot be attributed to changes in what constitutes a reportable collision.

Figure 1-1 Involvement in Total Collisions by Licensed Drivers and Vehicles Registered

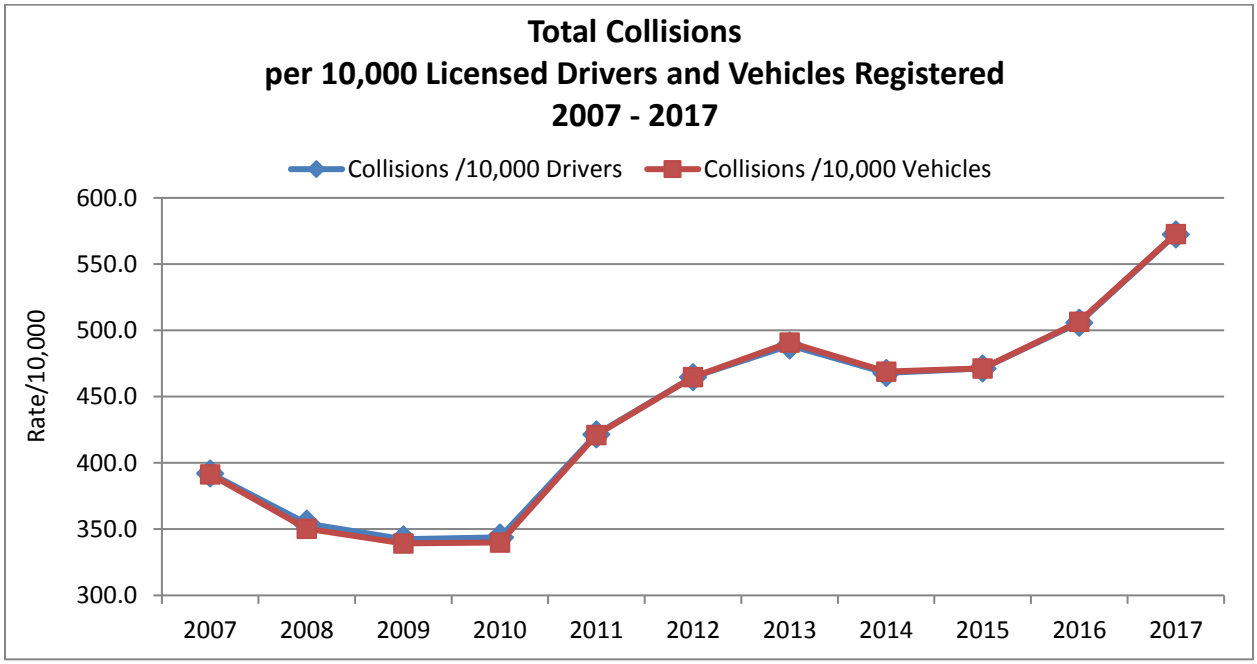


Figure 1-2 Involvement in Fatal Collisions by Licensed Drivers and Vehicles Registered

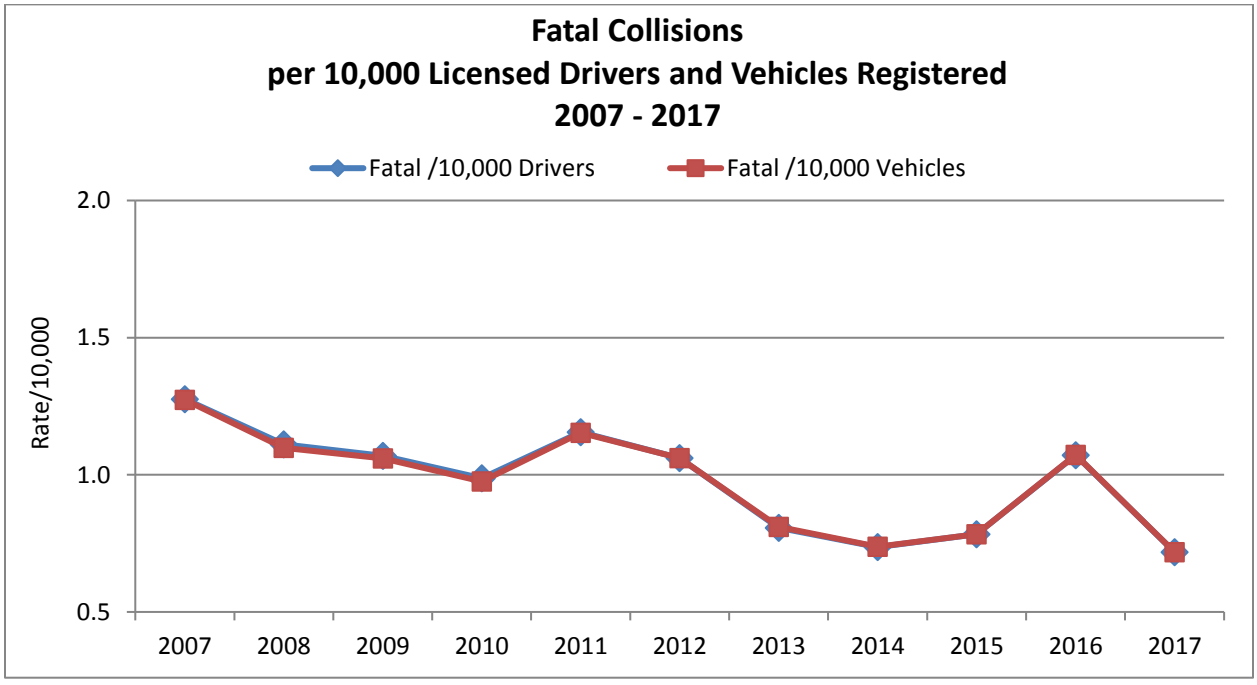


Figure 1-3 Involvement in Injury Collisions by Licensed Drivers and Vehicles Registered

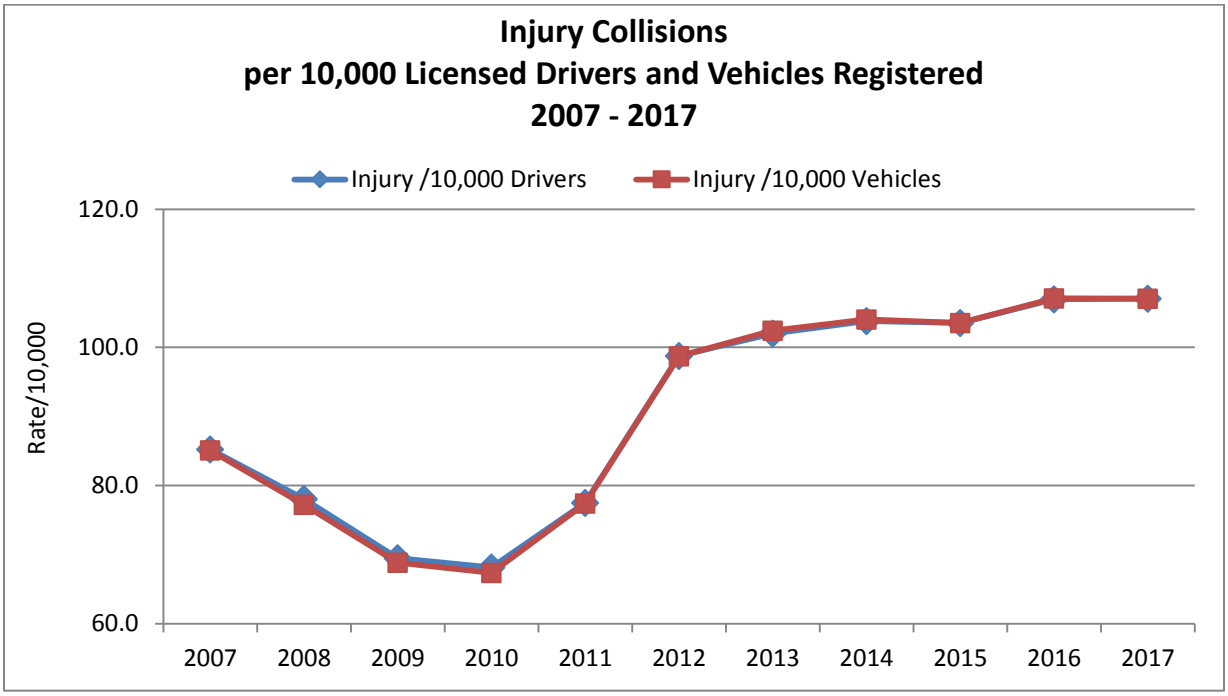


Figure 1-4 Involvement in Property Damage Only (PDO) Collisions by Licensed Drivers and Vehicles Registered

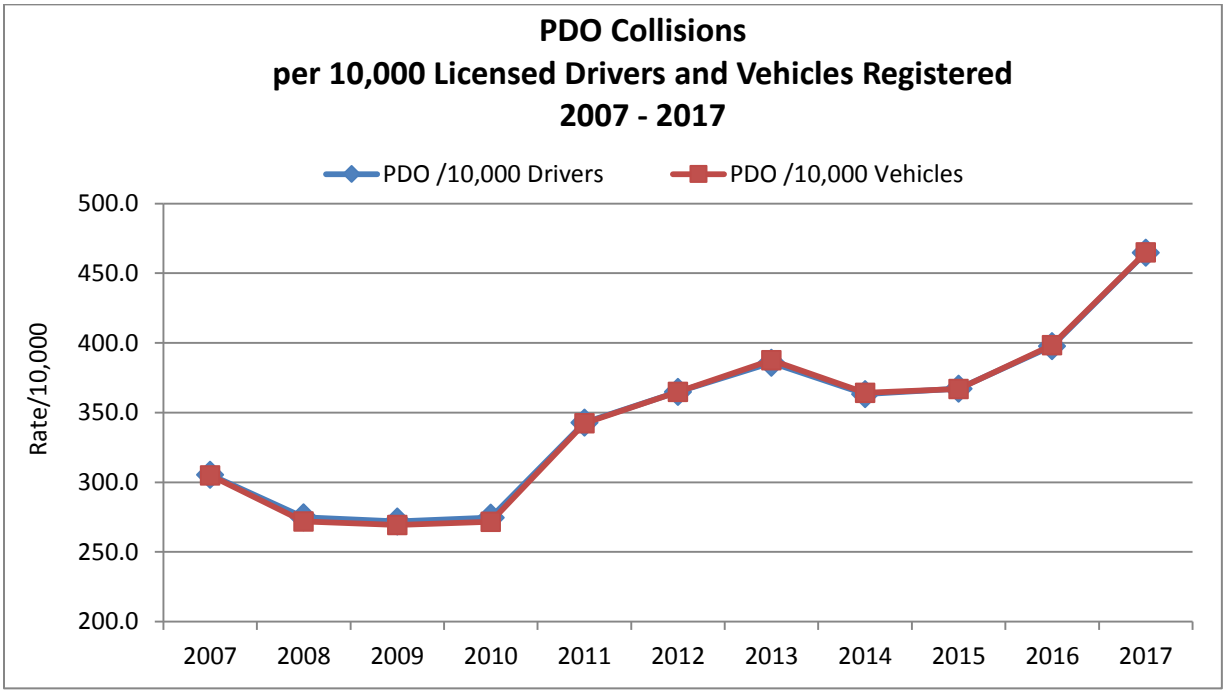


Table 1-4 Involvement (Total Collisions) per 10,000 Licensed Drivers by Age Group

Table 1-4
Involvement (Total Collisions) /10,000 Licensed Drivers by Age Group: 2007 to 2017

Age Group	Year											2012-2016 Average
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2017**	
16-19	838.7	771.7	756.1	737.3	890.8	1,095.7	1,068.3	982.5	969.1	993.0	**1,051.9**	1,016.6
20-24	706.2	673.8	648.8	630.4	851.6	1,114.4	1,121.0	1,059.8	1,035.3	1,079.7	**1,135.5**	1,102.8
25-34	511.6	493.2	460.6	470.5	671.8	860.0	920.8	871.5	826.0	867.5	**914.3**	896.0
35-44	466.1	450.5	444.0	432.1	586.9	741.6	811.3	777.2	736.8	779.1	**842.5**	781.2
45-54	429.1	402.9	393.0	397.9	524.2	645.0	698.4	668.6	652.7	696.0	**742.8**	665.8
55-64	378.6	347.6	340.4	353.0	441.6	529.8	554.4	540.4	519.3	551.0	**575.4**	552.3
65-74	310.0	296.9	289.8	285.0	366.9	416.9	458.1	441.2	414.2	447.5	**479.7**	458.7
75>	276.5	237.4	235.2	254.9	292.5	342.7	353.4	331.7	332.2	333.9	**355.7**	350.7

In 2017, the youngest driver age groups in Manitoba (16 to 19 and 20 to 24) continue to have the highest rates of involvement in collisions. At 1,051.9, the involvement rate of drivers aged 16 to 19 is:

- 7% lower than the rate of those aged 20 to 24;
- 15% higher than those aged 25 to 34;
- 25% higher than those aged 35 to 44;
- 42% higher than those aged 45 to 54;
- 83% higher than those aged 55 to 64; and,
- Two and a half times the rate of those aged 65 and older.

Manitobans aged 20 to 24 have the highest rate of involvement in collisions in 2017. At 1,135.5, the involvement rate of drivers aged 20 to 24 is:

- 24% higher than those aged 25 to 34;
- 35% higher than those aged 35 to 44;
- 53% higher than those aged 45 to 54;
- Almost double those aged 55 to 64; and,
- Nearly triple those aged 65 and older.

Manitobans aged 25 to 34, while having a lower involvement rate than younger drivers, have a higher involvement rate than drivers in older age groups. At 914.3 in 2017, the involvement rate of drivers aged 25 to 34 is:

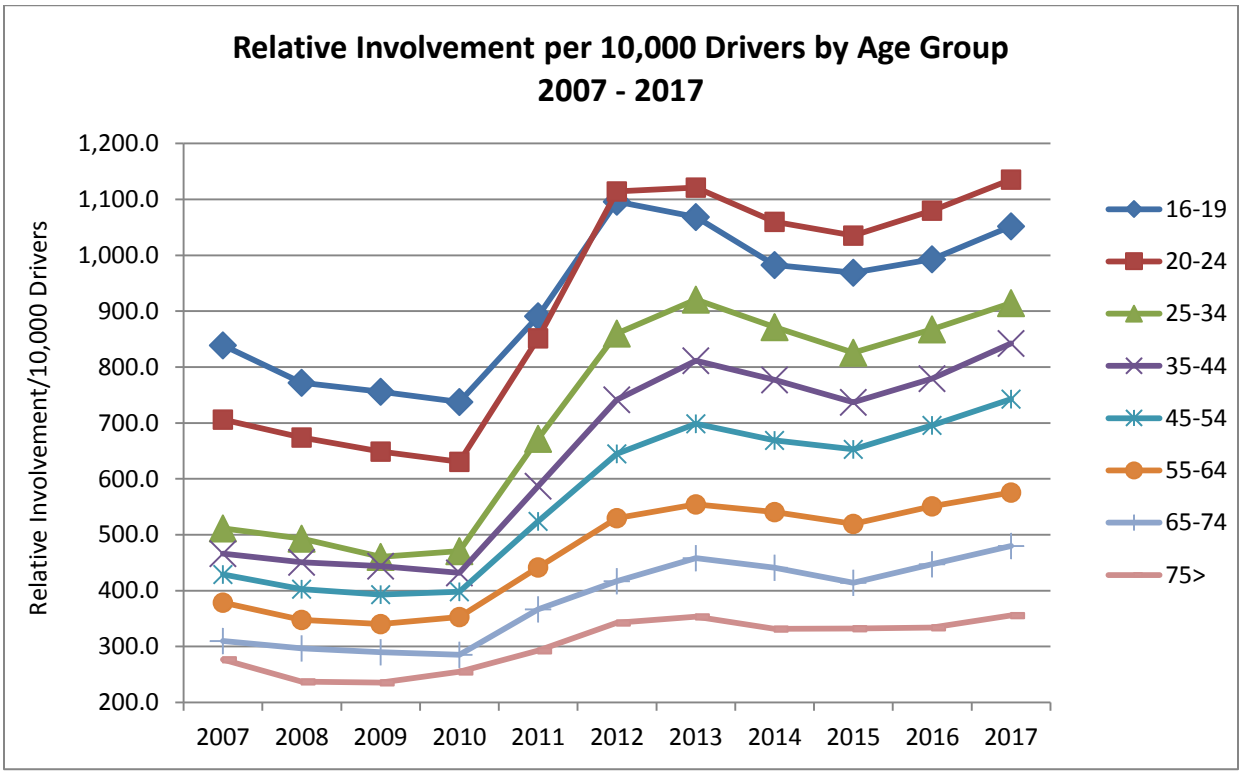
- Nearly 9% higher than those aged 35 to 44;
- 23% higher than those aged 45 to 54;
- 59% higher than those aged 55 to 64; and,
- More than double those aged 65 and older.

The involvement rate for drivers in each successive age group beginning at age 35 drops off consistently.

Collision involvement rates for drivers in all age groups have increased in 2017 compared to 2016 and to the previous five year (2012 to 2016) annual average. Involvement per 10,000 licensed drivers in 2017 by age group:

- Age 16 to 19 – 1,051.9 in 2017, up 6% compared to 2016 and by nearly 4% compared to the previous five year annual average.
- Age 20 to 24 – 1,135.5 in 2017, up 5% compared to 2016 and by 3% compared to the previous five year annual average.
- Age 25 to 34 – 914.3 in 2017, up 5% compared to 2016 and by 2% compared to the previous five year annual average.
- Age 35 to 44 – 842.5 in 2017, up 8% compared to 2016 and the previous five year annual average.
- Age 45 to 54 – 742.8 in 2017, up 7% compared to 2016 and by 12% compared to the previous five year annual average.
- Age 55 to 64 – 575.4 in 2017, up 4% compared to 2016 and the previous five year annual average.
- Age 65 to 74 – 479.7 in 2017, up 7% compared to 2016 and by 5% compared to the previous five year annual average.
- Age 75 and over – 355.7 in 2017, up nearly 7% compared to 2016 and by 1% compared to the previous five year annual average.

Figure 1-5 Involvement (per 10,000 Licensed Drivers) in Total Collisions by Age Group



SECTION 2 – Licensed Drivers

Introduction

This section deals with Active and Suspended Drivers by specific Age Groups, Gender and Manitoba Licence Class.

Key Highlights
There is an average of 905,365 licensed drivers in Manitoba in 2017, an increase of 1% compared to 2016. Of these:

- Nearly 96% are Active drivers, nearly 5% are Suspended drivers;
- 52% are Male, 48% are Female;
- 68% are between the ages of 25 and 64; and
- Men account for 66% of all Suspended drivers in Manitoba.

There is an average of 72,551 licensed motorcycle drivers in Manitoba in 2017, an increase of 2% compared to 2016.

Major Elements Examined
Counts of licensed drivers in Manitoba for 2017 represent an average for the 2017 calendar year. That is, "point-in-time" observations (licensed drivers by age, licence class and gender) are recorded as of the first of each month and then an average for the year is calculated and reported. Due to rounding in this process, some columns and rows may not add to the total. This is different from some previous years. Methodological improvements were made to licensed driver counts in 2008. To enable historical comparisons of licensed driver counts, data reported here for the years 2006 and 2007 have been adjusted to reflect this new methodology.

At the beginning of this section, there is a quick reference chart of Manitoba's Driver Licence and Vehicle Class descriptions. A review of these charts will indicate which Driver Licence Class is required to operate specific Vehicle Classes.

As it is a requirement for Class 6 licence holders to first possess a Class 1-5 licence prior to obtaining a Class 6 licence, Class 1 to 5 licence holders are discussed separately from Class 6 licence holders to avoid duplication of licence counts. Tables 2-6, 2-7, 2-8, 2-9 and 2-10 present the number of Class 6 active motorcycle licensed drivers by Gender, Age Group and Driver Licence Class.

Terms and Definitions
"Licence Class"

- A Manitoba Driver's Licence of a specific level which permits the holder to operate vehicles within a specific Vehicle Class.

"Vehicle Class"

- Category of vehicles meeting specific designations and specifications.

"Active drivers"

- Drivers holding an active Manitoba Driver's Licence of any specific Licence Class.

"Suspended drivers"

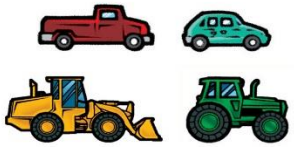
- Drivers holding a Manitoba Driver's Licence of any specific Licence Class who have been disqualified from driving for some reason. Although the list is extensive, some possible suspensions could be for driving violations, medical conditions, administrative suspensions and criminal code convictions.

"Graduated Driver Licensing (GDL)"

- A three-stage program designed to help new drivers, regardless of age, acquire the knowledge and skill needed to safely operate a motor vehicle. Each licence stage has specific rules and restrictions governing when and under what circumstances the holder is allowed to operate a motor vehicle, enabling novice drivers to gain more experience under a greater variety of driving conditions. Both Class 5 and Class 6 licences have a GDL stage associated with them.
- Three stages of GDL: Learner (5/L or 6/L); Intermediate (5/I or 6/I); and, Full (5/F or 6/F).
- To view a full discussion of the GDL program in Manitoba, please visit:
    - https://www.mpi.mb.ca/en/DL/DL/GDL/Pages/gdl-program.aspx; ou en Français,
    - https://www.mpi.mb.ca/fr/DL/DL/GDL/Pages/fr-gdl-program.aspx

Chart 2-1 Class Licence System Quick Reference Chart

The Class Licence System

Manitoba Licence Class		Allows the Licence Holder to Operate	Minimum Age	Medical Requirements	Requirements
1		• Semi-trailer trucks[1]. • Includes all vehicles in Classes 2, 3, 4 and 5.	18	• Must meet medical and vision standards. • Medical report required on initial application and periodically thereafter based on the age of the driver. Medical report valid for six months from the date completed by physician. Must obtain Authorized Instruction within this six-month time frame.	• Must hold a minimum Class 5I (Intermediate Stage) licence or Class 5A (Authorized Instruction Stage) licence to obtain authorized instruction in Classes 1–4. • Must pass knowledge test. • Requires supervising driver for Authorized Instruction. • Must pass road test. For Classes 1, 2, 3 or 4 (buses and trucks only), the test includes a pre-trip inspection of vehicle (and air brake system if applicable) by the applicant.
2		• Buses[2] having a seating capacity of over 24 passengers (while carrying passengers). • School buses[3] having a seating capacity over 36 passengers (while carrying passengers). • Includes all vehicles in Classes 3, 4 and 5.			
3		• A truck with more than two axles. • A combination of vehicles that includes a truck with more than two axles (not including a semi-trailer truck[1]). • A combination of vehicles consisting of a truck with two axles or Class 5 passenger vehicle, and a towed vehicle with a registered gross vehicle weight of **more than** 4,540 kg. • Includes all vehicles in Classes 4 and 5.			
4		• Ambulances and other emergency vehicles. • Buses[2] with a seating capacity between 10 and 24 passengers (while carrying passengers). • School buses[3] with a seating capacity between 10 and 36 passengers (while carrying passengers). • Includes all vehicles in Class 5. *Note: Individual municipalities may require a Class 4 licence to operate a Vehicle for Hire – contact your municipality for information.*			
5		• A passenger car (other than Class 4 vehicles). • A bus[2] while not carrying passengers. • A truck with two axles. • A combination of vehicles consisting of a passenger car or a truck with two axles, and a towed vehicle with a registered gross vehicle weight of **up to** 4,540 kg. • May operate Class 3 vehicles registered as a farm truck and the driver holds a Class 5I (Intermediate stage) licence or 5F (Full stage) licence. • May operate a moped[4], if 16 years of age or older. • May operate a special mobile machine, implement of husbandry or tractor on a provincial highway, or a highway within the municipal boundaries of a city, town or urban municipality, subject to supervising driver requirements.	16 or 15½ if enrolled in a high school driver education coursecurrently in progress	• Medical report required when requested. • Must meet vision standards.	• Must pass knowledge test for Class 5L (Learner Stage) licence (must wait seven days for re-test.) • Requires supervising driver for Class 5L (Learner Stage) or Class 5A (Authorized Instruction) licence. • Requires supervising driver for a Class 5I (Intermediate Stage) licence if carrying more than one passenger between the hours of midnight and 5 a.m. • Must pass road test to advance to the Intermediate Stage (Minimum 15 months). (Must wait 14 days for re-test. Professional instruction required if five or more tests are needed.)
6		• Motorcycles.	16	• Medical report required when requested. • Must meet vision standards.	• Driver must hold a valid licence of any class and stage. • Must pass knowledge test (must wait seven days for re-test). • Must obtain Class 6M (Motorcycle Training Course Stage) licence in order to complete motorcycle training course. The course is required before Class 6L (Learner Stage) licence is issued. (Contact Safety Services Manitoba for motorcycle course scheduling and fees.) • Minimum nine-month Learner Stage. • Must pass road test to advance to the Intermediate Stage (Minimum 15 months). (Must wait 14 days for re-test.)
Air Brake Endorsement		• Air brake endorsement permits the holder to drive vehicles equipped with air brakes in the class of vehicle for which the person is licensed. *Note: Drivers of a Class 3 truck registered as a farm truck equipped with air brakes are exempt from this requirement.*			• Must pass knowledge test. • Must pass Air Brake practical test for A (Authorized) endorsement. • Must pass adjustment of the manual slack adjusters for S (Slack Adjuster) endorsement. • No additional charge for the Air Brake practical test if it is completed at the same time you are road-tested for a higher class of licence.

1. A semi-trailer truck is a truck tractor and a semi-trailer combined.
2. A bus is any vehicle with a seating capacity of at least 11 persons (including the driver) used primarily to carry passengers. It excludes vehicles used for personal transportation by the owner or with the owner's permission.
3. School bus certificate is required. For further information, contact the Pupil Transportation Unit, Manitoba Education and Training at 204-945-6900.
4. Mopeds are not allowed to be driven on highways with a speed limit exceeding 80 km/h but may cross these highways.

Table 2-1 Class 1-5 Licensed Drivers by Year and Driver Status

Table 2-1

Class 1-5 Licensed Drivers by Year and Driver Status: 2007*-2017

Licensing Year	Active Drivers	Suspended Drivers	Total Drivers	% Change to Previous Year
2007*	728,047	24,351	752,398	-
2008	744,049	20,965	765,014	1.7%
2009	754,485	21,724	776,209	1.5%
2010	767,222	23,108	790,330	1.8%
2011	788,046	25,645	813,691	3.0%
2012	805,519	32,962	838,481	3.0%
2013	818,303	37,487	855,791	2.1%
2014	828,928	40,311	869,239	1.6%
2015	839,036	42,302	881,338	1.4%
2016	852,067	43,813	895,880	1.7%
2017	**864,695**	**40,670**	**905,365**	1.1%
Average 2012-2016	828,771	39,375	868,146	4.3%

*The count of "Suspended Drivers" in 2007 is artificially high due to a system error that was later corrected to recode licences displayed as suspended, but not actually suspended.

Compared to 2016, the total number of licensed drivers in Manitoba in 2017 increased by 1% to 905,365. This is in line with historical increases seen in recent years; the rate of change over the past five years (2012-2016) was a 2% increase on average each year. The total number of licensed drivers increased by 4% in 2017 compared to the previous five year (2012-2016) annual average.

The proportion of suspended drivers decreased by 7% in 2017 compared to 2016, down to 40,670 from 43,813, respectively. The count of suspended drivers in 2017 is 3% higher than the previous five year (2012-2016) annual average.

Table 2-2 Class 1-5 Licensed Drivers by Age Group, Gender and Driver Status

Table 2-2
Class 1-5 Licensed Drivers by Age Group, Gender and Driver Status: 2017

Age Group	Gender	Active Drivers	Suspended Drivers	Total Drivers	% of "All Ages"	% Suspended in Category
16-17	Male	10,872	202	11,073	2.4	1.8
	Female	10,486	99	10,584	2.4	0.9
	Total	21,357	300	21,657	2.4	1.4
18-19	Male	13,022	493	13,515	2.9	3.6
	Female	12,115	324	12,439	2.8	2.6
	Total	25,136	818	25,954	2.9	3.2
20-24	Male	36,993	2,346	39,338	8.4	6.0
	Female	34,178	1,465	35,643	8.1	4.1
	Total	71,171	3,810	74,981	8.3	5.1
25-34	Male	77,529	5,471	83,000	17.8	6.6
	Female	75,300	3,234	78,534	17.9	4.1
	Total	152,829	8,705	161,534	17.8	5.4
35-44	Male	73,273	4,239	77,512	16.6	5.5
	Female	71,449	2,228	73,677	16.8	3.0
	Total	144,721	6,467	151,188	16.7	4.3
45-54	Male	74,859	3,958	78,817	16.9	5.0
	Female	72,246	1,581	73,827	16.9	2.1
	Total	147,105	5,539	152,644	16.9	3.6
55-64	Male	75,696	3,251	78,947	16.9	4.1
	Female	72,329	1,128	73,457	16.8	1.5
	Total	148,025	4,379	152,404	16.8	2.9
65-74	Male	49,969	2,136	52,105	11.1	4.1
	Female	48,478	988	49,466	11.3	2.0
	Total	98,447	3,124	101,571	11.2	3.1
75-84	Male	22,253	2,045	24,297	5.2	8.4
	Female	21,927	1,181	23,108	5.3	5.1
	Total	44,179	3,226	47,405	5.2	6.8
85+	Male	6,016	2,730	8,747	1.9	31.2
	Female	5,708	1,572	7,280	1.7	21.6
	Total	11,725	4,303	16,027	1.8	26.8
All Ages	Male	440,480	26,870	467,350	100.0	5.7
	Female	424,215	13,800	438,015	100.0	3.2
	Total	864,695	40,670	905,365	100.0	4.5

In 2017, the proportion of suspended drivers aged 75 or older is three times the proportion of suspended drivers under age 75 (12% of drivers aged 75 or older are suspended; 4% of drivers aged 16 to 74 are suspended).

Table 2-3 Class 1-5 Licensed Drivers by Licence Class, Driver Status and Gender

Table 2-3
Class 1-5 Licensed Drivers by License Class, Driver Status and Gender: 2017

License Class	Active Drivers				Suspended Drivers				Total	%
	Male	Female	Subtotal	%	Male	Female	Subtotal	%		
1	39,826	1,510	41,336	4.8	1,094	37	1,132	2.8	42,467	4.7
2	4,679	1,681	6,360	0.7	84	21	105	0.3	6,464	0.7
3	11,626	423	12,048	1.4	274	6	279	0.7	12,328	1.4
4	12,704	4,172	16,876	2.0	426	61	487	1.2	17,364	1.9
5/F	343,108	374,828	717,936	83.0	20,177	9,517	29,694	73.0	747,631	82.6
5/I	9,558	9,446	19,004	2.2	619	258	876	2.2	19,880	2.2
5/L	15,672	25,704	41,376	4.8	2,702	2,942	5,645	13.9	47,021	5.2
5/A	3,299	6,449	9,748	1.1	879	711	1,589	3.9	11,337	1.3
Other	9	1	11	<0.1	616	247	863	2.1	874	<0.1
Total	440,480	424,215	864,695	100.0	26,870	13,800	40,670	100.0	905,365	100.0

Manitoba Class 5 Driver's Licence Stages:

- 5/F Full Class 5 licence (including Full Stage Class 5 under Graduated Driver Licensing)
- 5/I Intermediate Stage under Graduated Driver Licensing
- 5/L Learner Stage under Graduated Driver Licensing
- 5/A Learner drivers who are not in Graduated Driver Licensing
- Other Unlicensed drivers assigned a licence number

The vast majority of Manitobans with a licence hold a Full Class 5 (83%). Novice drivers, holding either Learner (5/L) or an Intermediate (5/I) Stage licence, account for the next largest group (7% of all licensed drivers in Manitoba), followed by Class 1 licensed drivers (5%).

Very little has changed in the proportion of licence holders by class when comparing 2017 to 2016.

Table 2-4 Class 1-5 Male Drivers by Age Group, Driver Status and Licence Class

Table 2-4
Class 1-5 Male Drivers by Age Group, Driver Status and License Class: 2017

Age Group	Status	Licence Class										Total
		1	2	3	4	1-4/A	5/F	5/I	5/L	5/A	5 Other	
16-17	Active	0	0	0	0	0	713	4,765	5,393	1	0	10,872
	Suspended	0	0	0	0	0	90	42	69	0	2	202
	Subtotal	0	0	0	0	0	802	4,807	5,462	1	2	11,073
18-19	Active	112	2	27	50	1	8,136	1,982	2,652	61	0	13,022
	Suspended	4	0	0	0	0	212	73	205	0	0	493
	Subtotal	116	2	27	50	1	8,347	2,054	2,856	61	0	13,515
20-24	Active	1,504	46	527	813	0	28,553	1,514	3,664	370	0	36,993
	Suspended	28	1	6	5	0	1,220	197	861	27	0	2,346
	Subtotal	1,531	47	534	817	0	29,774	1,712	4,525	398	0	39,338
25-34	Active	6,421	335	2,097	3,002	5	60,993	937	2,722	1,018	0	77,529
	Suspended	146	5	48	64	1	3,506	251	1,206	220	25	5,471
	Subtotal	6,568	340	2,145	3,066	5	64,499	1,188	3,928	1,238	25	83,000
35-44	Active	7,921	661	2,034	3,332	2	57,443	274	718	888	0	73,273
	Suspended	229	14	47	65	0	3,124	45	248	275	193	4,239
	Subtotal	8,151	674	2,082	3,396	2	60,567	319	966	1,163	193	77,512
45-54	Active	9,669	1,198	2,309	2,883	1	57,915	62	323	500	0	74,859
	Suspended	280	21	48	106	0	3,037	9	81	168	207	3,958
	Subtotal	9,949	1,219	2,357	2,989	1	60,952	71	404	668	207	78,817
55-64	Active	9,676	1,573	3,174	2,023	2	58,784	21	153	290	0	75,696
	Suspended	206	21	53	101	0	2,644	2	26	77	121	3,251
	Subtotal	9,882	1,594	3,227	2,123	2	61,428	23	179	367	121	78,947
65-74	Active	3,913	756	1,258	552	0	43,323	3	43	120	0	49,969
	Suspended	118	14	38	59	0	1,832	0	7	31	36	2,136
	Subtotal	4,032	770	1,296	612	0	45,155	3	50	151	36	52,105
75-84	Active	599	106	196	48	0	21,259	0	3	41	0	22,253
	Suspended	65	6	22	20	0	1,883	0	1	40	9	2,045
	Subtotal	663	112	218	68	0	23,142	0	4	80	9	24,297
85+	Active	11	1	3	2	0	5,989	0	0	10	0	6,016
	Suspended	18	2	10	7	0	2,630	0	0	41	22	2,730
	Subtotal	29	4	13	9	0	8,620	0	0	51	22	8,747
Total	Active	39,826	4,679	11,626	12,704	9	343,108	9,558	15,672	3,299	0	440,480
	Suspended	1,094	84	274	426	1	20,177	619	2,702	879	616	26,870
	Total	40,920	4,762	11,899	13,131	10	363,285	10,176	18,374	4,178	616	467,350

Men aged 25 to 34 make up the largest number of licensed drivers in Manitoba (9% of all drivers; 18% of all male drivers), closely followed by men aged 55 to 64 (9% of all drivers; 17% of all male drivers).

Men aged 25 to 34 account for the largest proportion of suspended drivers under the age of 75 (nearly 17% of all suspended drivers; 25% of suspended male drivers).

Table 2-5 Class 1-5 Female Drivers by Age Group, Driver Status and Licence Class

Table 2-5
Class 1-5 Female Drivers by Age Group, Driver Status and License Class: 2017

Age Group	Status	License Class										Total
		1	2	3	4	1-4/A	5/F	5/I	5/L	5/A	5 Other	
16-17	Active	0	0	0	0	0	654	4,223	5,608	0	0	10,486
	Suspended	0	0	0	0	0	17	18	64	0	0	99
	Subtotal	0	0	0	0	0	671	4,241	5,671	0	0	10,584
18-19	Active	2	0	4	13	0	7,334	1,606	3,124	32	0	12,115
	Suspended	0	0	0	0	0	83	34	206	1	0	324
	Subtotal	2	0	4	13	0	7,416	1,640	3,330	33	0	12,439
20-24	Active	34	8	52	327	0	26,762	1,527	5,175	295	0	34,178
	Suspended	0	1	0	2	0	517	71	865	9	0	1,465
	Subtotal	34	8	52	329	0	27,279	1,598	6,040	304	0	35,643
25-34	Active	162	124	104	1,067	0	64,199	1,406	6,068	2,170	0	75,300
	Suspended	5	2	2	8	0	1,683	107	1,240	182	6	3,234
	Subtotal	167	126	106	1,075	0	65,882	1,513	7,308	2,352	6	78,534
35-44	Active	307	302	68	1,137	1	63,859	518	3,311	1,947	0	71,449
	Suspended	8	3	1	17	0	1,451	24	393	260	72	2,228
	Subtotal	314	305	69	1,153	1	65,310	542	3,703	2,207	72	73,677
45-54	Active	513	541	71	985	0	66,950	136	1,759	1,290	0	72,246
	Suspended	13	6	1	13	0	1,203	4	131	137	73	1,581
	Subtotal	527	547	72	998	0	68,153	140	1,891	1,427	73	73,827
55-64	Active	400	553	82	546	0	69,613	24	564	548	0	72,329
	Suspended	9	8	1	10	0	959	0	35	56	52	1,128
	Subtotal	409	561	83	556	0	70,571	24	598	603	52	73,457
65-74	Active	87	144	40	93	0	47,878	6	90	141	0	48,478
	Suspended	3	1	0	7	0	922	0	7	21	26	988
	Subtotal	90	145	40	100	0	48,800	6	97	162	26	49,466
75-84	Active	6	9	2	4	0	21,882	0	5	20	0	21,927
	Suspended	0	0	1	2	0	1,145	0	2	23	8	1,181
	Subtotal	6	9	3	6	0	23,027	0	7	43	8	23,108
85+	Active	0	0	1	0	0	5,699	0	1	7	0	5,708
	Suspended	0	1	0	3	0	1,537	0	0	22	9	1,572
	Subtotal	0	1	1	3	0	7,236	0	1	29	9	7,280
Total	Active	1,510	1,681	423	4,172	1	374,828	9,446	25,704	6,449	0	424,215
	Suspended	37	21	6	61	0	9,517	258	2,942	711	247	13,800
	Total	1,548	1,702	429	4,233	1	384,345	9,704	28,647	7,160	247	438,015

Women aged 25 to 34 make up the largest number of licensed female drivers in Manitoba (9% of all drivers; 18% of all female drivers), closely followed by women aged 45 to 54 (8% of all drivers; 17% of all female drivers).

Even though women account for almost half (48%) of all licensed drivers, they only account for 34% of suspended drivers in Manitoba. Women aged 25 to 34 account for the highest proportion of suspended female drivers under the age of 75 (29%).

Table 2-6 Total Class 6 Active Licensed Drivers by Year

Table 2-6
Total Class 6 Active Licensed Drivers by Year: 2007 to 2017

Licensing Year	Active Drivers	% Change to Previous Year
2007	56,825	-
2008	58,486	2.9%
2009	60,105	2.8%
2010	61,572	2.4%
2011	63,385	2.9%
2012	65,305	3.0%
2013	66,908	2.5%
2014	68,180	1.9%
2015	69,506	1.9%
2016	71,135	2.3%
2017	**72,551**	**2.0%**
Average 2012-2016	68,207	6.4%

In 2017, the number of motorcycle licence holders increased by 2% compared to 2016, in line with the annual average rate of change in the previous five years (2012-2016 – 2%). The total number of motorcycle licence holders increased by 6% in 2017 compared to the previous five year (2012-2016) annual average.

As discussed in the introduction of this section, Class 6 Motorcycle licence holders in Manitoba also hold a Class 1-5 licence due to a requirement for those wishing to obtain a Class 6 licence to first obtain a licence in any other class (1-5). Because of this, Class 6 licence holders cannot be added to Class 1-5 licence holders.

Also, a licence suspension is applicable to all licence classes held by a suspended driver. Therefore, suspended Class 6 licences are not counted or addressed in the following discussion; they have been covered in the previous discussions of suspended Class 1-5 licence holders.

Table 2-7 Class 6 Active Licensed Drivers by Age Group and Gender

Table 2-7
Class 6 Active Licensed Drivers by Age Group and Gender: 2017

Age Group	Gender	Active Drivers	%
16-17	Male	108	
	Female	11	
	Total	119	0.2
18-19	Male	367	
	Female	40	
	Total	406	0.6
20-24	Male	2,330	
	Female	322	
	Total	2,651	3.7
25-34	Male	8,014	
	Female	1,334	
	Total	9,348	12.9
35-44	Male	8,387	
	Female	1,582	
	Total	9,969	13.7
45-54	Male	13,836	
	Female	2,392	
	Total	16,228	22.4
55-64	Male	19,225	
	Female	2,753	
	Total	21,978	30.3
65-74	Male	9,099	
	Female	974	
	Total	10,073	13.9
75-84	Male	1,397	
	Female	117	
	Total	1,514	2.1
85+	Male	237	
	Female	27	
	Total	264	0.4
All Ages	Male	62,998	
	Female	9,553	
	Total	72,551	100.0

Men account for the majority of Class 6 licence holders (87% overall). Most Class 6 licence holders are between the ages 35 and 64 (66%). Men aged 35 to 64 make up 57% of all Class 6 licence holders. Women in the same age group (aged 35 to 64) make up 9% of all Class 6 licence holders.

Table 2-8 Class 6 Active Licensed Drivers by Licence Class and Gender

Table 2-8
Class 6 Active Licensed Drivers by License Class and Gender: 2017

License Class	Active Drivers			
	Male	Female	Total	%
6/F	47,281	5,180	52,461	72.3
6/I	8	0	8	<0.1
6/L	9,459	2,759	12,218	16.8
6/A	2,850	391	3,242	4.5
6/M	3,400	1,222	4,622	6.4
Total	62,998	9,553	72,551	100.0

Manitoba Class 6 Driver's Licence Stages

6/F Full Class 6 licence (including Full Stage Class 6 under Graduated Driver Licensing)
6/I Intermediate Stage under Graduated Driver Licensing
6/L Learner Stage under Graduated Driver Licensing
6/A Learner drivers who are not in Graduated Driver Licensing
6/M Licence received after passing written test, entitling holder to take the Motorcycle Training Course

Under Manitoba's Graduated Driver Licensing (GDL) program, novice drivers are only required to complete the Intermediate Stage once. Credit for time served in the Intermediate Stage in Class 5 is given for the Intermediate Stage in Class 6. That is, if a novice driver completes the Intermediate stage of the GDL program for a Class 5 licence, they do not need to repeat the Intermediate Stage in order to obtain a Class 6 licence.

In 2017, Full Class 6 licence holders account for 72% of all Manitoba Class 6 licence holders and Learners account for 17%. This distribution is similar to 2016.

Table 2-9 Active Class 6 Male Drivers by Age Group and Licence Class

Table 2-9
Active Class 6 Male Drivers by Age Group and License Class: 2017

Age Group	License Class					Total	% of Total
	6/F	6/I	6/L	6/A	6/M		
16-17	4	6	66	0	33	108	0.2
18-19	55	1	199	1	111	367	0.6
20-24	465	1	1,230	35	599	2,330	3.7
25-34	2,604	0	3,712	306	1,392	8,014	12.7
35-44	4,596	0	2,095	1,035	661	8,387	13.3
45-54	11,358	0	1,200	945	333	13,836	22.0
55-64	17,929	0	702	414	180	19,225	30.5
65-74	8,712	0	225	93	70	9,099	14.4
75-84	1,328	0	28	21	20	1,397	2.2
85+	231	0	3	1	2	237	0.4
Total	47,281	8	9,459	2,850	3,400	62,998	

Table 2-10 Active Class 6 Female Drivers by Age Group and Licence Class

Table 2-10
Active Class 6 Female Drivers by Age Group and License Class: 2017

Age Group	License Class					Total	% of Total
	6/F	6/I	6/L	6/A	6/M		
16-17	0	0	4	0	7	11	0.1
18-19	4	0	24	0	11	40	0.4
20-24	31	0	181	1	109	322	3.4
25-34	230	0	722	15	367	1,334	14.0
35-44	516	0	706	112	248	1,582	16.6
45-54	1,290	0	704	145	254	2,392	25.0
55-64	2,089	0	390	94	180	2,753	28.8
65-74	877	0	30	23	45	974	10.2
75-84	115	0	0	1	1	117	1.2
85+	27	0	0	1	0	27	0.3
Total	5,180	0	2,759	391	1,222	9,553	

SECTION 3 – Vehicle Registrations

Introduction

This section deals with vehicle registrations and examines these by three major categories: Commercial; Non-Commercial; and, Snowmobiles (Recreational).

Key Highlights

There are a total of 961,477 Non-Commercial vehicles registered in Manitoba in 2017.

- This is a 1% increase over 2016 and a nearly 23% increase from 2007.
- This is a 4% increase over the average registrations for the period 2012-2016.

There are a total of 123,059 Commercial vehicles registered in Manitoba in 2017.

- This is a 2% increase over 2016 and a 52% increase from 2007.
- This is a 15% increase over the average registrations for the period 2012-2016.

Overall, there is a 1% increase in the total vehicle registrations (commercial and non-commercial, combined) in Manitoba from 1,070,115 in 2016 to 1,084,536 in 2017.

There are a total of 34,344 Snowmobiles registered in Manitoba in 2017.

- There are 283 more registered snowmobiles in 2017 than in 2016 (a 1% increase); a 47% increase from 2007.
- This is a 4% increase over the average registrations for the period 2012-2016.

Major Elements Examined

Counts for each Commercial and Non-Commercial registration types represent an average registration over the twelve-month period January through December 2017. That is, active vehicle registrations as of the first of each month are recorded for each vehicle category and then an average for the year is calculated and reported. Counts for Snowmobiles use a similar "point-in-time" average calculation, but include December 2016 through to and including April 2017 to cover the snowmobile riding season.

Terms and Definitions

"Vehicle Class"

- Category of vehicles meeting specific designations and specifications
- Non-Commercial vehicle classes are vehicles registered for private use and include:
    - Passenger
    - Antique
    - Motorcycle/Moped
    - Truck
    - Farm Truck
    - Snow Vehicle
    - Trailer
    - Tractor (non-farm)
- Commercial vehicle classes are those involving vehicles registered to or for the use of a business and include:
    - Truck
    - Public Service Vehicles (PSV) Truck
    - Dealer/Repairer
    - Taxi/Livery
    - PSV Bus
    - Trailers
    - PSV Trailers
- A detailed description of each class noted above can be found in the "Glossary" of the Report

Table 3-1 Non Commercial Vehicle Class

Table 3-1
Non-Commercial Vehicle Class: 2017

Vehicle Class*	Total	%
Passenger	571,719	59.5
Antique	145	<0.1
Motorcycle/Moped	15,356	1.6
Truck	151,143	15.7
Farm Truck	43,702	4.5
Snow Vehicle	49	<0.1
Trailer	179,244	18.6
Tractor (Other than Farm-type)	120	<0.1
Total Non-Commercial Vehicles Registered	**961,477**	**100**
Snowmobiles (Recreational)		
Snowmobiles	34,344	

*For definition of these motor vehicle classes refer to the “Terms and Definitions” of this Section and “Glossary” of this Report.

Table 3-2 Commercial Vehicle Class

Table 3-2
Commercial Vehicle Class: 2017

Vehicle Class*	Total	%
Commercial Truck	42,160	34.3
Public Service Vehicle (PSV) Truck	15,130	12.3
Dealer and Repairer	6,598	5.4
Taxi/Livery/Limousine	818	0.7
Public Service Vehicle (PSV) Bus	196	0.2
Commercial Trailer	58,054	47.2
Public Service Vehicle (PSV) Trailer	104	<0.1
Total Commercial Vehicles Registered	**123,059**	**100**

*For definition of these motor vehicle classes refer to the “Terms and Definitions” of this Section and “Glossary” of this Report.

Table 3-3 Vehicle Registration Summary

Table 3-3
Vehicle Registrations Summary: 2007 to 2017

Registration Class	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	5-year (2012-2016) Average	**2017**	% Change 2017 vs. 2016	% Change (2017 vs. 2012-2016 average)
Non-Commercial Vehicle Class														
Passenger	499,078	509,856	516,185	521,894	529,406	539,384	545,723	551,113	559,606	565,348	552,235	**571,719**	1.1	3.5
Antique**	82	84	77	95	103	131	134	133	136	145	136	**145**	-0.3	6.5
Motorcycle/Moped	9,143	10,059	10,413	10,732	11,229	12,329	12,658	13,042	13,732	14,634	13,279	**15,356**	4.9	15.6
Truck	120,217	123,766	127,154	133,057	139,530	145,405	149,295	153,077	156,302	150,401	150,896	**151,143**	0.5	0.2
Farm Truck	44,477	44,073	43,746	43,517	42,942	43,384	43,361	43,517	43,749	43,908	43,584	**43,702**	-0.5	0.3
Snow Vehicle**	49	47	49	50	48	46	43	45	49	48	46	**49**	1.4	5.7
Trailer	111,630	120,891	127,080	134,358	143,249	154,603	160,451	165,492	170,778	175,160	165,297	**179,244**	2.3	8.4
Tractor (non-farm)	120	117	122	123	120	117	116	113	117	116	116	**120**	3.2	3.2
Subtotal	784,796	808,892	824,824	843,825	866,628	895,400	911,781	926,533	944,469	949,761	925,589	**961,477**	1.2	3.9
Commercial Vehicle Class														
Truck	24,987	26,123	26,851	27,690	28,928	30,391	31,407	32,227	33,521	40,161	33,541	**42,160**	5.0	25.7
PSV Truck	10,115	9,863	9,818	9,849	10,244	10,934	11,337	11,813	12,447	14,647	12,236	**15,130**	3.3	23.7
Dealer/Repairer	6,511	6,546	6,347	6,229	6,185	6,178	6,210	6,354	6,439	6,551	6,347	**6,598**	0.7	4.0
Taxi/Livery	769	778	834	854	871	885	892	893	903	883	891	**818**	-7.3	-8.2
PSV Bus**	143	146	155	161	150	143	153	156	168	188	161	**196**	4.5	21.4
Trailers*	38,183	42,304	41,846	45,249	45,221	49,389	50,936	55,000	54,342	57,824	53,498	**58,054**	0.4	8.5
PSV Trailers**	56	51	57	57	57	71	78	82	87	101	84	**104**	2.3	23.6
Subtotal	80,764	85,811	85,909	90,089	91,655	97,991	101,012	106,525	107,907	120,355	106,758	**123,059**	2.2	15.3
Total Registrations - Non-Commercial and Commercial Vehicle Classes														
Total Registrations	865,560	894,703	910,732	933,914	958,283	993,390	1,012,793	1,033,058	1,052,376	1,070,115	1,032,347	**1,084,536**	1.3	5.1
Snowmobiles* **														
Total	23,401	26,359	27,664	28,064	30,421	30,650	32,851	34,280	33,735	34,061	33,115	**34,344**	0.8	3.7
Off-Road Vehicle Dealer Plates														
Total	429	473	464	454	471	469	505	518	529	562	517	**568**	1.1	9.9

*Commercial trailers include semi-trailers.
**Due to small numbers, percentage change figures are expected to be somewhat erratic year-over-year and should be interpreted with extreme caution.
***Snowmobile registration count reflects the average number of active policies at a point in time during the riding season, from December to April (e.g., for 2017, December 2016 through April 2017, inclusive).

The total count of vehicles registered in Manitoba in 2017 (1,084,536) has increased by 1% compared to 2016. This increase is in line with year-over-year increases seen in previous years. The count of registered vehicles in 2017 is 5% higher than the five year (2012-2016) annual average.

The total increase in overall vehicle registrations in 2017 comes from an increase in both non-commercial and commercial vehicle registrations. Non-Commercial vehicle registrations increased by 1% in 2017 compared to 2016. Commercial vehicle registrations increased by 2% in 2017 compared to 2016.

Snowmobile registrations increased by 1% in 2017 over 2016, and by 4% compared to the five year (2012-2016) annual average.

SECTION 4 – Traffic Collisions

Introduction

This section counts the number of collisions in Manitoba and provides detail for collisions of different severity: fatal, injury and property damage only (PDO). Historical information regarding the number of collisions, the number of victims, the number of vehicles and the number of drivers involved in collisions over the ten year period 2007 to 2016 is presented and compared to 2017. Details are provided for 2017 traffic collisions in terms of the month of occurrence, day of the week, time of day, weather and road conditions, location and type of collision.

Key Highlights

In 2017, there are 12,659 victims from 51,844 collisions involving 72,055 vehicles and 68,447 drivers. Of the 51,844 collisions:

- 65 are fatal collisions involving 88 vehicles and 85 drivers, resulting in 73 people killed and 37 people injured;
- 9,691 are injury collisions involving 16,748 vehicles and 16,531 drivers, resulting in 12,549 people injured; and,
- 42,088 are PDO collisions involving 55,219 vehicles and 51,831 drivers.

Collisions on public roadways in Manitoba in 2017 most frequently occur:

- In Winnipeg (nearly 62% of all collisions; 14% of fatal, nearly 77% of injury and 58% of PDO collisions) and in rural locations (22% of all collisions, 65% of fatal, 13% of injury and 24% of PDO collisions);
- In the months of January, November and December – 34% of all collisions; 15% of fatal, 33% of injury and 34% of PDO collisions;
- On Fridays - Friday accounts for 17% of all collisions; 15% of fatal, 18% of injury and 17% of PDO collisions; and,
- Between the hours of 3 and 6 p.m. (15:00 to 17:59) – 23% of all collisions; 20% of fatal, 27% of injury and 22% of PDO collisions.

Collisions on public roadways in Manitoba in 2017 are most frequently:

- “Motor vehicle to motor vehicle” in nature – 63% of all collisions; 49% of fatal, 82% of injury and 59% of PDO collisions; and,
- “Rear end” collisions (37% of all collisions), collisions occurring at 90° intersections (nearly 16% of all collisions), collisions involving a fixed object (13% of all collisions) and side-swipe collisions (13% of all collisions).

Major Elements Examined

Counts of collisions in Manitoba for 2017 and previous years are taken from Traffic Accident Reports (TARs) completed by Manitoba Public Insurance and law enforcement agencies, and compiled by Manitoba Public Insurance. These counts are presented for all reportable collisions, fatal collisions, injury collisions, and property damage only (PDO) collisions.

Collisions, victims, vehicles and drivers are presented separately at the beginning of this section with counts provided for the years 2007 through 2017. Following that, the majority of this section explores traffic collisions occurring in 2017 and provides comparisons to annual average counts of collisions for the time period 2012 to 2016.

It is important to note that the number of collisions is not equal to the number of victims as each collision can result in multiple victims. Likewise, the number of vehicles involved is not equal to the number of drivers involved as a driverless vehicle (e.g., a parked car; vehicles that do not have a licensed driver) could be involved in a collision.

“Drivers” in this section refers to the number of drivers involved in collisions. It excludes pedestrians, bicyclists, snowmobiles, off-road vehicles, farm and construction equipment, trains and parked vehicles.

The terms ‘crash’, ‘collision’, and ‘accident’ are used interchangeably in this report.

The terms ‘fatally injured’ and ‘killed’ are used interchangeably in this report.

The reader is cautioned that not all percentages and calculations in the following tables will add to 100% of the total noted. Rounding error will often produce a difference of one or two percentage points. Likewise, average calculations are presented for historical data from the years 2012 to 2016. Rounding error in these calculations will cause individual average counts not to add to total average counts in some cases.

Due to the small numbers of fatal collisions, fluctuations year-over-year could be dramatic; a small change in the total count of these types of collisions can have a significant effect on statistics such as percentage change to previous years and involvement rates. Therefore, the reader is strongly cautioned when interpreting results regarding fatal collisions.

Terms and Definitions

“Collision Severity”

- A classification of a collision based on the most severe result of the collision, i.e., whether someone was killed (fatal), injured (injury) or property damage only (PDO) occurred.

“Fatal Collision”

- A motor vehicle collision in which at least one person is killed as a result of the collision. The death must have occurred within thirty days of the collision occurrence.

“Injury Collision”

- A motor vehicle collision in which at least one person has been recorded as sustaining some level of personal injury, but in which no one is fatally injured or killed. Levels of injury include: ‘major’ (admitted to hospital); ‘minor’ (treated and released from hospital); and, ‘minimal’ (no hospital treatment required).

“Property Damage Only (PDO) Collision”

- A motor vehicle collision in which no injury or fatality is sustained and only property damage is the result.

“Collision Type”

- Refers to the object struck by a motor vehicle during a collision (including: a pedestrian, another motor vehicle, a train, a motorcycle, a bicycle, an animal, and fixed objects) or to what happened to the vehicle in a single-vehicle collision (including: overturned on roadway and ran off roadway).

“Urban Location”

- Collisions occurring within the municipal boundaries of urban locations, including Winnipeg, Brandon, Portage la Prairie, Flin Flon, Dauphin, Thompson, The Pas, Selkirk and others.

“Rural Location”

- Collisions occurring on primary highways, secondary highways and local roadways, including the Trans Canada Highway and excluding those that occur within the municipal boundaries of an urban area.

“Accident Configuration”

- Briefly describes the action taken by a vehicle immediately prior to or at the start of the collision, including such events as rear-ending another vehicle, side-swiping another vehicle, turning into (the path of) another vehicle, parking, meeting another vehicle at an intersection and/or leaving the roadway.
- “Other” in terms of accident configuration includes collisions involving more than one configuration or sequence of events.

Table 4-1 Historical Summary of Traffic Collisions

Table 4-1
Historical Summary of Traffic Collisions: 2007 to 2017

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2017**	2012-2016 Average
Total Collisions	29,494	27,092	26,578	27,172	34,302	38,972	41,819	40,672	41,548	45,316	**51,844**	41,665
Fatal	96	85	83	78	94	89	69	64	69	96	**65**	77
Injury	6,415	5,974	5,396	5,386	6,309	8,280	8,729	9,023	9,127	9,582	**9,691**	8,948
PDO	22,983	21,033	21,099	21,708	27,899	30,603	33,021	31,585	32,352	35,638	**42,088**	32,640
Total Victims	8,632	7,924	7,302	7,130	8,337	10,623	11,234	11,676	12,017	12,653	**12,659**	11,641
Killed	109	92	86	87	110	96	85	68	78	107	**73**	87
Injured	8,523	7,832	7,216	7,043	8,227	10,527	11,149	11,608	11,939	12,546	**12,586**	11,554
Total Vehicles Involved	48,491	44,555	43,610	44,979	53,516	59,556	64,316	62,277	61,711	66,063	**72,055**	62,785
Fatal	141	141	126	110	141	126	111	95	106	143	**88**	116
Injury	11,099	10,219	9,268	9,358	10,956	14,802	15,663	16,233	16,184	16,927	**16,748**	15,962
PDO	37,251	34,195	34,216	35,511	42,419	44,628	48,542	45,949	45,421	48,993	**55,219**	46,707
Total Drivers Involved	44,814	42,120	41,097	42,310	51,279	58,877	63,501	61,294	59,716	63,839	**68,447**	61,445
Fatal	135	121	120	105	130	119	106	90	103	138	**85**	111
Injury	10,696	9,854	8,938	8,969	10,644	14,696	15,539	16,120	16,088	16,753	**16,531**	15,839
PDO	33,983	32,145	32,039	33,236	40,505	44,062	47,856	45,084	43,525	46,948	**51,831**	45,495

In 2017, there are 12,659 victims from 51,844 collisions involving 72,055 vehicles and 68,447 drivers. Of the 51,844 collisions:

- 65 are fatal collisions involving 88 vehicles and 85 drivers, resulting in 73 people killed and 37 people injured;
- 9,691 are injury collisions involving 16,748 vehicles and 16,531 drivers, resulting in 12,549 people injured; and,
- 42,088 are PDO collisions involving 55,219 vehicles and 51,831 drivers.

Total collisions in 2017 are up 14% compared to 2016 and by 24% compared to the number of collisions in the previous five year (2012 to 2016) annual average.

- Fatal collisions decreased by 32% compared to 2016 and by 16% compared to the previous five years.
- Injury collisions increased by 1% compared to 2016 and by 8% compared to the previous five years.
- PDO collisions increased by 18% compared to 2016 and by 29% compared to the previous five years.

The total number of collision victims in 2017 is slightly up compared to 2016 (by a count of 6) and increased by 9% compared to the previous five year (2012 to 2016) annual average. The number of people killed in collisions in 2017 decreased by 32% compared to 2016 and by 16% compared to the previous five years. The count of people killed in 2017 is among the lowest in the last ten years.

The total number of drivers involved in collisions in 2017 is up 7% compared to 2016 and by 11% compared to the previous five year (2012 to 2016) annual average. The number of vehicles involved in collisions in 2017 is up 9% from 2016 and up 15% compared to the previous five years.

Figure 4-1 Historical Summary – Count of Traffic Collisions, Victims, Vehicles and Drivers

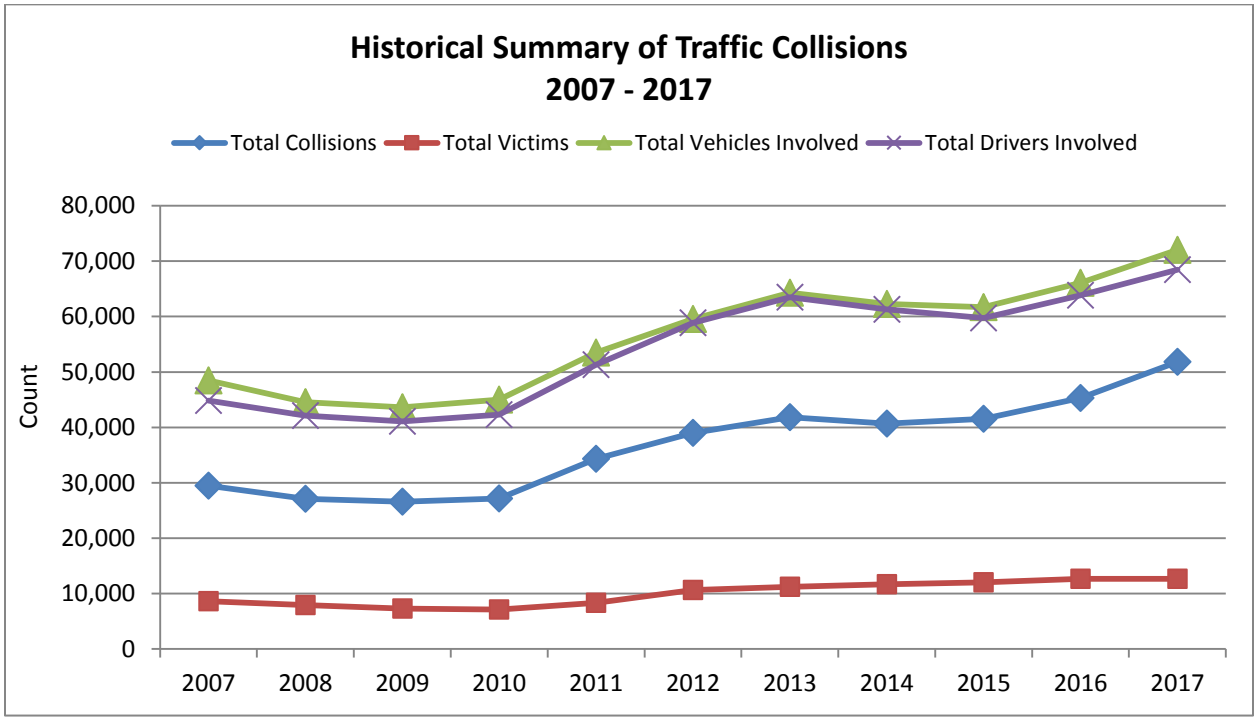


Table 4-2 Traffic Collisions by Month of Occurrence and Collision Severity

Table 4-2
Traffic Collisions by Month of Occurrence and Collision Severity: 2017, 2012-2016 Average

Month	2017 Collision Severity						**2017 Total**	% of 2017 Total	2012-2016 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
January	3	4.6%	1,122	11.6%	4,648	11.0%	**5,773**	11.1%	3	1,090	3,955	5,048	12.1%
February	2	3.1%	771	8.0%	3,462	8.2%	**4,235**	8.2%	4	854	2,970	3,828	9.2%
March	2	3.1%	708	7.3%	3,253	7.7%	**3,963**	7.6%	3	751	2,716	3,469	8.3%
April	4	6.2%	571	5.9%	2,597	6.2%	**3,172**	6.1%	6	547	2,029	2,582	6.2%
May	6	9.2%	710	7.3%	2,757	6.6%	**3,473**	6.7%	6	608	2,040	2,654	6.4%
June	10	15.4%	745	7.7%	2,938	7.0%	**3,693**	7.1%	7	596	2,243	2,846	6.8%
July	9	13.8%	631	6.5%	2,965	7.0%	**3,605**	7.0%	10	590	2,164	2,764	6.6%
August	6	9.2%	706	7.3%	2,831	6.7%	**3,543**	6.8%	10	617	2,085	2,711	6.5%
September	5	7.7%	721	7.4%	3,173	7.5%	**3,899**	7.5%	10	655	2,276	2,941	7.1%
October	11	16.9%	888	9.2%	3,771	9.0%	**4,670**	9.0%	7	739	2,646	3,391	8.1%
November	5	7.7%	1,021	10.5%	4,911	11.7%	**5,937**	11.5%	7	891	3,539	4,437	10.6%
December	2	3.1%	1,097	11.3%	4,782	11.4%	**5,881**	11.3%	5	1,011	3,978	4,994	12.0%
Total	65	100%	9,691	100%	42,088	100%	**51,844**	100%	77	8,948	32,640	41,665	100%

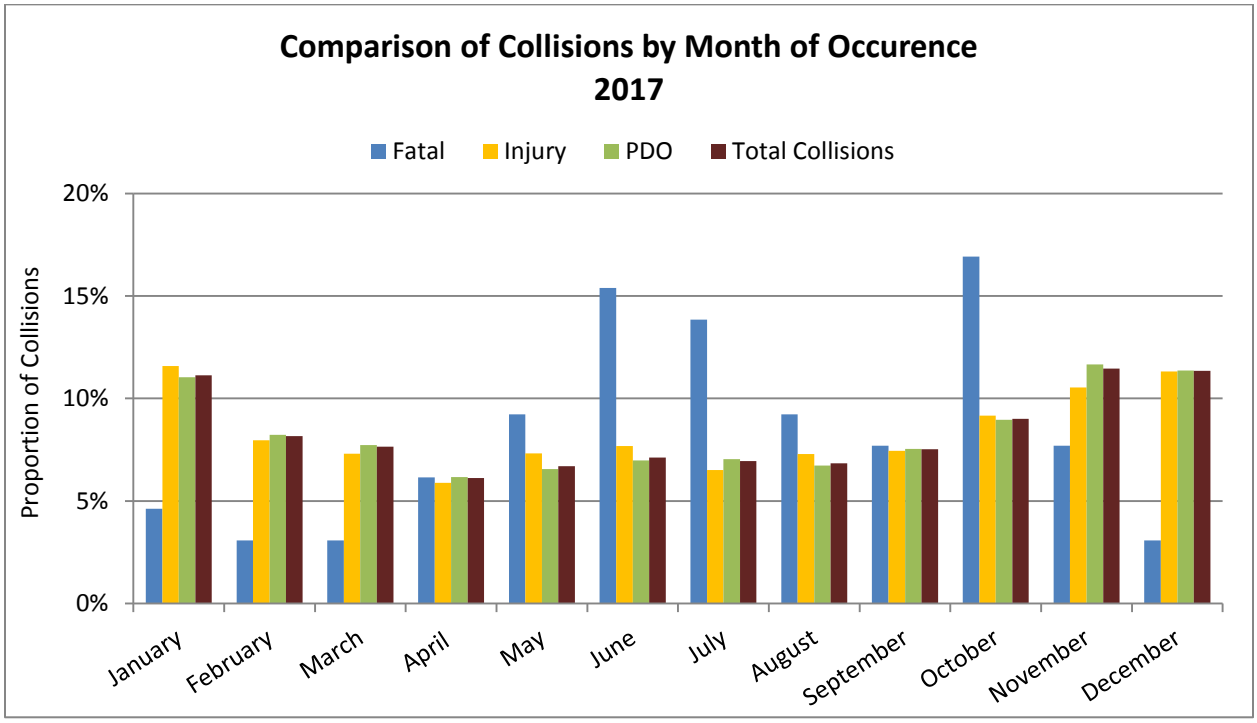
Note: Counts of collisions in the 2012-2016 average may not add to the total due to rounding.

In 2017, one-third (34%) of all collisions in Manitoba happened in the months of January, November and December. In the previous five year period (2012 to 2016), these months accounted for an average of 35% of all collisions. In 2017, January, November and December (combined), account for:

- 15% of all fatal collisions;
- 33% of all injury collisions; and,
- 34% of all PDO collisions.

Fatal collisions in 2017 occur most often in June, July, and October (46% of fatal crashes combined). Comparatively, 31% of fatal collisions occur in these months during the previous five years.

Figure 4-2 Traffic Collisions by Month of Occurrence and Collision Severity



In 2017, injury collisions and PDO collisions occur most frequently in the months of November through January (33% of injury collisions and 34% of PDO collisions). In the previous five year period (2012 to 2016), these months account for 33% of injury collisions and 35% of PDO collisions.

Table 4-3 Traffic Collisions by Day of Occurrence and Collision Severity

Table 4-3
Traffic Collisions by Day of Occurrence and Collision Severity: 2017, 2012-2016 Average

Day of Week	2017 Collision Severity						**2017 Total**	% of 2017 Total	2012-2016 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Sunday	17	26.2%	867	8.9%	4,518	10.7%	**5,402**	10.4%	11	812	3,451	4,274	10.3%
Monday	8	12.3%	1,336	13.8%	5,756	13.7%	**7,100**	13.7%	10	1,299	4,575	5,885	14.1%
Tuesday	7	10.8%	1,591	16.4%	6,167	14.7%	**7,765**	15.0%	9	1,392	4,774	6,174	14.8%
Wednesday	7	10.8%	1,456	15.0%	6,253	14.9%	**7,716**	14.9%	11	1,433	4,955	6,399	15.4%
Thursday	8	12.3%	1,528	15.8%	6,424	15.3%	**7,960**	15.4%	9	1,415	4,906	6,329	15.2%
Friday	10	15.4%	1,704	17.6%	7,265	17.3%	**8,979**	17.3%	13	1,526	5,630	7,169	17.2%
Saturday	8	12.3%	1,209	12.5%	5,705	13.6%	**6,922**	13.4%	14	1,072	4,349	5,435	13.0%
Total	65	100%	9,691	100%	42,088	100%	**51,844**	100%	77	8,948	32,640	41,665	100%

Note: Counts of collisions in the 2012-2016 average may not add to the total due to rounding.

Collisions in 2017 most frequently occur on weekdays, especially on Friday. Monday through Friday combined account for 76% of all collisions, nearly 62% of fatal collisions, 79% of injury collisions and 76% of PDO collisions. In the previous five year (2012 to 2016) annual average, weekdays account for the same proportions (77% of all collisions; 67% fatal; 79% injury; 76% PDO).

Overall, Friday accounts for the single largest proportion of collisions in 2017; this is also the case in the previous five year (2012 to 2016) annual average. Friday accounts for:

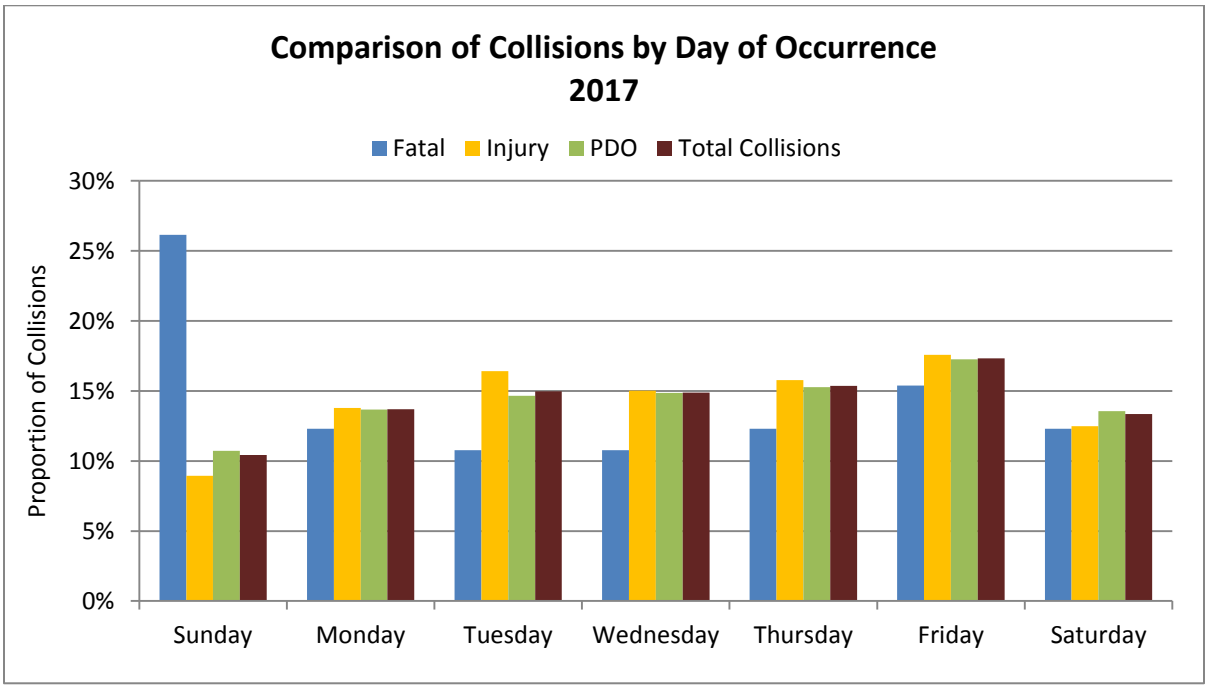
- 17% of all collisions in 2017 and in the previous five years;
- 15% of fatal collisions in 2017 and 17% in the previous five years;
- 18% of injury collisions in 2017 and 17% in the previous five years; and,
- 17% of PDO collisions in 2017 and in the previous five years.

Weekends, including Friday, Saturday and Sunday combined, account for:

- 41% of all collisions in 2017 and nearly 41% in the previous five years (2012 to 2016);
- 54% of fatal collisions in 2017 and 49% in the previous five years;
- 39% of injury collisions in 2017 and 38% in the previous five years; and,
- 42% of PDO collisions in 2017 and 41% in the previous five years.

Fridays are unique, accounting for the highest proportion of overall, injury, and PDO collisions, and the second highest proportion of fatal collisions by day of the week (17% of all collisions; 15% of fatal, 18% of injury and 17% of PDO collisions). Friday can be included as a weekday and as a weekend, and will affect any interpretation of crash prevalence depending on where it is grouped.

Figure 4-3 Traffic Collisions by Day of Occurrence and Collision Severity



In 2017, fatal collisions occur most often on Sunday (count of 17 or 26% of fatal collisions). In the previous five year (2012 to 2016) annual average, Saturdays account for the highest number of fatal crashes (count of 14; 18% of fatal collisions), closely followed by Fridays (count of 13; 17%).

Table 4-4 Traffic Collisions by Time of Occurrence and Collision Severity

Table 4-4
Traffic Collisions by Time of Occurrence and Collision Severity: 2017, 2012-2016 Average

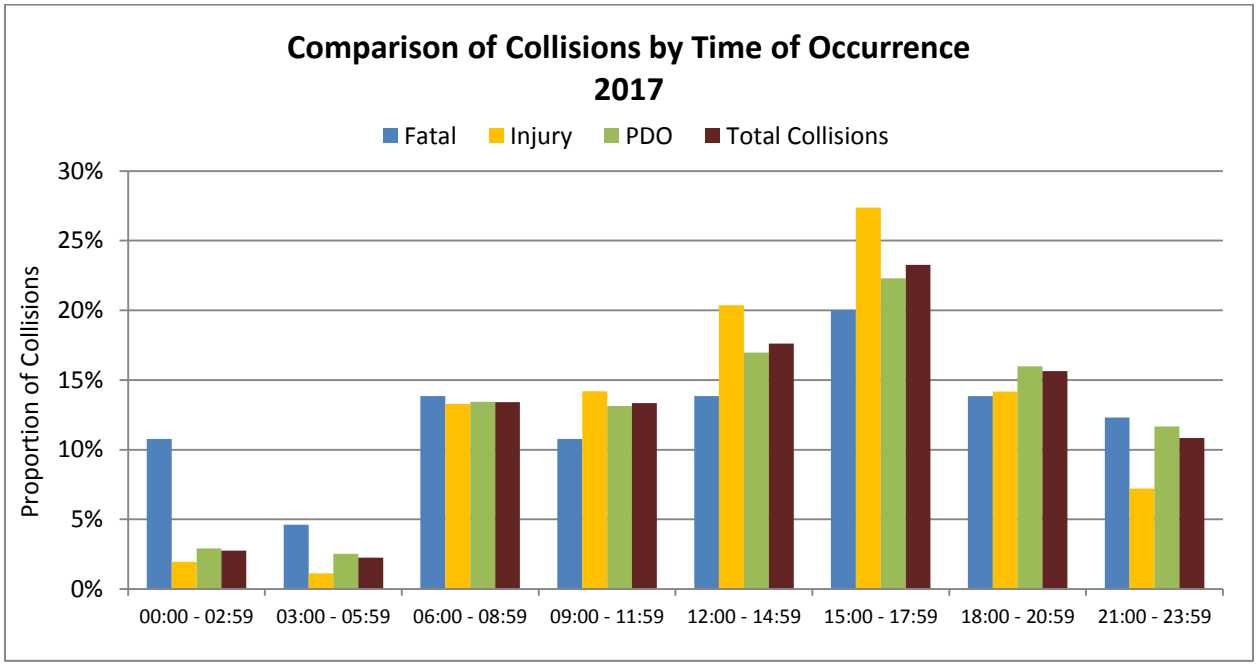
Time	2017 Collision Severity						**2017 Total**	% of 2017 Total	2012-2016 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
00:00 - 02:59	7	10.8%	190	2.0%	1231	2.9%	**1,428**	2.8%	7	205	1,019	1,229	2.9%
03:00 - 05:59	3	4.6%	109	1.1%	1,060	2.5%	**1,172**	2.3%	6	117	788	911	2.2%
06:00 - 08:59	9	13.8%	1,287	13.3%	5,658	13.4%	**6,954**	13.4%	7	1,207	4,298	5,512	13.2%
09:00 - 11:59	7	10.8%	1,375	14.2%	5,533	13.1%	**6,915**	13.3%	10	1,259	4,393	5,662	13.6%
12:00 - 14:59	9	13.8%	1,975	20.4%	7,145	17.0%	**9,129**	17.6%	10	1,774	5,596	7,380	17.7%
15:00 - 17:59	13	20.0%	2,654	27.4%	9,389	22.3%	**12,056**	23.3%	11	2,574	7,649	10,234	24.6%
18:00 - 20:59	9	13.8%	1,373	14.2%	6,726	16.0%	**8,108**	15.6%	12	1,173	4,940	6,125	14.7%
21:00 - 23:59	8	12.3%	699	7.2%	4,909	11.7%	**5,616**	10.8%	12	611	3,786	4,409	10.6%
Not Stated	-	-	29	0.3%	437	1.0%	**466**	0.9%	6	28	171	203	0.5%
Total	65	100%	9,691	100%	42,088	100%	**51,844**	100%	77	8,948	32,640	41,665	100%

Note: Counts of collisions in the 2012-2016 average may not add to the total due to rounding.

Four in ten collisions in 2017 occur between noon and 6 p.m. (41% of all collisions, 34% of fatal collisions, 48% of injury collisions, and 39% of PDO collisions). This is consistent with the proportion of collisions occurring during these hours in the previous five year (2012 to 2016) annual average (42% of all collisions, 27% of fatal collisions, 49% of injury collisions, and 41% of PDO collisions).

The largest proportion of total traffic collisions in 2017 occur between 3 and 6 p.m. (15:00 – 17:59), what is often considered the "afternoon rush". Almost one in four (23%) collisions occur during these hours (20% of fatal collisions, 27% of injury collisions and 22% of PDO collisions). This is relatively consistent with the proportion of collisions occurring during these hours in the previous five year (2012 to 2016) annual average.

Figure 4-4 Traffic Collisions by Time of Occurrence and Collision Severity



In 2017, 46% of fatal crashes occur between 3 p.m. and midnight, while another nearly 39% of fatal crashes occur between the hours of 6 a.m. and 3 p.m. This is consistent with the previous five years.

Table 4-5 Traffic Collisions by Provincial Location and Collision Severity

Table 4-5
Traffic Collisions by Provincial Location and Collision Severity: 2017, 2012-2016 Average

Location	2017 Collision Severity						**2017 Total**	% of 2017 Total	2012-2016 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Winnipeg	9	13.8%	7,412	76.5%	24,525	58.3%	**31,946**	61.6%	14	6,818	19,595	26,427	63.4%
Brandon	1	1.5%	245	2.5%	1,258	3.0%	**1,504**	2.9%	<1	209	1,004	1,213	2.9%
Portage	3	4.6%	53	0.5%	303	0.7%	**359**	0.7%	<1	54	258	311	0.7%
Flin Flon	1	1.5%	2	<0.1%	63	0.1%	**66**	0.1%	<1	4	73	77	0.2%
Dauphin	1	1.5%	31	0.3%	201	0.5%	**233**	0.4%	1	30	155	186	0.4%
Thompson	0	-	35	0.4%	267	0.6%	**302**	0.6%	<1	30	215	246	0.6%
The Pas	0	-	15	0.2%	170	0.4%	**185**	0.4%	-	16	129	145	0.3%
Selkirk	0	-	72	0.7%	278	0.7%	**350**	0.7%	<1	69	257	326	0.8%
Other Urban	8	12.3%	599	6.2%	4,827	11.5%	**5,434**	10.5%	7	595	4,110	4,712	11.3%
All Rural	42	64.6%	1,227	12.7%	10,196	24.2%	**11,465**	22.1%	52	1,125	6,845	8,022	19.3%
Total	65	100%	9,691	100%	42,088	100%	**51,844**	100%	77	8,948	32,640	41,665	100%

Note: Counts of collisions in the 2012-2016 average may not add to the total due to rounding.

Urban locations account for 78% of collisions in Manitoba, but only 35% of fatal collisions in 2017 (87% of injury collisions; 76% of PDO collisions). Rural locations account for 22% of all collisions, but 65% of fatal collisions. This is consistent with historical results. In the previous five year period (2012 to 2016), urban locations accounted for an average of 81% of all collisions, nearly 30% of fatal collisions, 87% of injury collisions, and 79% of PDO collisions.

In 2017, 62% of traffic collisions occur in Winnipeg while other urban locations (including Brandon, Portage, Flin Flon, Dauphin, Thompson, The Pas, Selkirk and "Other urban") account for 16% of all collisions. In the previous five year (2012 to 2016) annual average, 63% of all collisions occur in Winnipeg and 17% occur in other urban locations.

This pattern holds when we consider both injury and PDO collisions. In 2017:

- Nearly 77% of injury collisions occur in Winnipeg, 11% occur in other urban locations and 13% occur in rural locations.
- 58% of PDO collisions occur in Winnipeg, nearly 18% occur in other urban locations and 24% occur in rural locations.

Fatal collisions are different from the distribution of total crashes when it comes to the urban-rural split. In 2017, two-thirds of fatal collisions (65%) occur in rural locations, while 14% occur in Winnipeg and nearly 22% occur in other urban locations. The over-representation of rural locations for fatal collisions in 2017 is consistent with the previous five year (2012 to 2016) annual average, where 67% of fatal collisions occur in rural locations, 19% occur in Winnipeg and 14% occur in other urban locations.

Table 4-6 Collision Type by Urban/Rural Location

Table 4-6
Collision Type by Urban/Rural Location: 2017, 2012-2016 Average

Collision Type	Location													2012-2016 Average Count of Collisions				
	2017 Urban				2017 Rural				2017 Provincial Total				2017 Provincial Total as % of Total					
	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	**Total**		Fatal	Injury	PDO	Total	% of Total
Collision with pedestrian	1	70	75	146	1	3	3	7	2	73	78	**153**	0.3%	4	40	52	96	0.2%
Collision with other motor vehicle	11	7,479	23,639	31,129	21	430	1,042	1,493	32	7,909	24,681	**32,622**	62.9%	36	7,126	18,813	25,975	62.4%
Collisions with train	1	0	0	1	0	0	1	1	1	0	1	**2**	<0.1%	<1	2	4	7	<0.1%
Collision with motorcycle	0	7	7	14	1	1	0	2	1	8	7	**16**	<0.1%	1	7	5	13	<0.1%
Collision with animal drawn vehicle	0	0	0	0	0	0	0	0	0	0	0	**0**	-	-	-	-	-	<0.1%
Collision with bicycle	0	66	92	158	0	3	1	4	0	69	93	**162**	0.3%	1	19	48	69	0.2%
Collision with animal	0	67	1,537	1,604	0	303	7,200	7,503	0	370	8,737	**9,107**	17.6%	<1	269	5,451	5,721	13.7%
Collision with fixed object	4	468	4,158	4,630	10	390	1,193	1,593	14	858	5,351	**6,223**	12.0%	17	792	4,913	5,722	13.7%
Collision with other object	6	264	2,098	2,368	4	71	633	708	10	335	2,731	**3,076**	5.9%	8	524	2,968	3,501	8.4%
Overturned in roadway	0	4	7	11	1	8	10	19	1	12	17	**30**	<0.1%	2	11	14	26	<0.1%
Ran off roadway	0	5	6	11	2	3	12	17	2	8	18	**28**	<0.1%	7	50	37	94	0.2%
Collision with moped	0	0	1	1	0	0	0	0	0	0	1	**1**	<0.1%	-	<1	2	2	<0.1%
Other non-collision	0	34	272	306	2	15	101	118	2	49	373	**424**	0.8%	<1	87	332	420	1.0%
Total	23	8,464	31,892	40,379	42	1,227	10,196	11,465	65	9,691	42,088	**51,844**	100%	77	8,927	32,640	41,644	100%

Note: Counts of collisions in the 2012-2016 average may not add to the total due to rounding.

The majority of crashes on public roadways in Manitoba are “motor vehicle to motor vehicle” collisions, both in 2017 and in the previous five year (2012 to 2016) annual average. In 2017, “motor vehicle to motor vehicle” collisions account for:

- 63% of all collisions;
- 49% of fatal collisions;
- 82% of injury collisions; and,
- 59% of PDO collisions.

Collisions occurring in urban locations are also predominantly “motor vehicle to motor vehicle” in nature. In urban locations in 2017, “motor vehicle to motor vehicle” collisions account for:

- 77% of all collisions;
- 48% of fatal collisions;
- 88% of injury collisions; and,
- 74% of PDO collisions.

Collisions occurring in rural locations are predominantly “motor vehicle to animal” in nature, with “motor vehicle to fixed object” the second most common configuration, and “motor vehicle to motor vehicle” as the third most common. In rural locations in 2017:

- 65% of all collisions are “motor vehicle to animal” in nature (no fatal collisions; 25% of injury collisions; and 71% of PDO collisions);
- 14% of all collisions are “motor vehicle to fixed object” in nature (24% of fatal collisions; 32% of injury collisions; and 12% of PDO collisions); and,
- 13% of all collisions are “motor vehicle to motor vehicle” in nature (50% of fatal collisions; 35% of injury collisions; and 10% of PDO collisions).

Table 4-7 Traffic Collisions by Road Surface Condition and Collision Severity

Table 4-7
Traffic Collisions by Road Surface Condition and Collision Severity: 2017, 2012-2016 Average

Road Surface Condition	2017 Collision Severity						**2017 Total**	% of 2017 Total	2012-2016 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Dry	38	58.5%	5,552	57.3%	23,406	55.6%	**28,996**	55.9%	52	4,738	16,796	21,586	51.8%
Wet	6	9.2%	980	10.1%	3,457	8.2%	**4,443**	8.6%	5	991	3,112	4,109	9.9%
Mud	0	-	8	<0.1%	85	0.2%	**93**	0.2%	<1	6	80	86	0.2%
Snow	2	3.1%	686	7.1%	4,142	9.8%	**4,830**	9.3%	3	771	3,800	4,575	11.0%
Ice	4	6.2%	1,849	19.1%	7,246	17.2%	**9,099**	17.6%	6	1,877	6,778	8,661	20.8%
Slush	0	-	195	2.0%	671	1.6%	**866**	1.7%	1	227	663	891	2.1%
Loose Sand/ Gravel/ Dirt	0	-	76	0.8%	292	0.7%	**368**	0.7%	2	69	265	337	0.8%
Fresh Oil	0	-	5	<0.1%	24	<0.1%	**29**	<0.1%	-	5	15	20	<0.1%
Other	0	-	22	0.2%	205	0.5%	**227**	0.4%	<1	21	119	141	0.3%
Not Applicable	1	1.5%	54	0.6%	338	0.8%	**393**	0.8%	1	127	344	472	1.1%
Unknown	14	21.5%	264	2.7%	2,222	5.3%	**2,500**	4.8%	5	112	667	785	1.9%
Total	65	100%	9,691	100%	42,088	100%	**51,844**	100%	77	8,945	32,640	41,662	100%

Note: Counts of collisions in the 2012-2016 average may not add to the total due to rounding.

Collisions in Manitoba occur most often under “dry” road conditions. More than half (56%) of all collisions in 2017 and 52% in the previous five year (2012 to 2016) annual average occur on “dry” roads.

In 2017, nearly 59% of fatal collisions occur on “dry” roads. This is lower than the previous five year (2012 to 2016) annual average (67%).

Icy road conditions account for 18% of all collisions in 2017, including 6% of fatal collisions, 19% of injury collisions and 17% of PDO collisions. This is similar to the previous five year (2012 to 2016) annual average where icy roads account for 21% of all collisions, nearly 8% of fatal collisions, 21% of injury collisions and 21% of PDO collisions.

“Snow” covered and “wet” roads account for the next highest proportions of all collisions in 2017, at 9% each. These proportions are similar to the previous five year (2012 to 2016) annual average (11% and 10% respectively).

Figure 4-5 Traffic Collisions by Road Surface Condition and Collision Severity

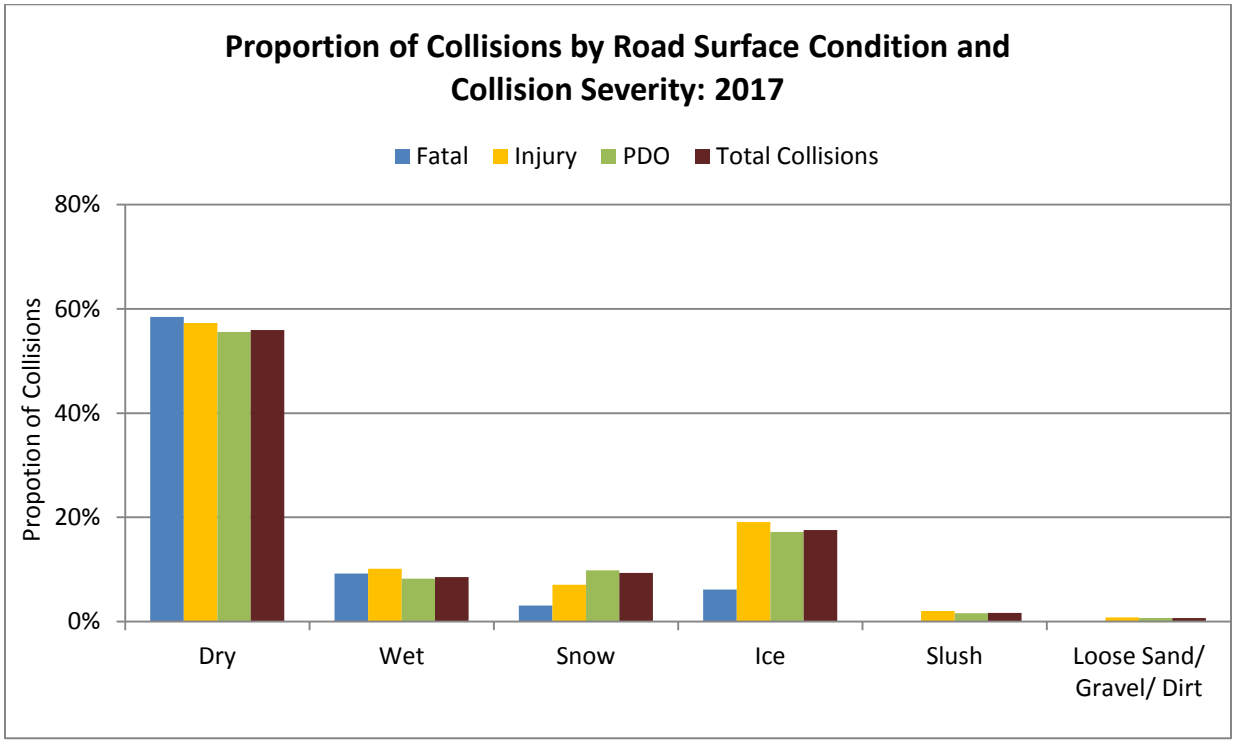


Table 4-8 Traffic Collisions by Weather Condition and Collision Severity

Table 4-8
Traffic Collisions by Weather Condition and Collision Severity: 2017, 2012-2016 Average

Weather Condition	2017 Collision Severity						**2017 Total**	% of 2017 Total	2012-2016 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Clear	37	56.9%	6,643	68.5%	27,844	66.2%	**34,524**	66.6%	52	5,995	21,082	27,129	65.1%
Cloudy	6	9.2%	1,401	14.5%	5,350	12.7%	**6,757**	13.0%	8	1,300	4,651	5,959	14.3%
Raining	3	4.6%	393	4.1%	1,384	3.3%	**1,780**	3.4%	3	418	1,408	1,828	4.4%
Snowing	2	3.1%	493	5.1%	2,203	5.2%	**2,698**	5.2%	1	593	2,353	2,947	7.1%
Fog or Mist	1	1.5%	65	0.7%	404	1.0%	**470**	0.9%	1	97	500	599	1.4%
Smoke or Dust	0	-	8	<0.1%	36	<0.1%	**44**	<0.1%	<1	10	35	45	0.1%
Freezing Rain/ Sleet/ Hail	0	-	65	0.7%	160	0.4%	**225**	0.4%	<1	40	157	197	0.5%
Drifting Snow	0	-	81	0.8%	427	1.0%	**508**	1.0%	2	105	478	585	1.4%
Strong Winds	0	-	85	0.9%	430	1.0%	**515**	1.0%	1	61	250	313	0.8%
Other	0	-	23	0.2%	146	0.3%	**169**	0.3%	<1	11	76	87	0.2%
Not Applicable	2	3.1%	72	0.7%	413	1.0%	**487**	0.9%	2	143	503	648	1.6%
Unknown	14	21.5%	362	3.7%	3,291	7.8%	**3,667**	7.1%	7	172	1,147	1,325	3.2%
Total	65	100%	9,691	100%	42,088	100%	**51,844**	100%	77	8,945	32,640	41,662	100%

Note: Counts of collisions in the 2012-2016 average may not add to the total due to rounding.

Most collisions in Manitoba occur during “clear” weather conditions. Two-thirds (67%) of all collisions (57% of fatal collisions; nearly 69% of injury collisions; 66% of PDO collisions) in 2017 and 65% of all collisions (67% of fatal collisions; 67% of injury collisions; 65% of PDO collisions) in the previous five year (2012 to 2016) annual average occur in “clear” weather. Other weather conditions when collisions occur in 2017 include:

- “Cloudy” – 13% of all collisions (9% of fatal collisions; nearly 15% of injury collisions; 13% of PDO collisions);
- “Snowing” – 5% of all collisions (3% of fatal collisions; 5% of injury collisions; 5% of PDO collisions); and,
- “Raining” – 3% of all collisions (5% of fatal collisions; 4% of injury collisions; 3% of PDO collisions).

Figure 4-6 Traffic Collisions by Weather Condition and Collision Severity

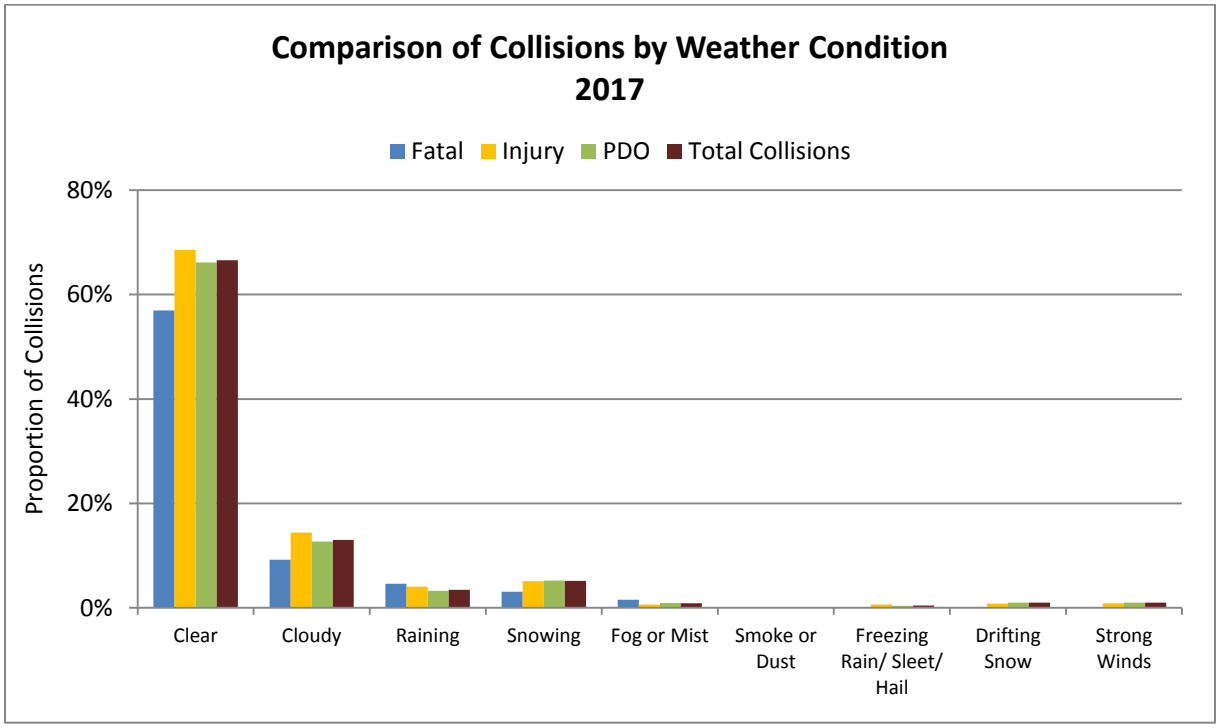


Table 4-9 Accident Configuration and Collision Severity

Table 4-9

Accident Configuration and Collision Severity: 2017, 2012-2016 Average

Accident Configuration	2017 Collision Severity						**2017 Total**	% of 2017 Total	2012-2016 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Rear End	3	8.8%	4,100	49.9%	8,212	32.5%	**12,315**	36.7%	3	3,809	6,673	10,485	36.0%
Head On	10	29.4%	131	1.6%	430	1.7%	**571**	1.7%	13	175	989	1,177	4.0%
Side Swipe Opposing	0	-	68	0.8%	391	1.5%	**459**	1.4%	<1	69	299	369	1.3%
Side Swipe Same Direction	0	-	487	5.9%	3,376	13.4%	**3,863**	11.5%	<1	389	2,784	3,173	10.9%
Overtaking	0	-	29	0.4%	130	0.5%	**159**	0.5%	<1	32	189	222	0.8%
Right Turn - Same direction	0	-	36	0.4%	187	0.7%	**223**	0.7%	<1	27	213	241	0.8%
Right Turn - Opposing	0	-	10	0.1%	62	0.2%	**72**	0.2%	-	13	62	75	0.3%
Left Turn - Opposing	0	-	193	2.4%	355	1.4%	**548**	1.6%	1.0	220	403	624	2.1%
Left Turn - Same direction	0	-	38	0.5%	173	0.7%	**211**	0.6%	-	34	184	218	0.8%
Left Turn - Across	0	-	203	2.5%	356	1.4%	**559**	1.7%	<1	157	349	506	1.7%
Intersection 90°	5	14.7%	1,817	22.1%	3,358	13.3%	**5,180**	15.5%	9	1,739	3,176	4,925	16.9%
Off Road Right	4	11.8%	274	3.3%	838	3.3%	**1,116**	3.3%	8	271	897	1,176	4.0%
Off Road Left	4	11.8%	180	2.2%	556	2.2%	**740**	2.2%	4	183	626	813	2.8%
Fixed Object	3	8.8%	397	4.8%	4,057	16.0%	**4,457**	13.3%	4	342	3,235	3,581	12.3%
Parking	1	2.9%	123	1.5%	2,685	10.6%	**2,809**	8.4%	-	127	1,248	1,375	4.7%
Pedestrian	4	11.8%	123	1.5%	118	0.5%	**245**	0.7%	9	69	80	157	0.5%
Other	31	-	1,482	-	16,804	-	**18,317**	-	23	1,289	11,231	12,544	-
Total	65	100%	9,691	100%	42,088	100%	**51,844**	100%	77	8,945	32,640	41,662	100%

Note: Counts of collisions in the 2012-2016 average may not add to the total due to rounding.
Note: 'Other' accident configurations consist primarily of collisions involving more than one configuration or sequence of events. Calculations in '% of Total' exclude the 'Other' category.

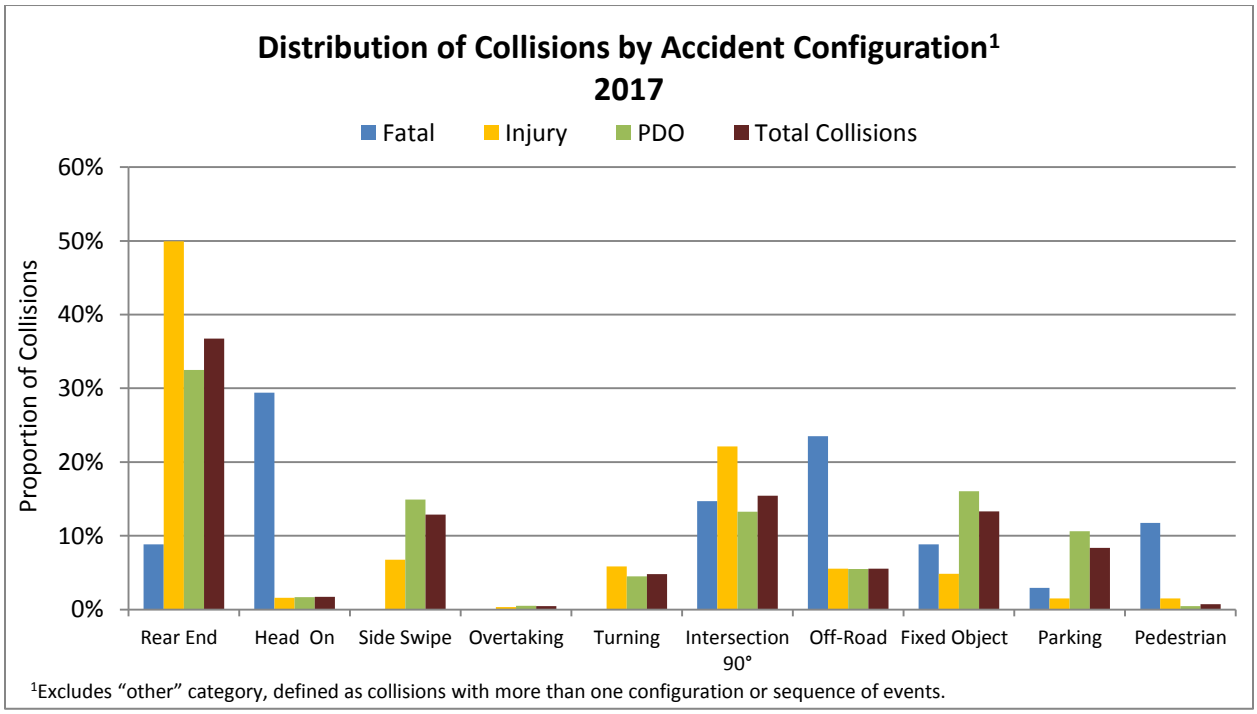
The most common accident configuration (or sequence of events immediately prior to or at the start of a collision) for collisions occurring in Manitoba (excluding "other") is a "rear end" type. "Rear end" crashes account for 37% of all collisions in 2017 (9% fatal collision; 50% of injury collisions; nearly 33% of PDO collisions) and 36% of all collisions in the previous five year (2012 to 2016) annual average.

Following "rear end" collisions, the next most common accident configurations in 2017 (excluding "other") are:

- Collisions occurring at "intersection 90°" – nearly 16% of all collisions, 15% of fatal collisions, 22% of injury collisions, and 13% of PDO collisions;
- "Fixed object" collisions – 13% of all collisions, 9% fatal collisions, 5% of injury collisions, and 16% of PDO collisions;
- "Side-swipe" collisions, including in the same or opposing direction – 13% of all collisions, no fatal collisions, 7% of injury collisions, and 15% of PDO collisions;
- Collisions where the vehicle leaves the road (either "off road left" or "off road right") – nearly 6% of all collisions, nearly 24% of fatal collisions, and nearly 6% of injury collisions and PDO collisions;
- Collisions where at least one vehicle is turning (both "left turn" or "right turn" and including in the "same direction" or "opposing" direction or "across") – 5% of all collisions, no fatal collisions, 6% of injury collisions, and nearly 5% of PDO collisions; and,
- "Head on" collisions – 2% of all collisions, 29% of fatal collisions, 2% of injury collisions and PDO collisions.

A large proportion of collisions cannot be assigned a single accident configuration or sequence of events. That is, they involve more than one of the possible configuration types. These collisions fall into the "other" category. In 2017, 35% of all collisions (48% fatal; 15% injury; 40% PDO) are recorded as "other". In the previous five year (2012 to 2016) annual average, 30% of all collisions (30% fatal; 14% injury; 34% PDO) are recorded as "other".

Figure 4-7 Distribution of Collisions by Accident Configuration and Collision Severity



"Head on" collisions are the highest proportion of fatal collisions in 2017 (29%), followed by collisions as a result of the vehicle leaving the road ("off-road left or right" – nearly 24%), and collisions occurring at intersections ("intersection 90°" – 15%).

SECTION 5 – Collision Victims

Introduction

This section counts the number of people killed and injured in traffic collisions and examines the severity of the injury received by the victim. Month, time and day of occurrences are examined, as well as the age of the victim. Other characteristics of the collision are presented as well. Relative involvement of victims in traffic collisions per 100,000 people in the general population is also calculated.

Key Highlights

In 2017, there are 12,659 victims (or casualties) of traffic collisions. Of these:

- 73 are killed;
- 442 are seriously injured;
- 2,026 sustain minor injuries;
- 9,836 sustain minimal injuries; and,
- 282 sustain injuries that are undefined in terms of severity.

The victim involvement rate (per 100,000 people in the general population) in traffic collisions in 2017 (932.9) has decreased by 1% compared to 2016 (944.7), but has increased by 5% compared to the previous five years (2012 to 2016) annual average (891.1). Victim involvement rates in traffic collisions in 2017 where the person:

- Is killed (5.4 in 2017) is 33% lower than in 2016 and 19% lower than in the previous five years; and,
- Is injured, including all levels of severity (but excluding killed; 927.5 in 2017), is 1% lower than in 2016 but 5% higher than in the previous five years.

People aged 20 to 24 and 25 to 34 have the highest victim involvement rates (per 100,000 people) overall in 2017.

- Children under age 15 – rate of 222.4
- People aged 15 to 19 – rate of 950.1
- People aged 20 to 24 – rate of 1,333.0
- People aged 25 to 34 – rate of 1,332.1
- People aged 35 to 44 – rate of 1,323.1
- People aged 45 to 54 – rate of 1,186.0
- People aged 55 and older – rate of 709.2

While women account for more than half of all casualties in traffic collisions (59%), men account for the highest proportion of people killed (73%). Men also account for more of the people seriously injured (nearly 54% compared to nearly 47% women).

“Drivers” account for 76% of all casualties and motor vehicle “Passengers” for 21%. “Motorcyclists” and “Moped” riders combined account for 1% of all casualties while “Bicyclists” account for 1% and “Pedestrians” account for 1%. In 2017, “Pedestrians” account for 16% of people killed in traffic collisions.

In 2017, casualties in traffic collisions most frequently result from crashes occurring:

- In Winnipeg – 76% of all victims;
- In the late fall, winter and early spring months (including October through March) – 57% of all victims; 36% of people killed and nearly 57% of people injured;
- On Friday (17%); and,
- Between noon and 6 p.m. (12:00-14:59 – 21% of all victims; 15:00 to 17:59 – 27% of all victims).

Major Elements Examined

Counts of collisions in Manitoba for 2017 and previous years are taken from Traffic Accident Reports (TARs) generated by Manitoba Public Insurance and law enforcement agencies, and compiled by Manitoba Public Insurance.

It is important to note that the number of victims involved in traffic collisions is not equal to the number of collisions that occurred as each collision can result in multiple victims while some collisions result in property damage only (PDO). PDO collisions are not included in this section.

The terms ‘crash’, ‘collision’ and ‘accident’ are used interchangeably in this report. As well, the terms ‘victim’ and ‘casualty’, and the terms ‘fatality’ and ‘killed’ are used interchangeably in this report.

Due to the small numbers of fatal collisions, fluctuations year-over-year could be dramatic; a small change in the total count of these types of collisions could have a significant effect on statistics such as percentage change to previous years and relative involvement rates. Therefore, the reader is strongly cautioned when interpreting results regarding fatal collisions.

The reader is cautioned that not all percentages and calculations in the following tables will add to 100% of the total noted. Rounding error will often produce a difference of one or two percentage points. Likewise, average calculations are presented for historical data from the years 2012 to 2016. Rounding error in these calculations will cause individual average counts not to add to total average counts in some cases.

Terms and Definitions

“Casualty Type”

- A classification of the severity of the injury sustained by a victim in a traffic collision, i.e., whether someone was killed or injured. This classification also includes a designation for the severity of each non-fatal injury sustained (i.e., victims sustaining a serious/major, minor or minimal injury).

“Killed”

- The casualty type “killed” indicates where the victim involved in the traffic collision died as a result of their injuries within thirty (30) days of the collision occurrence.

“Injured”

- The casualty type “injured” indicates where the victim sustained some level of personal injury, but in which they were not killed. Levels of injury include: ‘serious’ or ‘major’ (admitted to hospital); ‘minor’ (treated and released from hospital); and, ‘minimal’ (no hospital treatment required). ‘Other’ injury is noted when the severity of the victim’s injury is not known or recorded in the TAR.

“Road User Class”

- A classification based on how a person involved in a collision was using the road at the time of the collision. It includes: Drivers (of motor vehicles), Passengers (in motor vehicles), those Riding/Hanging On (to a motor vehicle), Motorcyclist (drivers and passengers), Moped (drivers and passengers), Bicyclist (drivers and passengers), and Pedestrians.

“Vehicle Occupant”

- All those in the “Road User Class” recorded as “Drivers” and “Passengers”. It excludes “Motorcyclist”, “Bicyclist”, “Moped”, those “Riding/Hanging On” to a vehicle, and “Pedestrians”.

“Victim Involvement Rate”

- A calculation of the number of victims or casualties involved in traffic collisions for every 100,000 people in the general population in Manitoba. Population statistics are taken from the Provincial government and can be found at the following web address: http://www.gov.mb.ca/health/annstats/index.html

“Collision Type”

- Refers to the object struck by a motor vehicle during a collision (including: a pedestrian, another motor vehicle, a train, a motorcycle, a bicycle, an animal, and fixed objects) or to what happened to the vehicle in a single-vehicle collision (including: overturned on roadway and ran off roadway).

“Accident Configuration”

- Briefly describes the action taken by a vehicle immediately prior to or at the start of the collision, including such events as rear-ending another vehicle, side-swiping another vehicle, turning into (the path of) another vehicle, parking, meeting another vehicle at an intersection and/or leaving the roadway.
- “Other” in terms of accident configuration includes, primarily, collisions involving more than one configuration or sequence of events.

Table 5-1 Historical Summary of Victims in Traffic Collisions

Table 5-1
Historical Summary of Victims in Traffic Collisions: 2007 to 2017

Year	Casualty Type												Total Victims	% change to previous year
	Killed	% change to previous year	Serious Injury	% change to previous year	Minor Injury	% change to previous year	Minimal Injury	% change to previous year	Other Injury	% change to previous year	Total Injured	% change to previous year		
2007	109	-	426	-	3,198	-	3,994	-	905	-	8,523	-	8,632	-
2008	92	-15.6%	396	-7.0%	2,968	-7.2%	3,678	-7.9%	790	-12.7%	7,832	-8.1%	7,924	-8.2%
2009	86	-6.5%	384	-3.0%	2,853	-3.9%	3,288	-10.6%	691	-12.5%	7,216	-7.9%	7,302	-7.8%
2010	87	1.2%	312	-18.8%	2,458	-13.8%	3,170	-3.6%	1,103	59.6%	7,043	-2.4%	7,130	-2.4%
2011	110	26.4%	337	8.0%	2,465	0.3%	4,306	35.8%	1,119	1.5%	8,227	16.8%	8,337	16.9%
2012	96	-12.7%	339	0.6%	2,237	-9.2%	7,864	82.6%	87	-92.2%	10,527	28.0%	10,623	27.4%
2013	85	-11.5%	307	-9.4%	2,242	0.2%	8,488	7.9%	112	28.7%	11,149	5.9%	11,234	5.8%
2014	68	-20.0%	303	-1.3%	2,009	-10.4%	9,201	8.4%	95	-15.2%	11,608	4.1%	11,676	3.9%
2015	78	14.7%	415	37.0%	1,947	-3.1%	9,014	-2.0%	563	492.6%	11,939	2.9%	12,017	2.9%
2016	107	37.2%	478	15.2%	2,174	11.7%	9,710	7.7%	184	-67.3%	12,546	5.1%	12,653	5.3%
2017	**73**	**-31.8%**	**442**	**-7.5%**	**2,026**	**-6.8%**	**9,836**	**1.3%**	**282**	**53.3%**	**12,586**	**0.3%**	**12,659**	**0.0%**
2012-2016 Average*	87	-15.9%	368	20.0%	2,122	-4.5%	8,855	11.1%	208	35.4%	11,554	8.9%	11,641	8.7%

* "% change" in this line compares the current year to the 5-year average

In 2017, there are 12,659 victims (or casualties) of traffic collisions. Of these:

- 73 are killed;
- 442 are seriously injured;
- 2,026 sustain minor injuries;
- 9,836 sustain minimal injuries; and,
- 282 sustain injuries that are undefined in terms of severity.

Overall, the total number of casualties in 2017 (12,659) is relatively unchanged compared to 2016 (12,653). In 2017, there are 34 fewer people killed than in 2016, 36 fewer people seriously injured, 148 fewer people with minor injuries, 126 more people with minimal injuries, and 98 more people with other or undefined injuries.

Compared to the previous five year (2012 to 2016) annual average, in 2017:

- The number of people killed is down 16%;
- The number of people seriously injured is up 20%;
- The number of people sustaining minor injuries is down by nearly 5%;
- The number of people sustaining minimal injuries is up 11%; and,
- The number of people sustaining “other” injuries is up 35%.

Table 5-2 Historical Summary of Victim Involvement Rate (per 100,000 People) in Traffic Collisions

Table 5-2
Historical Summary of Victim Involvement Rate (per 100,000 People) in Traffic Collisions: 2007 to 2017

Year	Casualty Type												Total Victims	% change to previous year
	Killed	% change to previous year	Serious Injury	% change to previous year	Minor Injury	% change to previous year	Minimal Injury	% change to previous year	Other Injury	% change to previous year	Total Injured	% change to previous year		
2007	9.2	-	35.9	-	269.6	-	336.7	-	76.3	-	718.4	-	727.6	-
2008	7.7	-16.5%	33.0	-8.0%	247.5	-8.2%	306.8	-8.9%	65.9	-13.6%	653.2	-9.1%	660.9	-9.2%
2009	7.1	-7.7%	31.6	-4.3%	234.9	-5.1%	270.8	-11.7%	56.9	-13.6%	594.2	-9.0%	601.3	-9.0%
2010	7.1	-0.1%	25.4	-19.8%	199.8	-15.0%	257.7	-4.8%	89.7	57.6%	572.5	-3.7%	579.5	-3.6%
2011	8.8	24.4%	26.9	6.3%	197.1	-1.3%	344.3	33.6%	89.5	-0.2%	657.9	14.9%	666.7	15.0%
2012	7.6	-14.2%	26.7	-1.1%	175.9	-10.7%	618.5	79.6%	6.8	-92.4%	828.0	25.9%	835.5	25.3%
2013	6.6	-12.7%	23.8	-10.7%	173.9	-1.2%	658.4	6.4%	8.7	27.0%	864.8	4.4%	871.3	4.3%
2014	5.2	-21.0%	23.2	-2.6%	153.8	-11.6%	704.4	7.0%	7.3	-16.3%	888.6	2.8%	893.8	2.6%
2015	5.9	13.5%	31.4	35.5%	147.5	-4.1%	682.7	-3.1%	42.6	486.3%	904.2	1.8%	910.1	1.8%
2016	8.0	35.2%	35.7	13.5%	162.3	10.1%	725.0	6.2%	13.7	-67.8%	936.8	3.6%	944.7	3.8%
2017	**5.4**	**-32.7%**	**32.6**	**-8.7%**	**149.3**	**-8.0%**	**724.9**	**0.0%**	**20.8**	**51.3%**	**927.5**	**-1.0%**	**932.9**	**-1.3%**
2012-2016 Average*	6.6	-19.1%	28.2	15.7%	162.7	-8.2%	677.8	6.9%	15.8	31.2%	884.5	4.9%	891.1	4.7%

* "% change" in this line compares the current year to the 5-year average

Recognizing that counts of victims of collisions could be impacted either positively or negatively by changing population statistics, involvement rates per 100,000 people in the general population in Manitoba is examined (see Table 5-2) to provide a standardized rate comparison. This accounts for changing population size instead of simply a raw count of the number of victims involved overall.

The victim involvement rate (per 100,000 people in the general population) in traffic collisions in 2017 (932.9) has decreased by 1% compared to 2016 (944.7), but has increased by 5% compared to the previous five years (2012 to 2016 – 891.1) on average.

Casualty involvement rates in traffic collisions in 2017 where a person:

- Is killed (5.4 in 2017) decreased by 33% compared to 2016 and by 19% compared to the previous five years;
- Is injured, including all levels of severity (but excluding killed; 927.5 in 2017), decreased by 1% compared to 2016, but increased by 5% compared to the previous five years;
- Is seriously injured (32.6 in 2017) decreased by 9% compared to 2016, but increased by 16% compared to the previous five years;
- Sustains minor injuries (149.3 in 2017) decreased by 8% compared to 2016 and the previous five years;
- Sustains minimal injuries (724.9 in 2017) remained unchanged compared to 2016, but increased by 7% compared to the previous five years; and,
- Sustains injuries that are unspecified in severity ("other injury"; 20.8 in 2017) increased by 51% compared to 2016 and by 31% compared to the previous five years.

Figure 5-1 Historical Summary of Victim Involvement Rate in Traffic Collisions

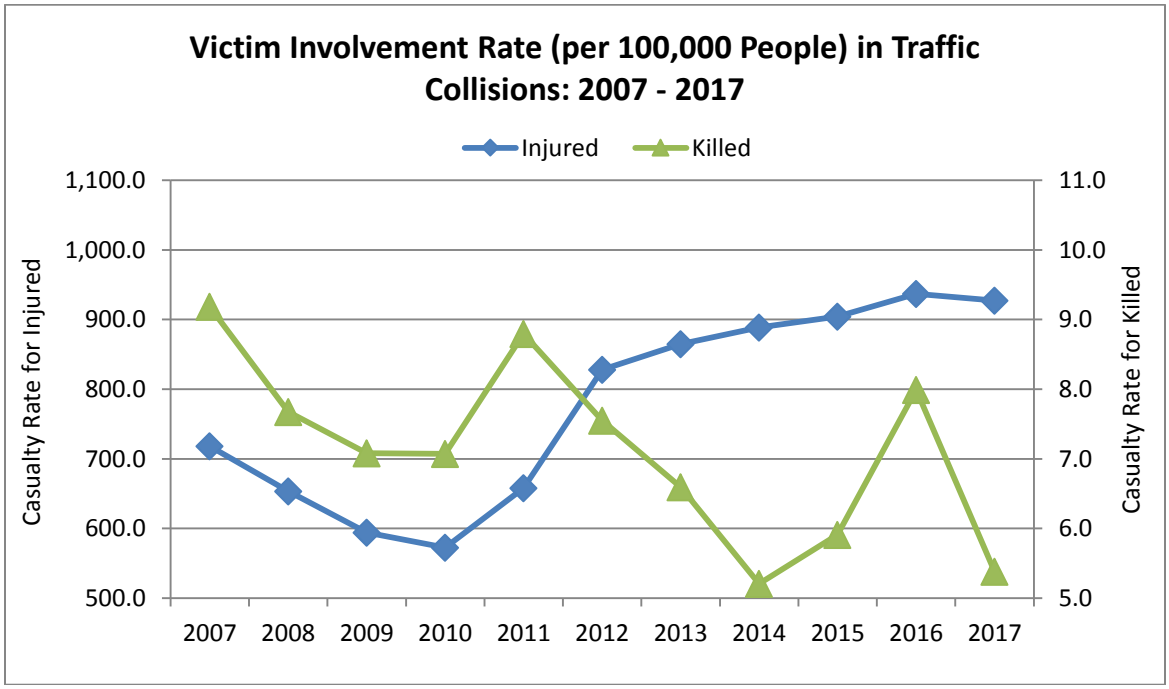


Table 5-3 Collision Victims by Month of Occurrence and Casualty Type

Table 5-3
Collision Victims by Month of Occurrence and Casualty Type: 2017

Month of Occurrence	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
January	3	4.1%	31	7.0%	209	10.3%	1,185	12.0%	2	0.7%	1,427	11.3%	**1,430**	11.3%
February	2	2.7%	29	6.6%	135	6.7%	811	8.2%	5	1.8%	980	7.8%	**982**	7.8%
March	2	2.7%	30	6.8%	138	6.8%	723	7.4%	24	8.5%	915	7.3%	**917**	7.2%
April	4	5.5%	30	6.8%	120	5.9%	591	6.0%	9	3.2%	750	6.0%	**754**	6.0%
May	7	9.6%	41	9.3%	183	9.0%	695	7.1%	22	7.8%	941	7.5%	**948**	7.5%
June	11	15.1%	37	8.4%	204	10.1%	703	7.1%	23	8.2%	967	7.7%	**978**	7.7%
July	10	13.7%	41	9.3%	149	7.4%	609	6.2%	30	10.6%	829	6.6%	**839**	6.6%
August	9	12.3%	30	6.8%	172	8.5%	717	7.3%	31	11.0%	950	7.5%	**959**	7.6%
September	6	8.2%	52	11.8%	154	7.6%	688	7.0%	29	10.3%	923	7.3%	**929**	7.3%
October	12	16.4%	59	13.3%	204	10.1%	895	9.1%	20	7.1%	1,178	9.4%	**1,190**	9.4%
November	5	6.8%	28	6.3%	168	8.3%	1,065	10.8%	37	13.1%	1,298	10.3%	**1,303**	10.3%
December	2	2.7%	34	7.7%	190	9.4%	1,154	11.7%	50	17.7%	1,428	11.3%	**1,430**	11.3%
Total	73	100%	442	100%	2,026	100%	9,836	100%	282	100%	12,586	100%	**12,659**	100%

Table 5-3a Collision Victims by Month of Occurrence and Casualty Type for Previous Five Years

Table 5-3a

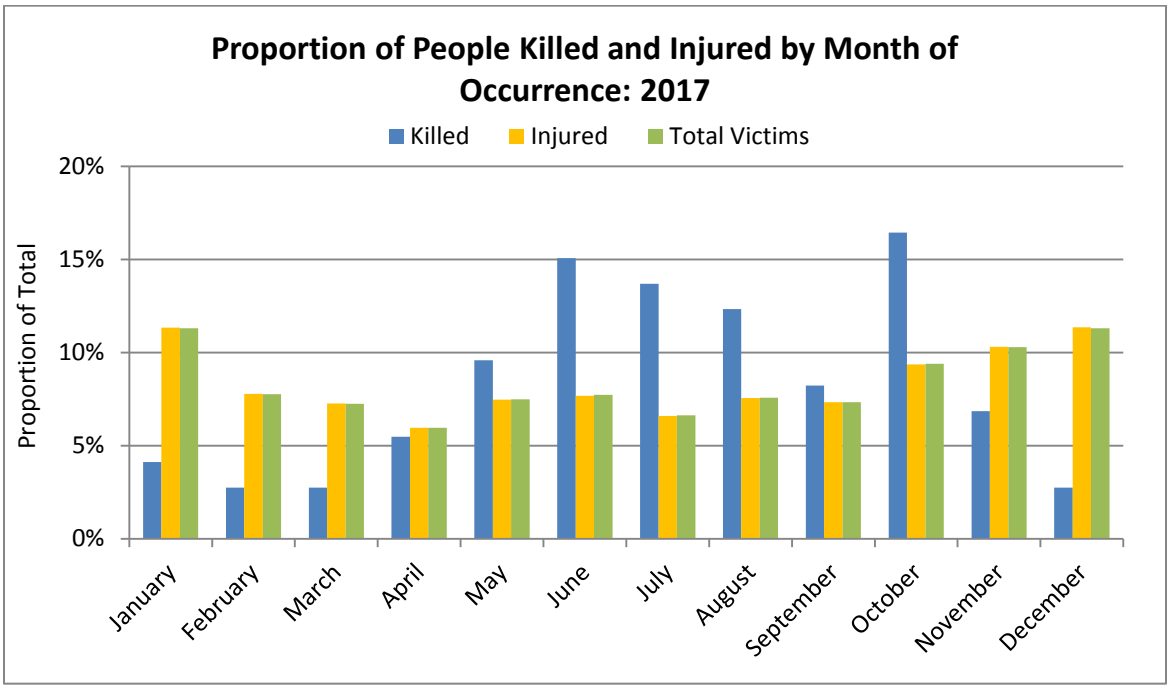
Collision Victims by Month of Occurrence and Casualty Type: 2012-2016 Average

Month of Occurrence	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
January	5	32	197	1,139	13	1,381	1,385	11.9%
February	5	19	168	881	21	1,089	1,094	9.4%
March	3	26	176	734	22	959	961	8.3%
April	6	25	141	524	12	701	708	6.1%
May	7	32	168	583	11	793	800	6.9%
June	8	30	166	576	16	789	796	6.8%
July	12	29	182	565	15	791	803	6.9%
August	11	36	175	592	17	820	831	7.1%
September	11	40	167	627	16	850	861	7.4%
October	8	34	192	718	14	958	966	8.3%
November	8	35	195	881	24	1,135	1,143	9.8%
December	5	31	196	1,036	25	1,288	1,293	11.1%
Total	87	368	2,122	8,855	208	11,554	11,641	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.

Victims in 2017 appear to follow a fairly typical distribution compared to past years in terms of month of occurrence. The months of January, November and December combined account for a disproportionate number of traffic collision victims overall, both in 2017 (33% of all victims) and in the previous five year (2012 to 2016) annual average (33%). In 2017 (similar to the previous five years), the count of victims is lowest in the late spring and summer months (ranging from 6% to 8% of all victims in each month from April to August) and is highest in late fall, winter and early spring (ranging from 7% to 11% of all victims in each month from October to March).

Figure 5-2 Proportion of People Killed and Injured by Month of Occurrence



In 2017, June, July, August and October account for the highest proportions of people killed (15%, 14%, 12% and 16% of people killed, respectively) by month. This is somewhat different from the previous five year (2012 to 2016) annual average, where the months of July, August and September account for the highest proportions of deaths.

Table 5-4 Collision Victims by Day of Occurrence and Casualty Type

Table 5-4
Collision Victims by Day of Occurrence and Casualty Type: 2017

Day of the Week	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Sunday	20	27.4%	57	12.9%	241	11.9%	866	8.8%	41	14.5%	1,205	9.6%	**1,225**	9.7%
Monday	10	13.7%	56	12.7%	273	13.5%	1,328	13.5%	41	14.5%	1,698	13.5%	**1,708**	13.5%
Tuesday	7	9.6%	64	14.5%	299	14.8%	1,571	16.0%	33	11.7%	1,967	15.6%	**1,974**	15.6%
Wednesday	7	9.6%	61	13.8%	263	13.0%	1,525	15.5%	33	11.7%	1,882	15.0%	**1,889**	14.9%
Thursday	8	11.0%	64	14.5%	303	15.0%	1,559	15.8%	32	11.3%	1,958	15.6%	**1,966**	15.5%
Friday	11	15.1%	67	15.2%	340	16.8%	1,715	17.4%	55	19.5%	2,177	17.3%	**2,188**	17.3%
Saturday	10	13.7%	73	16.5%	307	15.2%	1,272	12.9%	47	16.7%	1,699	13.5%	**1,709**	13.5%
Total	73	100%	442	100%	2,026	100%	9,836	100%	282	100%	12,586	100%	**12,659**	100%

Table 5-4a Collision Victims by Day of Occurrence and Casualty Type for Previous Five Years

Table 5-4a

Collision Victims by Day of Occurrence and Casualty Type: 2012-2016 Average

Day of the Week	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Sunday	13	50	241	814	21	1,126	1,138	9.8%
Monday	12	53	297	1,272	29	1,651	1,663	14.3%
Tuesday	9	46	308	1,370	28	1,752	1,761	15.1%
Wednesday	13	48	304	1,423	35	1,810	1,823	15.7%
Thursday	9	51	304	1,410	32	1,796	1,805	15.5%
Friday	15	59	366	1,496	37	1,958	1,973	17.0%
Saturday	17	62	303	1,069	26	1,461	1,478	12.7%
Total	87	368	2,122	8,855	208	11,554	11,641	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.

In 2017, the victims involved in traffic collisions are fairly evenly distributed throughout the week, with lowest on Sunday (10%) and highest on Friday (17%). This is very similar to the previous five year (2012 to 2016) annual average.

More than half (56%) of people killed in crashes in 2017 were killed on the weekend (15% Friday; 14% Saturday; 27% Sunday). This is similar to the previous five year (2012 to 2016) annual average, where the weekend (Friday, Saturday, and Sunday) is when most people are killed (51% cumulatively).

Figure 5-3 Proportion of People Killed and Injured by Day of Occurrence

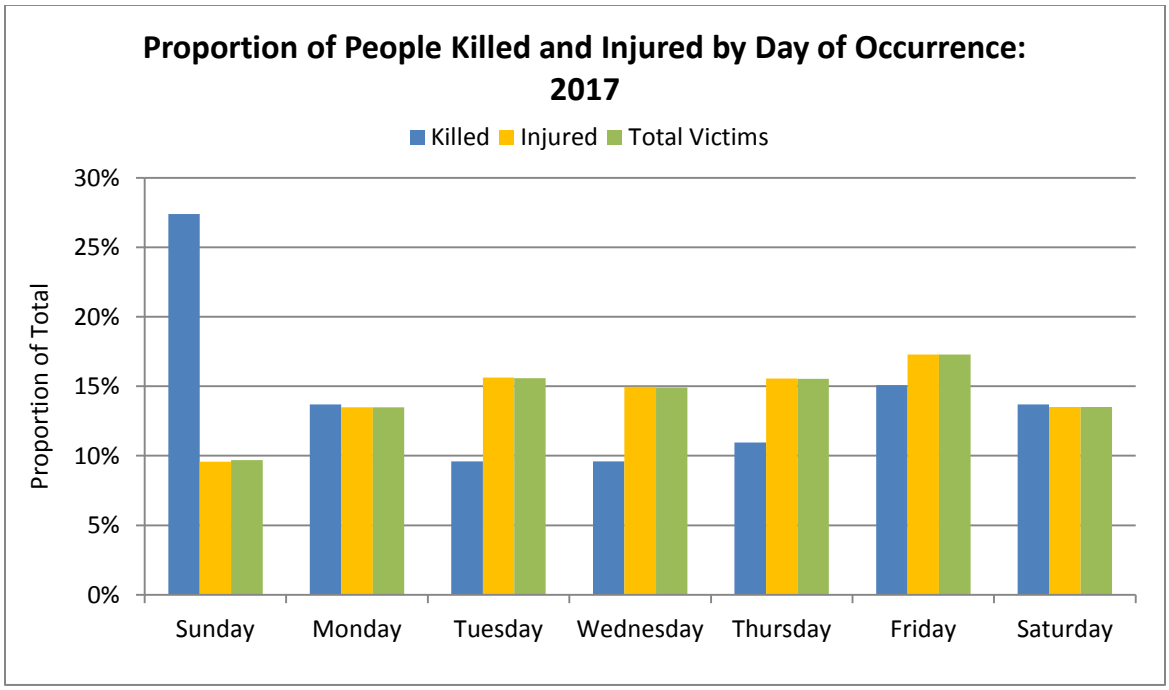


Table 5-5 Collision Victims by Time of Occurrence and Casualty Type

Table 5-5

Collision Victims by Time of Occurrence and Casualty Type: 2017

Time of the Day	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
00:00 - 02:59	8	11.0%	29	6.6%	58	2.9%	161	1.6%	9	3.2%	257	2.0%	**265**	2.1%
03:00 - 05:59	3	4.1%	11	2.5%	35	1.7%	86	0.9%	4	1.4%	136	1.1%	**139**	1.1%
06:00 - 08:59	10	13.7%	42	9.5%	252	12.4%	1,246	12.7%	34	12.1%	1,574	12.5%	**1,584**	12.5%
09:00 - 11:59	7	9.6%	61	13.8%	279	13.8%	1,351	13.7%	43	15.2%	1,734	13.8%	**1,741**	13.8%
12:00 - 14:59	11	15.1%	72	16.3%	439	21.7%	2,033	20.7%	61	21.6%	2,605	20.7%	**2,616**	20.7%
15:00 - 17:59	13	17.8%	112	25.3%	495	24.4%	2,769	28.2%	69	24.5%	3,445	27.4%	**3,458**	27.3%
18:00 - 20:59	12	16.4%	70	15.8%	311	15.4%	1,448	14.7%	45	16.0%	1,874	14.9%	**1,886**	14.9%
21:00 - 23:59	9	12.3%	44	10.0%	151	7.5%	714	7.3%	17	6.0%	926	7.4%	**935**	7.4%
Not Stated	0	-	1	0.2%	6	0.3%	28	0.3%	0	-	35	0.3%	**35**	0.3%
Total	73	100%	442	100%	2,026	100%	9,836	100%	282	100%	12,586	100%	**12,659**	100%

Table 5-5a Collision Victims by Time of Occurrence and Casualty Type for Previous Five Years

Table 5-5a

Collision Victims by Time of Occurrence and Casualty: 2012-2016 Average

Time of the Day	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
00:00 - 02:59	7	16	73	172	6	268	274	2.4%
03:00 - 05:59	8	14	42	85	1	143	150	1.3%
06:00 - 08:59	8	38	262	1,159	28	1,487	1,495	12.8%
09:00 - 11:59	11	53	296	1,238	30	1,617	1,628	14.0%
12:00 - 14:59	14	60	398	1,805	41	2,303	2,316	19.9%
15:00 - 17:59	12	86	540	2,640	51	3,318	3,330	28.6%
18:00 - 20:59	13	62	305	1,178	33	1,578	1,590	13.7%
21:00 - 23:59	13	36	192	560	16	804	817	7.0%
Not Stated	2	4	14	18	2	37	39	0.3%
Total	87	368	2,122	8,855	208	11,554	11,641	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.

People are most often killed and injured in traffic collisions between noon and 6 p.m. In 2017, 48% of all victims are involved in traffic collisions between 12:00 and 14:59 (21%) and between 15:00 to 17:59 (27%). This is consistent with the previous five year (2012 to 2016) annual average (12:00-14:59 – 20% of all victims; 15:00 to 17:59 – 29% of all victims).

In 2017, most people are killed between noon and midnight (12:00-17:59 – 33% of people killed, 18:00 – 23:59 – 29% killed). This is similar to the previous five year (2012 to 2016) annual average where nearly 30% of people are killed between noon and 6 p.m. and another nearly 30% are killed in collisions between 6 p.m. and midnight.

Comparing 2017 to the previous five year (2012 to 2016) annual average, the proportional distribution of people killed by time of the day is very similar. In 2017:

- 23% of people are killed between 6 a.m. and noon (06:00-08:59 – 14%; 09:00-11:59 – 10%), compared to 22% in the previous five years;
- 33% of people are killed between noon and 6 p.m. (12:00-14:59 – 15%; 15:00 to 17:59 – 18%), compared to nearly 30% in the previous five years;
- 29% of people are killed between 6 p.m. and midnight (18:00-20:59 – 16%; 21:00 to 23:59 – 12%), compared to nearly 30% in the previous five years; and,
- 15% of people are killed between midnight to 6 a.m. (00:00-02:59 – 11%; 03:00-05:59 – 4%), compared to 16% in the previous five years.

Figure 5-4 Proportion of People Killed and Injured by Time of Occurrence

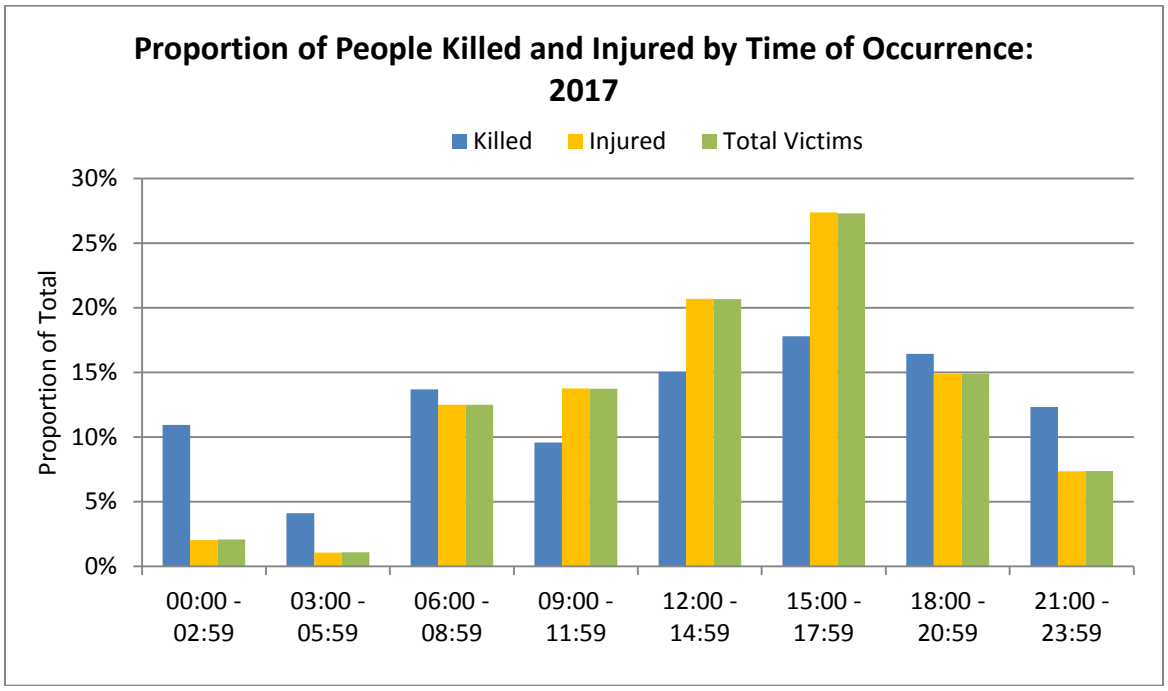


Table 5-6 Collision Victims by Gender and Casualty Type

Table 5-6

Collision Victims by Gender and Casualty Type: 2017

Gender	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Female	20	27.4%	199	46.5%	1,126	57.7%	5,746	59.7%	162	61.8%	7,233	59.0%	**7,253**	58.8%
Male	53	72.6%	229	53.5%	825	42.3%	3,874	40.3%	100	38.2%	5,028	41.0%	**5,081**	41.2%
Total	73	100%	428	100%	1,951	100%	9,620	100%	262	100%	12,261	100%	**12,334**	100%

Note: Some victims do not have age and gender recorded and are therefore missing from the table above.

Table 5-6a Collision Victims by Gender and Casualty Type for Previous Five Years

Table 5-6a

Collision Victims by Gender and Casualty Type: 2012-2016 Average

Gender	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Female	29	170	1,166	5,218	113	6,667	6,697	59.4%
Male	58	192	860	3,382	88	4,522	4,579	40.6%
Total	87	362	2,026	8,600	201	11,189	11,276	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.
Note: Some victims do not have age and gender recorded and are therefore missing from the table above.

In 2017, women account for 59% of all casualties in traffic collisions, same as the previous five year (2012 to 2016) annual average (59%). In 2017:

- Men account for a higher proportion of people killed (73%) than women, similar to the previous five years when men accounted for 66% of victims killed;
- Women account for the majority of people injured (but not killed) overall (59%), similar to the previous five years (60%);
- Men account for just over half of people seriously injured (nearly 54% compared to nearly 47% women), similar to the previous five years (53% men compared to 47% women); and,
- Women account for more people sustaining minor injuries (58%) and minimal injuries (60%) than men, similar to the previous five years (minor injuries – nearly 58%; minimal injuries – 61%).

Figure 5-5 Proportion of People Killed and Injured by Gender and Casualty Type

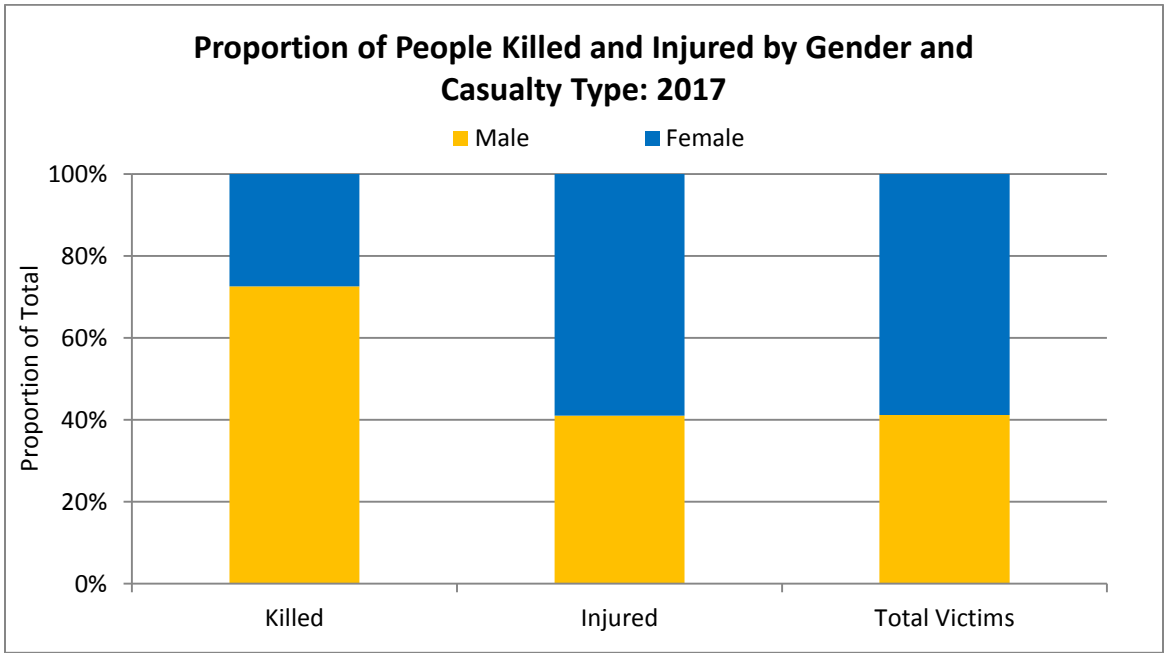


Table 5-7 Collision Victims by Age Group and Casualty Type

Table 5-7

Collision Victims by Age Group and Casualty Type: 2017

Age Group	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
0-4	0	-	6	1.4%	43	2.2%	107	1.1%	2	0.8%	158	1.3%	**158**	1.3%
5-9	0	-	8	1.9%	44	2.3%	127	1.3%	3	1.2%	182	1.5%	**182**	1.5%
10-14	2	2.7%	10	2.3%	48	2.5%	165	1.7%	4	1.5%	227	1.9%	**229**	1.9%
15-19	4	5.5%	41	9.6%	206	10.6%	549	5.7%	17	6.5%	813	6.7%	**817**	6.6%
20-24	10	13.7%	48	11.2%	228	11.7%	983	10.3%	22	8.5%	1,281	10.5%	**1,291**	10.5%
25-34	15	20.5%	68	15.9%	363	18.7%	2,055	21.4%	66	25.4%	2,552	20.9%	**2,567**	20.9%
35-44	10	13.7%	55	12.9%	303	15.6%	1,894	19.7%	48	18.5%	2,300	18.8%	**2,310**	18.8%
45-54	14	19.2%	66	15.4%	292	15.0%	1,654	17.2%	42	16.2%	2,054	16.8%	**2,068**	16.8%
55-64	9	12.3%	52	12.1%	220	11.3%	1,201	12.5%	37	14.2%	1,510	12.4%	**1,519**	12.4%
65+	9	12.3%	74	17.3%	195	10.0%	855	8.9%	19	7.3%	1,143	9.4%	**1,152**	9.4%
Not Stated	0	-	0	-	9	-	30	-	2	-	41	-	**41**	-
Total	73	100%	428	100%	1,951	100%	9,620	100%	262	100%	12,261	100%	**12,334**	100%

*Percentage of the total does not include the "not stated" category.
Note: Some victims do not have age and gender recorded and are therefore missing from the table above.

Table 5-7a Collision Victims by Age Group and Casualty Type for Previous Five Years

Table 5-7a

Collision Victims by Age Group and Casualty Type: 2012-2016 Average

Age Group	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
0-4	1	5	36	102	2	145	146	1.3%
5-9	1	5	42	94	5	146	147	1.3%
10-14	2	5	38	109	4	155	157	1.4%
15-19	10	36	220	549	15	820	830	7.4%
20-24	11	44	256	883	20	1,202	1,213	10.8%
25-34	15	61	389	1,795	43	2,288	2,303	20.5%
35-44	11	54	310	1,686	37	2,088	2,098	18.7%
45-54	12	48	314	1,625	33	2,021	2,032	18.1%
55-64	7	42	226	1,077	27	1,372	1,379	12.3%
65+	18	59	181	635	14	888	906	8.1%
Not Stated	-	3	14	45	2	64	64	-
Total	87	362	2,026	8,600	201	11,189	11,276	100%

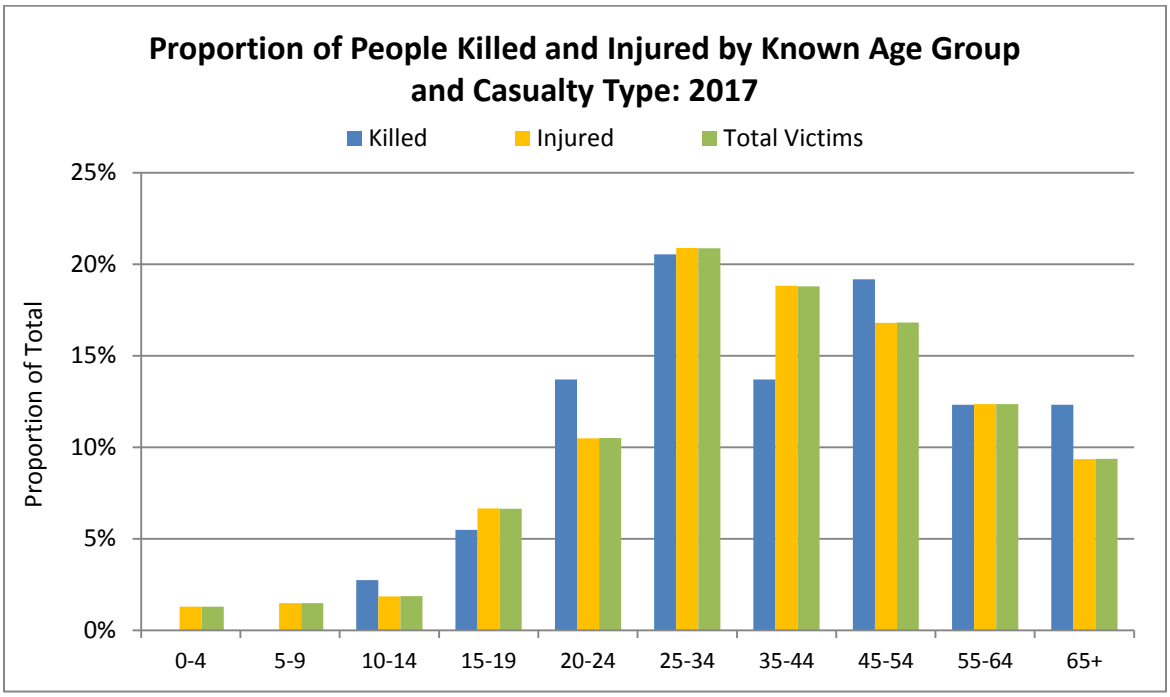
*Percentage of the total does not include the "not stated" category.
Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.
Note: Some victims do not have age and gender recorded and are therefore missing from the table above.

Victims aged 25 to 34 account for the highest proportion of casualties in 2017 (21% of all casualties; nearly 21% of people killed; 16% of people seriously injured), followed by those aged 35 to 44 (19% of all casualties; 14% of people killed; 13% of people seriously injured) and those age 45 to 54 (17% of all casualties; 19% of people killed; 15% of people seriously injured). Victims aged 15 to 19 account for 7% of all casualties while those aged 20 to 24 account for nearly 11%.

The proportion of victims by age group in 2017 is very similar to what it has been in the previous five year (2012 to 2016) annual average. In the previous five years, victims aged 25 to 34 (nearly 21% of all victims) account for the largest group, followed by victims aged 35 to 44 (19% of all victims) and those aged 45 to 54 (18% of all victims). Victims aged 15 to 19 and 20 to 24 account for 7% and 11% of all victims in the five year period (2012 to 2016), respectively.

In 2017, 40% of all people killed are aged 15 to 34 (nearly 6% aged 15-19; 14% aged 20-24; nearly 21% aged 25-34), 33% are aged 35 to 54, and 25% are aged 55 and older. In the previous five year (2012 to 2016) annual average, 41% of people killed are aged 15 to 34, 26% are aged 35 to 54, and 29% are aged 55 and older.

Figure 5-6 Proportion of People Killed and Injured by Age Group and Casualty Type



In 2017, people aged 25 to 34 make up the largest group of people killed in traffic collisions (nearly 21%), followed by those aged 45 to 54 (19%).

NOTE: For a detailed count of collision victims for 2017 and the previous five year (2012 to 2016) annual average by age and gender combined, please refer to "*Table 5-8 Collision Victims by Age Group, Casualty Type, and Gender*" and "*Table 5-8a Collision Victims by Age Group, Casualty Type, and Gender for Previous Five Years*" on the following pages.

Table 5-8 Collision Victims by Age Group, Casualty Type, and Gender

Table 5-8

Collision Victims by Gender and Age Group and Casualty Type: 2017

Age Group		2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
		Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Female	0-4	0	-	3	1.5%	17	1.5%	57	1.0%	1	0.6%	78	1.1%	**78**	1.1%
	5-9	0	-	4	2.0%	15	1.3%	67	1.2%	2	1.2%	88	1.2%	**88**	1.2%
	10-14	0	-	5	2.5%	23	2.1%	84	1.5%	3	1.9%	115	1.6%	**115**	1.6%
	15-19	2	10.0%	26	13.1%	134	12.0%	328	5.7%	8	4.9%	496	6.9%	**498**	6.9%
	20-24	2	10.0%	19	9.5%	135	12.0%	601	10.5%	15	9.3%	770	10.7%	**772**	10.7%
	25-34	3	15.0%	26	13.1%	219	19.5%	1,256	21.9%	41	25.3%	1,542	21.4%	**1,545**	21.4%
	35-44	3	15.0%	25	12.6%	189	16.9%	1,105	19.3%	26	16.0%	1,345	18.7%	**1,348**	18.6%
	45-54	4	20.0%	26	13.1%	156	13.9%	1,003	17.5%	31	19.1%	1,216	16.9%	**1,220**	16.9%
	55-64	4	20.0%	24	12.1%	122	10.9%	717	12.5%	23	14.2%	886	12.3%	**890**	12.3%
	65+	2	10.0%	41	20.6%	111	9.9%	509	8.9%	12	7.4%	673	9.3%	**675**	9.3%
	Not Stated	0	-	0	-	5	-	19	-	0	-	24	-	**24**	-
	Total Female	**20**	**100%**	**199**	**100%**	**1,126**	**100%**	**5,746**	**100%**	**162**	**100%**	**7,233**	**100%**	**7,253**	100%
Male	0-4	0	-	3	1.3%	26	3.2%	50	1.3%	1	1.0%	80	1.6%	**80**	1.6%
	5-9	0	-	4	1.7%	29	3.5%	60	1.6%	1	1.0%	94	1.9%	**94**	1.9%
	10-14	2	3.8%	5	2.2%	25	3.0%	81	2.1%	1	1.0%	112	2.2%	**114**	2.3%
	15-19	2	3.8%	15	6.6%	72	8.8%	221	5.7%	9	9.2%	317	6.3%	**319**	6.3%
	20-24	8	15.1%	29	12.7%	93	11.3%	382	9.9%	7	7.1%	511	10.2%	**519**	10.2%
	25-34	12	22.6%	42	18.3%	144	17.5%	799	20.7%	25	25.5%	1,010	20.2%	**1,022**	20.2%
	35-44	7	13.2%	30	13.1%	114	13.9%	789	20.4%	22	22.4%	955	19.1%	**962**	19.0%
	45-54	10	18.9%	40	17.5%	136	16.6%	651	16.9%	11	11.2%	838	16.7%	**848**	16.7%
	55-64	5	9.4%	28	12.2%	98	11.9%	484	12.5%	14	14.3%	624	12.5%	**629**	12.4%
	65+	7	13.2%	33	14.4%	84	10.2%	346	9.0%	7	7.1%	470	9.4%	**477**	9.4%
	Not Stated	0	-	0	-	4	-	11	-	2	-	17	-	**17**	-
	Total Male	**53**	**100%**	**229**	**100%**	**825**	**100%**	**3,874**	**100%**	**100**	**100%**	**5,028**	**100%**	**5,081**	100%

*Percentage of the total does not include the "not stated" category.

Note: Some victims do not have age and gender recorded and are therefore missing from the table above.

Table 5-8a Collision Victims by Age Group, Casualty Type, and Gender for Previous Five Years

Table 5-8a

Collision Victims by Gender and Age Group and Casualty Type: 2012-2016 Average

Age Group		2012-2016 Average Count of Victims							
		Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Female	0-4	<1	3	19	56	<1	79	80	1.2%
	5-9	<1	2	20	48	2	72	72	1.1%
	10-14	<1	2	19	63	2	87	88	1.3%
	15-19	3	18	137	328	8	490	494	7.4%
	20-24	4	21	150	549	11	730	734	11.0%
	25-34	5	28	232	1,090	25	1,376	1,381	20.7%
	35-44	2	27	176	1,036	21	1,260	1,262	19.0%
	45-54	4	22	177	1,004	17	1,220	1,224	18.4%
	55-64	<1	20	126	649	18	813	814	12.2%
	65+	8	26	102	366	8	503	511	7.7%
	Not Stated	-	1	9	28	<1	38	38	-
	Total Female	29	170	1,166	5,218	113	6,667	6,697	100%
Male	0-4	<1	2	18	45	1	66	66	1.5%
	5-9	<1	3	22	46	3	74	75	1.6%
	10-14	<1	3	18	45	2	68	69	1.5%
	15-19	6	18	84	221	7	330	336	7.4%
	20-24	7	23	106	334	9	472	479	10.5%
	25-34	10	33	157	705	18	912	922	20.3%
	35-44	8	27	134	650	16	828	836	18.4%
	45-54	8	26	137	622	16	801	809	17.8%
	55-64	6	22	101	428	8	559	565	12.4%
	65+	10	33	79	268	6	386	396	8.7%
	Not Stated	-	1	5	18	2	26	26	-
	Total Male	58	192	860	3,382	88	4,522	4,579	100%

*Percentage of the total does not include the "not stated" category.
Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.
Note: Some victims do not have age and gender recorded and are therefore missing from the table above.

Table 5-9 Victim Involvement Rate (per 100,000 people) by Gender and Age Group and Casualty Type

Table 5-9

Victim Involvement Rate (per 100,000 people) by Gender and Age Group and Casualty Type: 2017, 2012-2016 Average

Age Group		2017 Casualty Type						**2017 Total Victims**	2012-2016 Average Victim Involvement Rate						
		Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured		Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims
Female	0-4	-	7.2	40.6	136.3	2.4	186.5	**186.5**	2.0	7.9	46.4	139.2	2.0	195.5	197.5
	5-9	-	9.4	35.1	156.9	4.7	206.1	**206.1**	0.5	6.0	49.1	118.6	4.5	178.2	178.7
	10-14	-	12.5	57.3	209.2	7.5	286.4	**286.4**	2.1	5.1	49.9	163.0	5.7	223.7	225.7
	15-19	4.8	62.6	322.7	789.9	19.3	1,194.5	**1,199.3**	8.0	41.6	323.1	774.8	19.9	1,159.4	1,167.4
	20-24	4.3	40.6	288.7	1,285.2	32.1	1,646.6	**1,650.9**	9.0	44.1	320.2	1,175.1	22.7	1,562.2	1,571.1
	25-34	3.1	26.9	226.5	1,299.0	42.4	1,594.8	**1,597.9**	5.6	31.4	258.5	1,215.0	27.9	1,532.7	1,538.3
	35-44	3.4	28.6	216.3	1,264.8	29.8	1,539.5	**1,542.9**	2.6	32.0	210.1	1,235.1	24.8	1,501.9	1,504.6
	45-54	4.6	29.9	179.3	1,152.9	35.6	1,397.7	**1,402.3**	4.5	24.5	196.9	1,117.8	19.2	1,358.3	1,362.7
	55-64	4.7	28.0	142.2	835.8	26.8	1,032.9	**1,037.5**	1.0	24.5	155.5	803.6	22.8	1,006.4	1,007.4
	65+	1.8	36.4	98.4	451.3	10.6	596.7	**598.5**	14.9	50.3	195.1	698.1	14.5	957.9	972.8
	Total Female	**2.9**	**29.2**	**165.0**	**841.8**	**23.7**	**1,059.7**	**1,062.6**	4.4	25.9	177.2	793.1	17.2	1,013.5	1,017.9
Male	0-4	-	6.8	58.6	112.6	2.3	180.2	**180.2**	0.5	4.7	41.2	106.2	2.3	154.4	154.9
	5-9	-	8.9	64.9	134.2	2.2	210.3	**210.3**	1.9	6.7	52.8	109.9	7.1	176.5	178.4
	10-14	4.7	11.9	59.4	192.4	2.4	266.0	**270.7**	1.9	6.8	44.0	109.4	5.3	165.5	167.5
	15-19	4.5	33.7	161.9	497.0	20.2	713.0	**717.5**	13.8	41.0	186.2	493.0	14.7	734.8	748.6
	20-24	16.0	57.9	185.7	762.7	14.0	1,020.2	**1,036.2**	13.5	47.4	216.5	682.1	18.4	964.3	977.8
	25-34	12.5	43.7	150.0	832.1	26.0	1,051.9	**1,064.4**	11.6	36.7	175.4	789.7	19.7	1,021.6	1,033.2
	35-44	8.0	34.4	130.7	904.5	25.2	1,094.8	**1,102.9**	10.1	32.8	160.6	777.7	19.6	990.8	1,000.9
	45-54	11.4	45.8	155.7	745.1	12.6	959.2	**970.6**	8.6	29.0	151.4	687.1	17.7	885.2	893.8
	55-64	5.9	32.8	114.9	567.2	16.4	731.3	**737.2**	7.8	27.9	126.5	536.6	10.3	701.2	709.0
	65+	7.6	35.6	90.6	373.2	7.6	507.0	**514.5**	24.1	77.2	186.1	635.4	14.2	912.8	937.0
	Total Male	**7.9**	**34.0**	**122.3**	**574.5**	**14.8**	**745.6**	**753.4**	8.9	29.6	132.8	522.4	13.6	698.4	707.3

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.
Note: Some victims do not have age and gender recorded and are therefore missing from the table above.

Overall, women have higher victim involvement rates than men. The involvement rate for females in all traffic collisions in 2017 is 1,062.6, while for males it is 753.4 (per 100,000 people). Similarly, in the previous five year (2012 to 2016) annual average, women have a higher involvement rate than men (women 1,017.9; men 707.3). However, men have higher involvement rates than women when it comes to being killed and sustaining serious injuries.

People aged 20 to 24 and 25 to 34 have the highest victim involvement rates (per 100,000 people) overall in 2017.

- Children under age 15 – rate of 222.4
- People aged 15 to 19 – rate of 950.1
- People aged 20 to 24 – rate of 1,333.0
- People aged 25 to 34 – rate of 1,332.1
- People aged 35 to 44 – rate of 1,323.1
- People aged 45 to 54 – rate of 1,186.0
- People aged 55 and older – rate of 709.2

In 2017, women aged 20 to 24 have the highest victim involvement rate of any age-gender group (1,650.9 per 100,000 people) followed by women aged 25 to 34 (1,597.9) and women aged 35 to 44 (1,542.9). While the victim involvement rates for young men is lower than young women in 2017, men aged 35 to 44 have the highest rate among male age groups (1,102.9 per 100,000 people) followed by men aged 25 to 34 (1,064.4) and men aged 20 to 24 (1,036.2).

The overall victim involvement rates in 2017 are generally higher than the rates in the previous five year (2012 to 2016) annual average.

- Compared to the previous five years, victim involvement rates for women increased by 4% overall. The rate for women killed in 2017 decreased by 34% and seriously injured in 2017 increased by 13% compared to the previous five years.
- Compared to the previous five years, victim involvement rates for men increased by nearly 7% overall. The rate for men killed in 2017 decreased by 12% and seriously injured in 2017 increased by 15% compared to the previous five years.

Table 5-10 Collision Victims by Road User Class and Age Group

Table 5-10

Collision Victims by Road User Class and Age Group and Casualty Type: 2017

Age Group		2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
		Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Driver	0-4	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	5-9	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	10-14	0	-	1	0.4%	1	<0.1%	0	-	0	-	2	<0.1%	**2**	<0.1%
	15-19	3	7.0%	27	9.9%	123	9.6%	381	4.9%	10	5.1%	541	5.7%	**544**	5.7%
	20-24	6	14.0%	28	10.2%	153	12.0%	812	10.5%	19	9.7%	1,012	10.7%	**1,018**	10.7%
	25-34	11	25.6%	47	17.2%	277	21.7%	1,733	22.5%	54	27.6%	2,111	22.3%	**2,122**	22.3%
	35-44	4	9.3%	35	12.8%	225	17.6%	1,661	21.5%	38	19.4%	1,959	20.7%	**1,963**	20.7%
	45-54	6	14.0%	50	18.2%	215	16.8%	1,426	18.5%	35	17.9%	1,726	18.3%	**1,732**	18.2%
	55-64	6	14.0%	37	13.5%	159	12.5%	1,029	13.3%	20	10.2%	1,245	13.2%	**1,251**	13.2%
	65+	7	16.3%	49	17.9%	123	9.6%	668	8.7%	20	10.2%	860	9.1%	**867**	9.1%
	Not Stated	0	-	0	-	1	-	4	-	0	-	5	-	**5**	-
	Total Drivers*	**43**	**100%**	**274**	**100%**	**1,277**	**100%**	**7,714**	**100%**	**196**	**100%**	**9,461**	**100%**	**9,504**	100%
Passenger	0-4	0	-	14	12.7%	42	8.3%	106	6.0%	4	7.0%	166	6.8%	**166**	6.8%
	5-9	0	-	6	5.5%	40	7.9%	132	7.4%	3	5.3%	181	7.4%	**181**	7.4%
	10-14	2	15.4%	6	5.5%	40	7.9%	174	9.8%	5	8.8%	225	9.2%	**227**	9.2%
	15-19	1	7.7%	9	8.2%	68	13.4%	161	9.1%	6	10.5%	244	10.0%	**245**	10.0%
	20-24	2	15.4%	15	13.6%	56	11.0%	155	8.7%	3	5.3%	229	9.4%	**231**	9.4%
	25-34	2	15.4%	8	7.3%	63	12.4%	287	16.2%	12	21.1%	370	15.1%	**372**	15.1%
	35-44	3	23.1%	12	10.9%	58	11.4%	215	12.1%	9	15.8%	294	12.0%	**297**	12.1%
	45-54	3	23.1%	11	10.0%	50	9.9%	209	11.8%	5	8.8%	275	11.2%	**278**	11.3%
	55-64	0	-	8	7.3%	35	6.9%	160	9.0%	10	17.5%	213	8.7%	**213**	8.7%
	65+	0	-	21	19.1%	55	10.8%	173	9.8%	0	-	249	10.2%	**249**	10.1%
	Not Stated	0	-	1	-	34	-	86	-	4	-	125	-	**125**	-
	Total Passengers*	**13**	**100%**	**111**	**100%**	**541**	**100%**	**1,858**	**100%**	**61**	**100%**	**2,571**	**100%**	**2,584**	100%

(continued on next page)

(continued from previous page)

Age Group		2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
		Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Motorcyclist	0-4	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	5-9	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	10-14	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	15-19	0	-	1	4.2%	1	1.9%	0	-	0	-	2	1.6%	**2**	1.5%
	20-24	0	-	4	16.7%	9	17.3%	5	10.4%	1	33.3%	19	15.0%	**19**	14.4%
	25-34	0	-	9	37.5%	10	19.2%	10	20.8%	2	66.7%	31	24.4%	**31**	23.5%
	35-44	1	20.0%	3	12.5%	7	13.5%	6	12.5%	0	-	16	12.6%	**17**	12.9%
	45-54	3	60.0%	5	20.8%	13	25.0%	11	22.9%	0	-	29	22.8%	**32**	24.2%
	55-64	0	-	2	8.3%	9	17.3%	10	20.8%	0	-	21	16.5%	**21**	15.9%
	65+	1	20.0%	0	-	3	5.8%	6	12.5%	0	-	9	7.1%	**10**	7.6%
	Not Stated	0	-	0	-	0	-	1	-	0	-	1	-	**1**	-
	Total Motorcyclists*	**5**	**100%**	**24**	**100%**	**52**	**100%**	**49**	**100%**	**3**	**100%**	**128**	**100%**	**133**	100%
Moped	0-4	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	5-9	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	10-14	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	15-19	0	-	0	-	1	25.0%	0	-	0	-	1	14.3%	**1**	14.3%
	20-24	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	25-34	0	-	0	-	0	-	2	66.7%	0	-	2	28.6%	**2**	28.6%
	35-44	0	-	0	-	1	25.0%	0	-	0	-	1	14.3%	**1**	14.3%
	45-54	0	-	0	-	1	25.0%	1	33.3%	0	-	2	28.6%	**2**	28.6%
	55-64	0	-	0	-	1	25.0%	0	-	0	-	1	14.3%	**1**	14.3%
	65+	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	Not Stated	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	Total Moped*	**0**	**0%**	**0**	**0%**	**4**	**100%**	**3**	**100%**	**0**	**0%**	**7**	**100%**	**7**	100%

(continued on next page)

(continued from previous page)

	Age Group	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
		Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Bicyclist	0-4	0	-	0	-	2	4.3%	7	11.9%	2	18.2%	11	8.7%	**11**	8.7%
	5-9	0	-	0	-	0	-	1	1.7%	0	-	1	0.8%	**1**	0.8%
	10-14	0	-	2	22.2%	6	12.8%	2	3.4%	0	-	10	7.9%	**10**	7.9%
	15-19	0	-	1	11.1%	6	12.8%	7	11.9%	2	18.2%	16	12.7%	**16**	12.7%
	20-24	0	-	0	-	4	8.5%	8	13.6%	1	9.1%	13	10.3%	**13**	10.3%
	25-34	0	-	1	11.1%	7	14.9%	15	25.4%	2	18.2%	25	19.8%	**25**	19.8%
	35-44	0	-	1	11.1%	10	21.3%	10	16.9%	1	9.1%	22	17.5%	**22**	17.5%
	45-54	0	-	0	-	5	10.6%	7	11.9%	2	18.2%	14	11.1%	**14**	11.1%
	55-64	0	-	3	33.3%	3	6.4%	2	3.4%	1	9.1%	9	7.1%	**9**	7.1%
	65+	0	-	1	11.1%	4	8.5%	0	-	0	-	5	4.0%	**5**	4.0%
	Not Stated	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
	Total Bicyclists*	**0**	**0%**	**9**	**100%**	**47**	**100%**	**59**	**100%**	**11**	**100%**	**126**	**100%**	**126**	100%
Pedestrian	0-4	0	-	0	-	2	2.7%	3	5.9%	0	-	5	3.2%	**5**	3.0%
	5-9	0	-	2	9.1%	2	2.7%	0	-	0	-	4	2.6%	**4**	2.4%
	10-14	0	-	1	4.5%	3	4.1%	1	2.0%	0	-	5	3.2%	**5**	3.0%
	15-19	0	-	3	13.6%	7	9.5%	4	7.8%	0	-	14	9.0%	**14**	8.3%
	20-24	2	16.7%	1	4.5%	6	8.1%	4	7.8%	1	11.1%	12	7.7%	**14**	8.3%
	25-34	2	16.7%	4	18.2%	13	17.6%	10	19.6%	1	11.1%	28	17.9%	**30**	17.9%
	35-44	2	16.7%	5	22.7%	4	5.4%	8	15.7%	1	11.1%	18	11.5%	**20**	11.9%
	45-54	2	16.7%	0	-	13	17.6%	9	17.6%	0	-	22	14.1%	**24**	14.3%
	55-64	3	25.0%	2	9.1%	13	17.6%	4	7.8%	6	66.7%	25	16.0%	**28**	16.7%
	65+	1	8.3%	4	18.2%	11	14.9%	8	15.7%	0	-	23	14.7%	**24**	14.3%
	Not Stated	0	-	0	-	4	-	5	-	2	-	11	-	**11**	-
	Total Pedestrians*	**12**	**100%**	**22**	**100%**	**78**	**100%**	**56**	**100%**	**11**	**100%**	**167**	**100%**	**179**	100%

*Percentage of the total does not include the "not stated" category.

Note: Counts for “Motorcyclist”, “Bicyclist” and “Moped” include passengers on those vehicle types.

Note: In 2017, there are 36 victims in the class "Riding/hanging on" (i.e., not in the passenger compartment) who are not included in Table 5-10. This includes 6 people with minor injuries and 30 with minimal injuries.

Note: Some victims do not have their position in the vehicle recorded and are therefore missing from the table above. This includes 90 injured people (2 serious, 21 minor, 67 minimal injuries).

Table 5-10a Victims by Road User Class and Age Group and Casualty Type for Previous Five Years

Table 5-10a

Collision Victims by Road User Class and Age Group and Casualty Type: 2012-2016 Average

Age Group		2012-2016 Average Count of Victims							
		Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Driver	0-4	-	-	<1	1	-	1	1	<0.1%
	5-9	-	-	<1	<1	-	<1	<1	<0.1%
	10-14	-	<1	-	<1	<1	<1	<1	<0.1%
	15-19	5	21	147	392	10	571	575	6.5%
	20-24	5	27	189	731	13	959	964	10.9%
	25-34	8	39	305	1,531	35	1,910	1,918	21.7%
	35-44	5	36	246	1,480	31	1,793	1,798	20.4%
	45-54	7	29	242	1,408	26	1,705	1,712	19.4%
	55-64	5	26	172	920	20	1,137	1,142	12.9%
	65+	10	41	132	518	9	700	709	8.0%
	Not Stated	-	-	1	3	-	4	4	-
	Total Drivers*	45	219	1,434	6,984	144	8,782	8,827	100%
Passenger	0-4	<1	5	40	115	2	163	163	7.5%
	5-9	1	4	42	100	4	149	150	6.9%
	10-14	<1	3	36	118	3	161	161	7.4%
	15-19	3	12	67	162	3	245	247	11.4%
	20-24	3	11	52	143	4	211	214	9.8%
	25-34	4	12	61	249	5	327	331	15.2%
	35-44	3	11	48	194	4	256	259	11.9%
	45-54	2	9	52	202	4	267	268	12.3%
	55-64	1	7	40	148	4	200	201	9.2%
	65+	4	12	43	117	2	175	179	8.2%
	Not Stated	-	3	42	127	1	174	174	-
	Total Passengers*	21	90	523	1,678	37	2,328	2,349	100%
Motorcyclist	0-4	-	-	-	-	-	-	-	-
	5-9	-	-	<1	-	-	<1	<1	0.2%
	10-14	<1	-	<1	-	-	<1	<1	0.3%
	15-19	<1	<1	2	1	-	4	4	2.9%
	20-24	<1	2	6	7	<1	15	15	11.8%
	25-34	1	3	7	12	<1	23	24	18.4%
	35-44	<1	3	7	11	<1	21	22	17.1%
	45-54	1	7	11	15	<1	33	34	26.4%
	55-64	<1	6	9	9	-	24	24	18.8%
	65+	<1	2	2	2	-	5	5	4.2%
	Not Stated	-	-	-	<1	-	<1	<1	-
	Total Motorcyclists*	5	24	44	56	1	125	129	100%

(continued on next page)

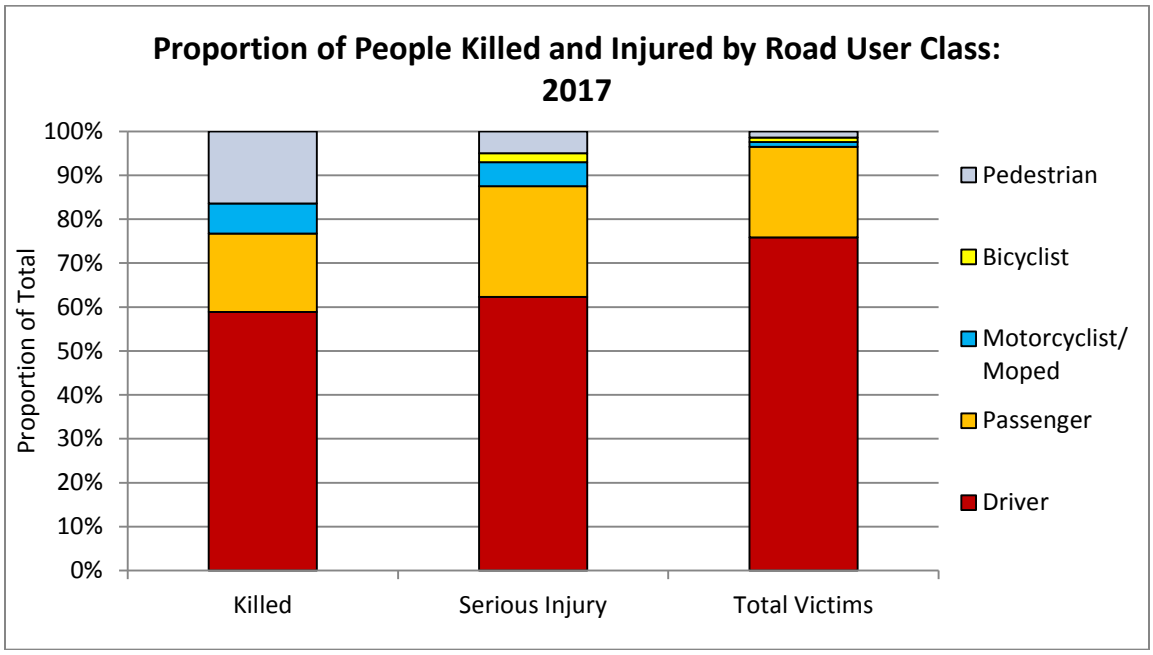
(continued from previous page)

Age Group		2012-2016 Average Count of Victims							
		Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Moped	0-4	-	-	-	-	-	-	-	-
	5-9	-	-	-	-	-	-	-	-
	10-14	-	-	-	-	-	-	-	-
	15-19	-	-	-	<1	-	<1	<1	1.5%
	20-24	-	-	<1	<1	-	1	1	8.8%
	25-34	-	<1	<1	3	-	4	4	29.4%
	35-44	-	<1	1	<1	-	3	3	19.1%
	45-54	-	<1	2	2	<1	4	4	32.4%
	55-64	-	<1	<1	<1	-	1	1	7.4%
	65+	-	-	-	-	<1	<1	<1	1.5%
	Not Stated	-	-	-	-	-	-	-	-
	Total Moped*	-	2	5	7	<1	14	14	100%
Bicyclist	0-4	-	-	-	<1	-	<1	<1	1.0%
	5-9	-	-	1	<1	<1	2	2	2.6%
	10-14	<1	<1	2	<1	<1	4	4	4.8%
	15-19	<1	1	3	3	<1	8	8	10.2%
	20-24	<1	<1	4	6	<1	11	11	14.0%
	25-34	<1	2	8	5	1	15	15	19.6%
	35-44	1	<1	5	4	1	11	12	15.8%
	45-54	<1	2	5	5	2	13	13	16.8%
	55-64	-	<1	2	4	<1	7	7	9.4%
	65+	1	<1	1	1	<1	3	4	5.6%
	Not Stated	-	<1	<1	1	<1	3	3	-
	Total Bicyclists*	4	8	32	31	8	78	82	100%
Pedestrian	0-4	<1	<1	3	<1	<1	4	4	3.1%
	5-9	-	1	2	<1	<1	4	4	2.8%
	10-14	<1	1	4	1	-	6	6	4.3%
	15-19	2	1	5	3	1	10	12	8.7%
	20-24	2	2	8	4	2	17	19	13.2%
	25-34	2	3	10	6	2	21	23	16.1%
	35-44	<1	3	8	7	1	19	20	13.9%
	45-54	<1	3	8	6	1	19	19	13.8%
	55-64	<1	2	6	5	2	15	16	11.4%
	65+	3	4	5	4	1	15	18	12.8%
	Not Stated	-	<1	2	2	3	8	8	-
	Total Pedestrians*	11	22	61	39	14	137	148	100%

*Percentage of the total does not include the "not stated" category.
Note: Counts for “Motorcyclist”, “Bicyclist” and “Moped” include passengers on those vehicle types.
Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.
Note: In 2012-2016, there is an average of 24 victims in the class “Riding/Hanging On”. There is also an average of 68 victims whose Road User Class cannot be determined. These victims are not included in Table 5-10a.

In 2017, “Drivers” account for 76% of all casualties and motor vehicle “Passengers” for 21%. “Motorcyclists” and “Moped” riders combined account for 1% of all casualties while “Bicyclists” account for 1% and “Pedestrians” account for 1%. In 2017, “Pedestrians” account for 16% of people killed in traffic collisions.

Figure 5-7 Proportion of People Killed and Injured by Road User Class



Considering people killed and seriously injured in Manitoba traffic collisions in 2017:

- Drivers account for the largest proportion of people killed (59%) and seriously injured (62%);
- Passengers account for 18% of people killed and 25% of people seriously injured;
- Pedestrians account for 16% of people killed and 5% of people seriously injured;
- Motorcyclists (including motorcycle and moped riders, combined) account for 7% of people killed and nearly 6% of people seriously injured; and,
- Bicyclists account for none killed and 2% of people seriously injured.

Vulnerable road users (pedestrians, motorcyclists/moped riders, and bicyclists) account for a much higher proportion of people killed and seriously injured than they do for people sustaining only minor or minimal injuries.

- Pedestrians account for 16% of people killed and 5% of people seriously injured, but only 1% of all victims in 2017.
- Motorcyclists and moped riders account for 7% of people killed and nearly 6% of people seriously injured, but only 1% of all victims in 2017.
- Bicyclists account for none killed and 2% of people seriously injured, but only 1% of all victims in 2017.

Table 5-11 Collision Victims by Collision Type and Casualty Type

Table 5-11
Collision Victims by Collision Type and Casualty Type: 2017

Collision Type	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Collision with pedestrian	2	2.7%	8	1.8%	32	1.6%	31	0.3%	9	3.2%	80	0.6%	**82**	0.6%
Collision with other motor vehicle	38	52.1%	266	60.2%	1,537	75.9%	8,451	85.9%	237	84.0%	10,491	83.4%	**10,529**	83.2%
Collisions with train	1	1.4%	0	-	0	-	0	-	0	-	0	-	**1**	<0.1%
Collision with motorcycle	2	2.7%	2	0.5%	2	<0.1%	5	<0.1%	1	0.4%	10	<0.1%	**12**	<0.1%
Collision with animal drawn vehicle	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
Collision with bicycle	0	-	7	1.6%	24	1.2%	43	0.4%	4	1.4%	78	0.6%	**78**	0.6%
Collision with animal	0	-	15	3.4%	35	1.7%	372	3.8%	10	3.5%	432	3.4%	**432**	3.4%
Collision with fixed object	15	20.5%	107	24.2%	276	13.6%	632	6.4%	11	3.9%	1,026	8.2%	**1,041**	8.2%
Collision with other object	10	13.7%	28	6.3%	92	4.5%	266	2.7%	6	2.1%	392	3.1%	**402**	3.2%
Overturned in roadway	1	1.4%	2	0.5%	9	0.4%	3	<0.1%	0	-	14	0.1%	**15**	0.1%
Ran off roadway	2	2.7%	3	0.7%	3	0.1%	2	<0.1%	0	-	8	<0.1%	**10**	<0.1%
Collision with moped	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
Other non-collision	2	2.7%	4	0.9%	16	0.8%	31	0.3%	4	1.4%	55	0.4%	**57**	0.5%
Total	73	100%	442	100%	2,026	100%	9,836	100%	282	100%	12,586	100%	**12,659**	100%

Table 5-11a Collision Victims by Collision Type and Casualty Type for Previous Five Years

Table 5-11a

Collision Victims by Collision Type and Casualty Type: 2012-2016 Average

Collision Type	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Collision with pedestrian	4	8	19	11	6	44	48	0.4%
Collision with other motor vehicle	42	200	1,481	7,475	158	9,313	9,356	80.6%
Collisions with train	<1	<1	<1	<1	-	2	2	<0.1%
Collision with motorcycle	1	3	2	3	<1	9	10	<0.1%
Collision with animal drawn vehicle	-	-	-	-	-	-	-	-
Collision with bicycle	1	2	8	11	2	22	24	0.2%
Collision with animal	<1	7	36	268	5	316	316	2.7%
Collision with fixed object	18	75	312	546	16	949	967	8.3%
Collision with other object	9	39	180	435	13	667	676	5.8%
Overturned in roadway	2	2	6	5	-	14	15	0.1%
Ran off roadway	7	21	40	15	4	80	87	0.7%
Collision with moped	-	-	<1	<1	-	<1	<1	<0.1%
Other non-collision	<1	7	32	67	3	109	109	0.9%
Total	87	365	2,114	8,838	208	11,524	11,611	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.
Note: There are several victims in 2014 where collision type was not captured; these are not included in the average calculation.

Motor vehicles colliding with other motor vehicles account for the majority of casualties in Manitoba, both in 2017 and in the previous five year (2012 to 2016) annual average. In 2017, “collision with other motor vehicle” accounts for:

- 83% of all casualties (81% in the previous five years);
- 52% of people killed (49% in the previous five years); and,
- 60% of people seriously injured (55% in the previous five years).

“Collision with a pedestrian”, “collision with motorcycle”, “collision with fixed object”, “collision with other object”, “overturned in roadway”, and “ran off roadway” each account for a higher proportion of people killed than of people injured in traffic collisions.

Table 5-12 Collision Victims by Accident Configuration and Casualty Type

Table 5-12
Collision Victims by Accident Configuration and Casualty Type: 2017

Accident Configuration	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Rear End	3	7.5%	44	12.9%	471	27.7%	4,703	55.2%	140	58.8%	5,358	49.6%	**5,361**	49.5%
Head On	12	30.0%	38	11.2%	72	4.2%	108	1.3%	2	0.8%	220	2.0%	**232**	2.1%
Side Swipe Opposing	0	-	3	0.9%	17	1.0%	73	0.9%	0	-	93	0.9%	**93**	0.9%
Side Swipe Same Direction	0	-	10	2.9%	63	3.7%	540	6.3%	14	5.9%	627	5.8%	**627**	5.8%
Overtaking	0	-	1	0.3%	7	0.4%	23	0.3%	0	-	31	0.3%	**31**	0.3%
Right Turn - Same direction	0	-	0	-	5	0.3%	28	0.3%	4	1.7%	37	0.3%	**37**	0.3%
Right Turn - Opposing	0	-	1	0.3%	2	0.1%	7	<0.1%	1	0.4%	11	0.1%	**11**	0.1%
Left Turn - Opposing	0	-	12	3.5%	76	4.5%	174	2.0%	6	2.5%	268	2.5%	**268**	2.5%
Left Turn - Same direction	0	-	2	0.6%	3	0.2%	33	0.4%	3	1.3%	41	0.4%	**41**	0.4%
Left Turn - Across	0	-	11	3.2%	46	2.7%	203	2.4%	4	1.7%	264	2.4%	**264**	2.4%
Intersection 90°	8	20.0%	104	30.6%	612	36.0%	1,792	21.0%	42	17.6%	2,550	23.6%	**2,558**	23.6%
Off Road Right	4	10.0%	37	10.9%	102	6.0%	200	2.3%	2	0.8%	341	3.2%	**345**	3.2%
Off Road Left	4	10.0%	29	8.5%	86	5.1%	106	1.2%	2	0.8%	223	2.1%	**227**	2.1%
Fixed Object	4	10.0%	29	8.5%	76	4.5%	334	3.9%	8	3.4%	447	4.1%	**451**	4.2%
Parking	1	2.5%	1	0.3%	11	0.6%	131	1.5%	0	-	143	1.3%	**144**	1.3%
Pedestrian	4	10.0%	18	5.3%	52	3.1%	59	0.7%	10	4.2%	139	1.3%	**143**	1.3%
Other	33	-	102	-	325	-	1,322	-	44	-	1,793	-	**1,826**	-
Total	73	100%	442	100%	2,026	100%	9,836	100%	282	100%	12,586	100%	**12,659**	100%

Note: “Other” accident configurations consist primarily of collisions involving more than one configuration or sequence of events. Calculations in "% of Total" exclude the "Other" category.

Table 5-12a Collision Victims by Accident Configuration and Casualty Type for Previous Five Years

Table 5-12a

Collision Victims by Accident Configuration and Casualty Type: 2012-2016 Average

Accident Configuration	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Rear End	3	35	440	4,312	79	4,866	4,869	48.6%
Head On	18	26	79	145	5	254	272	2.7%
Side Swipe Opposing	<1	5	22	66	<1	94	95	1.0%
Side Swipe Same Direction	<1	7	55	397	7	466	467	4.7%
Overtaking	<1	2	6	32	1	41	41	0.4%
Right Turn - Same direction	<1	<1	5	26	<1	31	32	0.3%
Right Turn - Opposing	-	<1	3	12	<1	16	16	0.2%
Left Turn - Opposing	1	8	76	223	4	311	313	3.1%
Left Turn - Same direction	-	<1	10	32	<1	43	43	0.4%
Left Turn - Across	<1	7	50	153	3	213	214	2.1%
Intersection 90°	10	90	645	1,660	40	2,435	2,445	24.4%
Off Road Right	8	39	141	160	4	344	352	3.5%
Off Road Left	5	24	90	106	2	223	228	2.3%
Fixed Object	4	21	100	267	8	396	400	4.0%
Parking	-	1	14	127	3	145	145	1.4%
Pedestrian	9	12	29	29	9	79	87	0.9%
Other	26	90	355	1,106	41	1,592	1,618	-
Total	87	368	2,120	8,854	208	11,550	11,637	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.
Note: “Other” accident configurations consist primarily of collisions involving more than one configuration or sequence of events. Calculations in "% of Total" exclude the "Other" category.
Note: There are several victims in 2014 where accident configuration was not captured; these are not included in the average calculation.

“Rear end” collisions and those occurring at “intersections 90°” account for the highest proportions of casualties, followed by side-swipe collisions, collisions where the vehicle leaves the road (either “off road right” or “off road left”), and collisions involving at least one vehicle turning. In 2017:

- “Rear end” collisions account for nearly 50% of all victims, nearly 8% of people killed, and 13% of people seriously injured;
- “Intersection 90°” collisions account for 24% of all victims, 20% of people killed, and 31% of people seriously injured;
- “Side swipe” (either opposing or same direction) collisions account for 7% of all victims, none killed, and 4% of people seriously injured;
- “Off road” (either right or left) collisions account for 5% of all victims, 20% of people killed, and 19% of people seriously injured; and,
- “Left turn” (including across, in the same direction, and opposing) collisions account for 5% of all victims, none killed, and 7% of people seriously injured.

In 2017, people are most often killed in traffic collisions where:

- A “head on” collision occurs (30% of people killed);
- A collision occurs at 90° intersections (20% of people killed); or,
- A vehicle goes “off road” (either right or left; 20% of people killed).

Table 5-13 Collision Victims by Provincial Location and Casualty Type

Table 5-13
Collision Victims by Provincial Location and Casualty Type: 2017

Location	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Winnipeg	9	12.3%	179	40.5%	1,183	58.4%	7,966	81.0%	237	84.0%	9,565	76.0%	**9,574**	75.6%
Brandon	1	1.4%	15	3.4%	83	4.1%	197	2.0%	8	2.8%	303	2.4%	**304**	2.4%
Portage	7	9.6%	2	0.5%	18	0.9%	45	0.5%	3	1.1%	68	0.5%	**75**	0.6%
Flin Flon	1	1.4%	0	-	3	0.1%	2	<0.1%	0	-	5	<0.1%	**6**	<0.1%
Dauphin	1	1.4%	0	-	6	0.3%	27	0.3%	2	0.7%	35	0.3%	**36**	0.3%
Thompson	0	-	5	1.1%	11	0.5%	25	0.3%	2	0.7%	43	0.3%	**43**	0.3%
The Pas	0	-	0	-	7	0.3%	11	0.1%	1	0.4%	19	0.2%	**19**	0.2%
Selkirk	0	-	6	1.4%	28	1.4%	51	0.5%	1	0.4%	86	0.7%	**86**	0.7%
Other Urban	9	12.3%	48	10.9%	196	9.7%	542	5.5%	11	3.9%	797	6.3%	**806**	6.4%
All Rural	45	61.6%	187	42.3%	491	24.2%	970	9.9%	17	6.0%	1,665	13.2%	**1,710**	13.5%
Total	73	100%	442	100%	2,026	100%	9,836	100%	282	100%	12,586	100%	**12,659**	100%

Table 5-13a Collision Victims by Provincial Location and Casualty Type for Previous Five Years

Table 5-13a

Collision Victims by Provincial Location and Casualty: 2012-2016 Average

Location	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Winnipeg	15	146	1,160	7,202	158	8,666	8,681	74.6%
Brandon	<1	10	78	166	4	258	258	2.2%
Portage	<1	2	22	47	<1	72	72	0.6%
Flin Flon	<1	<1	2	3	-	4	5	<0.1%
Dauphin	1	2	13	20	1	36	37	0.3%
Thompson	1	1	14	22	1	38	39	0.3%
The Pas	-	1	9	10	<1	21	21	0.2%
Selkirk	<1	3	24	63	2	91	92	0.8%
Other Urban	8	46	240	493	14	793	801	6.9%
All Rural	60	157	561	830	28	1,575	1,635	14.0%
Total	87	368	2,122	8,855	208	11,554	11,641	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.

While traffic collisions occurring in urban locations account for the majority of casualties overall, traffic collisions in rural locations account for the majority of people killed and seriously injured. In 2017, 86% of all casualties result from traffic collisions in urban areas. Traffic collisions in rural locations, however, account for 62% of people killed and 42% of people seriously injured. In the previous five year (2012 to 2016) annual average, 86% of all victims are from traffic collisions in urban locations, while 69% of people killed and 43% of people seriously injured are from traffic collisions in rural locations.

Table 5-14 Collision Victims by Safety Equipment Use and Casualty Type

Table 5-14

Collision Victims by Safety Equipment Use and Casualty Type: 2017

Safety Equipment	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Lap belt only installed - In use	1	1.6%	2	0.5%	13	0.7%	66	0.7%	15	5.8%	96	0.8%	**97**	0.8%
Lap belt only installed - Not in use	1	1.6%	6	1.5%	7	0.4%	26	0.3%	1	0.4%	40	0.3%	**41**	0.3%
Shoulder belt only installed - In use	2	3.3%	0	-	6	0.3%	47	0.5%	26	10.0%	79	0.6%	**81**	0.7%
Shoulder belt only installed - Not in use	2	3.3%	0	-	6	0.3%	20	0.2%	1	0.4%	27	0.2%	**29**	0.2%
Lap and shoulder belt assembly - In use	11	18.0%	191	46.7%	1,043	55.7%	8,233	85.5%	174	66.9%	9,641	79.2%	**9,652**	78.9%
Combined belt installed - Not in use	11	18.0%	6	1.5%	17	0.9%	27	0.3%	0	-	50	0.4%	**61**	0.5%
Only lap part of full assembly in use	0	-	0	-	0	-	20	0.2%	2	0.8%	22	0.2%	**22**	0.2%
Air bag deployed - Safety belt in use	10	16.4%	145	35.5%	629	33.6%	885	9.2%	21	8.1%	1,680	13.8%	**1,690**	13.8%
Air bar deployed - Safety belt not use	8	13.1%	8	2.0%	7	0.4%	7	<0.1%	0	-	22	0.2%	**30**	0.2%
Safety seat properly installed - In use	0	-	6	1.5%	59	3.1%	177	1.8%	8	3.1%	250	2.1%	**250**	2.0%
Safety seat improperly installed - In use	0	-	2	0.5%	3	0.2%	8	<0.1%	0	-	13	0.1%	**13**	0.1%
Safety seat installed - Not in use	1	1.6%	1	0.2%	0	-	1	<0.1%	0	-	2	<0.1%	**3**	<0.1%
Safety helmet worn	5	8.2%	23	5.6%	51	2.7%	45	0.5%	3	1.2%	122	1.0%	**127**	1.0%
Safety helmet not worn	2	3.3%	0	-	2	0.1%	1	<0.1%	0	-	3	<0.1%	**5**	<0.1%
No safety device available	3	4.9%	2	0.5%	3	0.2%	4	<0.1%	1	0.4%	10	<0.1%	**13**	0.1%
Other	0	-	1	0.2%	7	0.4%	10	0.1%	0	-	18	0.1%	**18**	0.1%
Not Applicable	0	-	0	-	9	0.5%	24	0.2%	3	1.2%	36	0.3%	**36**	0.3%
Unknown	4	6.6%	16	3.9%	12	0.6%	23	0.2%	5	1.9%	56	0.5%	**60**	0.5%
Total	61	100%	409	100%	1,874	100%	9,624	100%	260	100%	12,167	100%	**12,228**	100%

Note: Vehicle occupants (Road User Class = Driver, Passenger) plus Motorcyclists and Moped riders and their passengers.

Table 5-14a Collision Victims by Safety Equipment Use and Casualty Type for Previous Five Years

Table 5-14a

Collision Victims by Safety Equipment Use and Casualty Type: 2012-2016 Average

Safety Equipment	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Lap belt only installed - In use	2	2	21	61	2	86	88	0.8%
Lap belt only installed - Not in use	2	3	9	18	<1	30	31	0.3%
Shoulder belt only installed - In use	1	2	10	34	<1	47	48	0.4%
Shoulder belt only installed - Not in use	2	3	8	18	<1	29	31	0.3%
Lap and shoulder belt assembly - In use	17	169	1,309	7,687	150	9,315	9,332	82.5%
Combined belt installed - Not in use	13	9	24	22	<1	55	68	0.6%
Only lap part of full assembly in use	-	<1	4	18	<1	23	23	0.2%
Air bag deployed - Safety belt in use	8	87	470	568	13	1,138	1,146	10.1%
Air bar deployed - Safety belt not use	4	3	12	10	<1	25	29	0.3%
Safety seat properly installed - In use	1	6	46	154	3	209	210	1.9%
Safety seat improperly installed - In use	<1	<1	4	11	<1	17	18	0.2%
Safety seat installed - Not in use	-	<1	1	3	-	4	4	<0.1%
Safety helmet worn	2	22	47	57	1	128	130	1.1%
Safety helmet not worn	<1	3	1	<1	-	5	5	<0.1%
No safety device available	<1	2	5	5	-	13	13	0.1%
Other	2	2	9	20	2	34	36	0.3%
Not Applicable	2	3	8	22	1	34	36	0.3%
Unknown	15	16	18	15	6	56	71	0.6%
Total	71	335	2,006	8,725	182	11,247	11,318	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.
Note: Vehicle occupants (Road User Class = Driver, Passenger) plus Motorcyclists and Moped riders and their passengers.

In 2017, most victims in traffic collisions were using safety equipment at the time of the collision (nearly 99% of all victims where safety equipment use is known, i.e., excluding “other”, “not applicable” and “unknown”).

In 2017, 49% of the people killed in traffic collisions and 6% of the people seriously injured in traffic collisions are recorded as not wearing or using the available safety equipment at the time of the collision (where safety equipment use is known).

Table 5-15 Safety Equipment Effectiveness

Table 5-15
Safety Equipment Effectiveness - Ratio of Victims Killed and Injured While 'Not Using Safety Equipment' to 'Using Safety Equipment': 2017

Safety Equipment Use	Total Casualties	Killed	% of Total Casualties	Serious Injury	% of Total Casualties	Minor/ Minimal Injury	% of Total Casualties	Other Injury	% of Total Casualties
Equipment not in use	182	28	15.4%	23	12.6%	128	70.3%	3	1.6%
Equipment in use	11,932	29	0.2%	369	3.1%	11,285	94.6%	249	2.1%
Safety Equipment Effectiveness*			**63.30**		**4.09**		**0.74**		**0.79**

*Ratio of % not using equipment over the % using equipment.

As a large majority of vehicle occupants use safety equipment (such as seatbelts, child restraints and helmets), the number of victims in traffic collisions who use safety equipment exceeds the number of victims who did not use safety equipment. Considering this, one might erroneously conclude that using safety equipment contributes to more victims.

When considering the effectiveness of safety equipment in a traffic collision, the proportion of victims by casualty type who use safety equipment is compared to the proportion of victims by casualty type not using safety equipment. In this manner, it is possible to determine the effectiveness of the equipment by examining how much more likely the victim is to sustain injuries of a specific severity when using or not using safety equipment.

As shown in Table 5-15, in 2017, victims not using safety equipment are more than sixty times more likely to be killed and four times more likely to be seriously injured in a traffic collision than those who used the equipment. Over the previous five years (2012 to 2016), people not using the available safety equipment are nearly forty times more likely to be killed and five times more likely to be seriously injured in a collision than people using the equipment.

Figure 5-8 Safety Equipment Effectiveness: Ratio of "Not Using Equipment" to "Using Equipment"

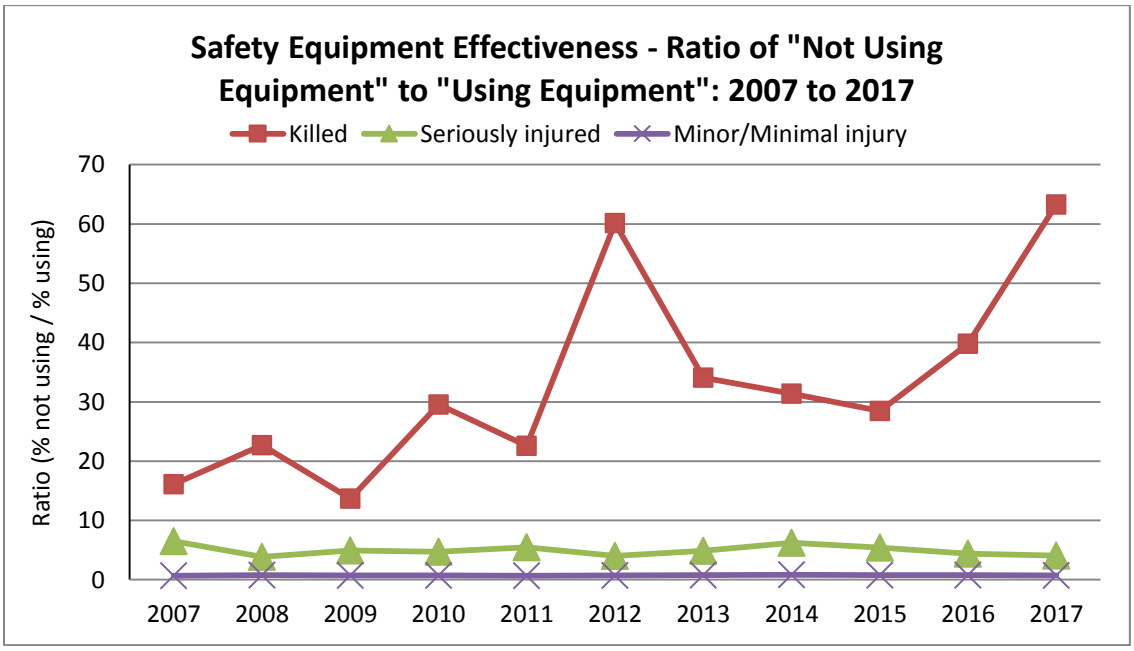


Table 5-16 Vehicle Occupant Victim Ejections in Traffic Collision

Table 5-16

Vehicle Occupant Victims by Ejection From Vehicle and Casualty Type: 2017

Ejection	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Not Ejected	35	63.6%	362	94.0%	1,793	98.6%	9,521	99.5%	256	99.6%	11,932	99.2%	**11,967**	99.0%
Fully Ejected	19	34.5%	16	4.2%	23	1.3%	37	0.4%	1	0.4%	77	0.6%	**96**	0.8%
Partially Ejected	1	1.8%	7	1.8%	2	0.1%	14	0.1%	0	-	23	0.2%	**24**	0.2%
Total	55	100%	385	100%	1,818	100%	9,572	100%	257	100%	12,032	100%	**12,087**	100%

NOTE: Vehicle occupants (Drivers and Passengers; excluding Motorcyclist, Moped riders and passengers).

Table 5-16a Vehicle Occupant Victim Ejections in Traffic Collision for Previous Five Years

Table 5-16a

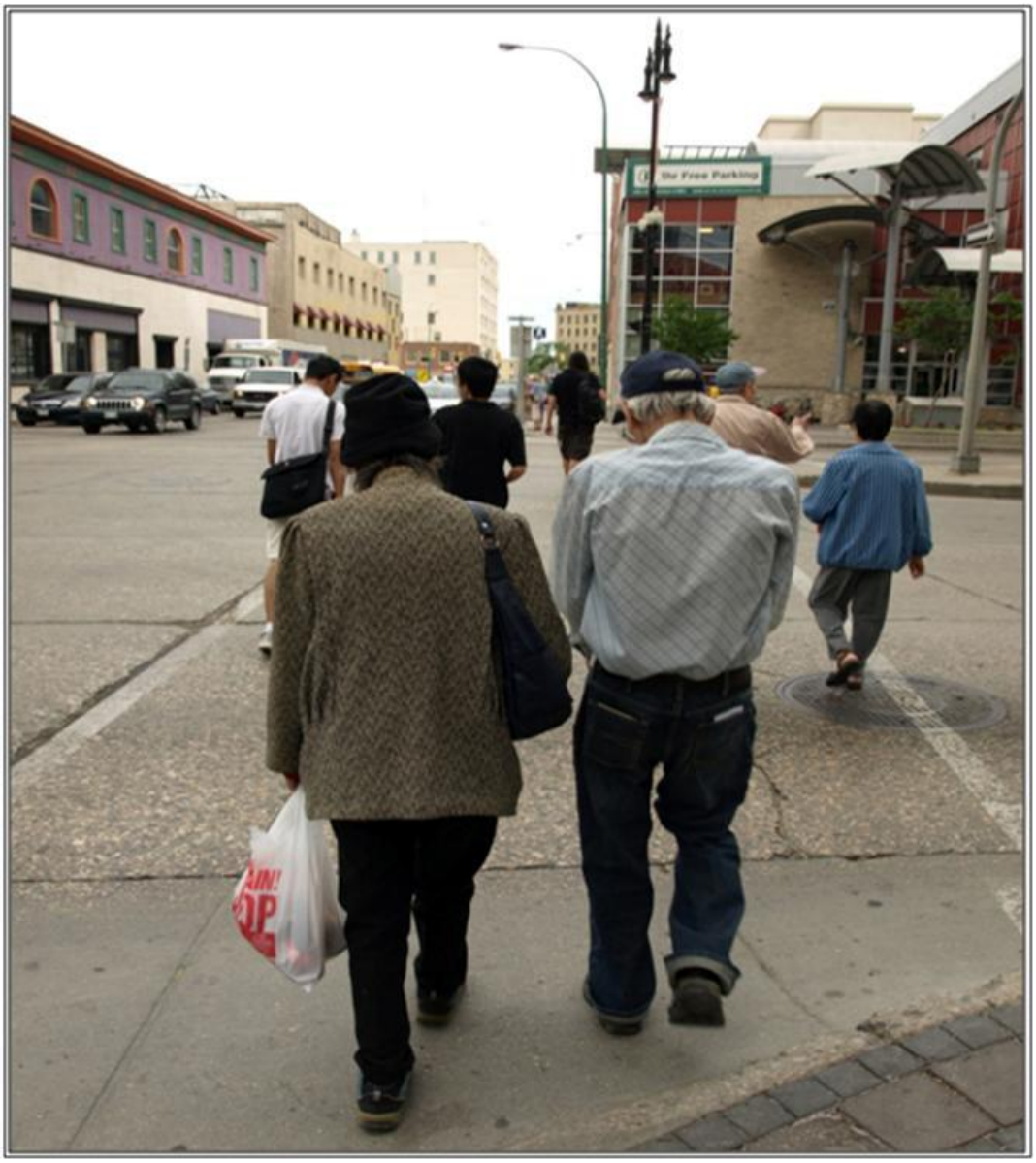
Vehicle Occupant Victims by Ejection From Vehicle and Casualty: 2012-2016 Average

Ejection	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Not Ejected	50	288	1,934	8,612	179	11,013	11,063	99.0%
Fully Ejected	14	18	18	37	1	74	88	0.8%
Partially Ejected	2	4	5	13	0	22	25	0.2%
Total	66	309	1,957	8,662	181	11,109	11,176	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.
Note: Vehicle occupants (Drivers and Passengers; excluding Motorcyclist, Moped riders and passengers).

In 2017, people fully or partially ejected from a vehicle and killed during a traffic collision account for 17% of all victims ejected from the vehicle. People killed but not ejected account for 0.3% of all victims not ejected during the collision. This makes people ejected during a collision nearly sixty times more likely to be killed than people not ejected. Similarly, people ejected and seriously injured during a collision account for 19% of all victims ejected while people seriously injured but not ejected account for only 3% of victims not ejected. This makes people ejected during a collision six times more likely to be seriously injured than people not ejected.

SECTION 6 – Pedestrian Victims



Introduction

This section counts the number of pedestrians killed and injured in traffic collisions and examines the severity of the injury received by the pedestrian. Month, time and day of occurrence are examined and breaks are provided for the age of the pedestrian. The specific pedestrian actions taken immediately prior to the collision are also presented. Involvement rate of pedestrians in traffic collisions per 100,000 people in the general population is also calculated.

Key Highlights

In 2017, there are 179 pedestrians killed or injured in traffic collisions. Of these:

- 12 are killed;
- 22 are seriously injured;
- 78 sustain minor injuries;
- 56 sustain minimal injuries; and
- 11 sustain injuries that are undefined in terms of severity.

The involvement rate (per 100,000 people in the general population) of pedestrians in traffic collisions in 2017 (13.2) has increased by 3% compared to 2016 (12.8) and by 16% compared to the previous five year (2012 to 2016) annual average (11.4).

Pedestrian involvement rate in traffic collisions in 2017 where a pedestrian:

- Is killed (0.9) has decreased by 9% compared to 2016 (1.0), but is relatively unchanged compared to the previous five year average (0.9); and,
- Is injured (12.3) has increased by 4% compared to 2016 (11.9) and by 17% compared to the previous five year average (10.5).

In 2017, collisions involving pedestrians most frequently occur:

- In October and November (14% and 12% of pedestrian casualties, respectively); however, 7 of 12 pedestrians are killed between July and October;
- On weekdays (Monday to Friday), 82% of pedestrian casualties cumulatively; 7 of 12 pedestrians are killed on weekdays; and,
- Between noon and 6 p.m. (12:00-14:59 – 20% of pedestrian casualties; 15:00 to 17:59 – 24% of pedestrian casualties.

Manitobans aged 55 to 64 have the highest pedestrian involvement rate (per 100,000 people) in traffic collisions at 16.4 in 2017 (10.0 in the previous five years), followed by those aged 15 to 19 at 16.3 (14.0 in the previous five years).

Where the actions of the pedestrian immediately prior to the collision are known, most pedestrian casualties in 2017 occur when the pedestrian is:

- At an intersection, crossing with the right of way (44% of pedestrian casualties);
- At an intersection, crossing without the right of way (nearly 9% of pedestrian casualties); and
- Between intersections (5% of pedestrian casualties).

For the 12 pedestrians killed in traffic collisions in 2017, 1 is killed at an intersection while crossing with the right of way, 1 is killed walking on roadway, and 1 is killed running into the roadway. No pedestrian action was recorded for 8 of the 12 pedestrians killed.

Major Elements Examined

Counts of collisions in Manitoba for 2017 and previous years are taken from Traffic Accident Reports (TARs) completed by Manitoba Public Insurance and law enforcement agencies, and compiled by Manitoba Public Insurance. These counts are presented for all reportable collisions, fatal collisions, injury collisions, and property damage only (PDO) collisions.

It is important to note that the number of pedestrian victims in traffic collisions is not equal to the number of collisions that occurred involving pedestrians as each collision can result in multiple victims. It is also possible that a collision could involve a pedestrian who is not killed or injured.

The terms 'crash', 'collision' and 'accident' are used interchangeably in this report. The terms 'victims' and 'casualties' are used interchangeably in this report. The terms 'fatality' and 'killed' are used interchangeably in this report.

Due to the small numbers of fatal collisions, fluctuations year-over-year could be dramatic; a small change in the total count of these types of collisions could have a significant effect on statistics such as percentage change to previous years and involvement rates. Therefore, the reader is strongly cautioned when interpreting results regarding pedestrian collisions of differing injury severity.

The reader is cautioned that not all percentages and calculations in the following tables will add to 100% of the total noted. Rounding error will often produce a difference of one or two percent. Likewise, average calculations are presented for historical data from the years 2012 to 2016. Rounding error in these calculations will cause individual average counts not to add to total average counts in some cases.

Terms and Definitions

"Casualty Type"

- A classification of the severity of the injury sustained by a victim in a traffic collision, i.e., whether someone was killed or injured. This classification also includes a designation for the severity of each non-fatal injury sustained (i.e., victims sustaining a serious/major, minor or minimal injury).

"Killed"

- The casualty type "killed" indicates the victim involved in the traffic collision died as a result of their injuries within thirty days of the collision occurrence.

"Injured"

- The casualty type "injured" indicates the victim sustained some level of personal injury, but in which they were not killed. Levels of injury include: 'serious' or 'major' (admitted to hospital); 'minor' (treated and released from hospital); and, 'minimal' (no hospital treatment required). 'Other' injury is noted when the severity of the victim's injuries is not known or recorded in the TAR.

"Collision severity"

- A classification of a collision based on the most severe result of the collision, i.e., whether someone was killed (fatal), injured (injury) or property damage only (PDO) occurred.

"Pedestrian Involvement Rate"

- A calculation of the number of pedestrians involved in traffic collisions for every 100,000 people in the general population in Manitoba. Population statistics are taken from the Provincial government and can be found at the following web address: http://www.gov.mb.ca/health/annstats/index.html

"Pedestrian Action"

- Refers to the actions taken by a pedestrian immediately prior to a collision (including: crossing at an intersection with or without the right-of-way, crossing between intersections, running into the roadway, walking on the roadway, lying on the roadway, playing on the roadway, etc.).

Table 6-1 Historical Summary of Pedestrians Killed and Injured in Traffic Collisions

Table 6-1
Historical Summary of Pedestrians Killed and Injured in Traffic Collisions: 2007 to 2017

Year	Casualty Type												Total Victims	% change to previous year
	Killed	% change to previous year	Serious Injury	% change to previous year	Minor Injury	% change to previous year	Minimal Injury	% change to previous year	Other Injury	% change to previous year	Total Injured	% change to previous year		
2007	16	-	52	-	161	-	107	-	109	-	429	-	445	-
2008	15	-6.3%	49	-5.8%	153	-5.0%	133	24.3%	88	-19.3%	423	-1.4%	438	-1.6%
2009	9	-40.0%	37	-24.5%	137	-10.5%	90	-32.3%	95	8.0%	359	-15.1%	368	-16.0%
2010	14	55.6%	32	-13.5%	126	-8.0%	111	23.3%	116	22.1%	385	7.2%	399	8.4%
2011	10	-28.6%	24	-25.0%	130	3.2%	62	-44.1%	114	-1.7%	330	-14.3%	340	-14.8%
2012	13	30.0%	21	-12.5%	90	-30.8%	40	-35.5%	12	-89.5%	163	-50.6%	176	-48.2%
2013	10	-23.1%	22	4.8%	49	-45.6%	25	-37.5%	10	-16.7%	106	-35.0%	116	-34.1%
2014	11	10.0%	22	0.0%	68	38.8%	38	52.0%	9	-10.0%	137	29.2%	148	27.6%
2015	9	-18.2%	18	-18.2%	51	-25.0%	40	5.3%	12	33.3%	121	-11.7%	130	-12.2%
2016	13	44.4%	27	50.0%	49	-3.9%	54	35.0%	29	141.7%	159	31.4%	172	32.3%
2017	**12**	**-7.7%**	**22**	**-18.5%**	**78**	**59.2%**	**56**	**3.7%**	**11**	**-62.1%**	**167**	**5.0%**	**179**	**4.1%**
2012-2016 Average*	11	7.1%	22	0.0%	61	27.0%	39	42.1%	14	-23.6%	137	21.7%	148	20.6%

* "% change" in this line compares the current year to the 5-year average

In 2017, there are 179 pedestrians killed or injured in traffic collisions. Of these:

- 12 are killed;
- 22 are seriously injured;
- 78 sustain minor injuries;
- 56 sustain minimal injuries; and
- 11 sustain injuries that are undefined in terms of severity.

The total number of pedestrians killed and injured in traffic collisions in 2017 has increased by 4% compared to 2016 and by 21% compared to the previous five year (2012 to 2016) annual average. In 2017, the number of pedestrians:

- Killed has decreased by 8% compared to 2016, but has increased by 7% compared to the previous five years;
- Sustaining serious injuries has decreased by nearly 19% compared to 2016 and is unchanged compared to the previous five years;
- Sustaining minor injuries has increased by 59% compared to 2016 and by 27% compared to the previous five years;
- Sustaining minimal injuries has increased by 4% compared to 2016 and by 42% compared to the previous five years; and,
- Sustaining an unspecified injury has decreased by 62% compared to 2016 and by 24% compared to the previous five years.

The number of pedestrians killed in traffic collisions over the past ten years has fluctuated, ranging from a high of 16 in 2007 to a low of 9 in 2009 and 2015. The number of pedestrians killed in 2017 is down by a count of 1 compared to 2016, but up by a count of 1 compared to the previous five year (2012 to 2016) annual average.

Recognizing that counts of pedestrians involved in collisions could be impacted either positively or negatively by changing population statistics, involvement rates per 100,000 people in the general population in Manitoba is examined (see Table 6-2) to provide a standardized rate comparison. This accounts for changing population size instead of simply a raw count of the number of pedestrians involved overall.

Table 6-2 Historical Summary of Pedestrian Involvement Rate (per 100,000 people) in Traffic Collisions

Table 6-2
Historical Summary of Pedestrian Involvement Rates (per 100,000 people) in Traffic Collisions: 2007 to 2017

Year	Casualty Type												Total Victims	% change to previous year
	Killed	% change to previous year	Serious Injury	% change to previous year	Minor Injury	% change to previous year	Minimal Injury	% change to previous year	Other Injury	% change to previous year	Total Injured	% change to previous year		
2007	1.3	-	4.4	-	13.6	-	9.0	-	9.2	-	36.2	-	37.5	-
2008	1.3	-7.2%	4.1	-6.8%	12.8	-6.0%	11.1	23.0%	7.3	-20.1%	35.3	-2.4%	36.5	-2.6%
2009	0.7	-40.8%	3.0	-25.4%	11.3	-11.6%	7.4	-33.2%	7.8	6.6%	29.6	-16.2%	30.3	-17.0%
2010	1.1	53.5%	2.6	-14.6%	10.2	-9.2%	9.0	21.7%	9.4	20.5%	31.3	5.9%	32.4	7.0%
2011	0.8	-29.7%	1.9	-26.2%	10.4	1.5%	5.0	-45.0%	9.1	-3.3%	26.4	-15.7%	27.2	-16.2%
2012	1.0	27.9%	1.7	-13.9%	7.1	-31.9%	3.1	-36.5%	0.9	-89.6%	12.8	-51.4%	13.8	-49.1%
2013	0.8	-24.1%	1.7	3.3%	3.8	-46.3%	1.9	-38.4%	0.8	-17.8%	8.2	-35.9%	9.0	-35.0%
2014	0.8	8.6%	1.7	-1.3%	5.2	37.0%	2.9	50.0%	0.7	-11.2%	10.5	27.6%	11.3	25.9%
2015	0.7	-19.1%	1.4	-19.1%	3.9	-25.8%	3.0	4.1%	0.9	31.9%	9.2	-12.6%	9.8	-13.1%
2016	1.0	42.4%	2.0	47.9%	3.7	-5.3%	4.0	33.1%	2.2	138.2%	11.9	29.5%	12.8	30.4%
2017	**0.9**	**-8.9%**	**1.6**	**-19.6%**	**5.7**	**57.1%**	**4.1**	**2.4%**	**0.8**	**-62.6%**	**12.3**	**3.7%**	**13.2**	**2.7%**
2012-2016 Average*	0.9	3.0%	1.7	-3.7%	4.7	21.8%	3.0	37.1%	1.1	-26.1%	10.5	17.1%	11.4	16.0%

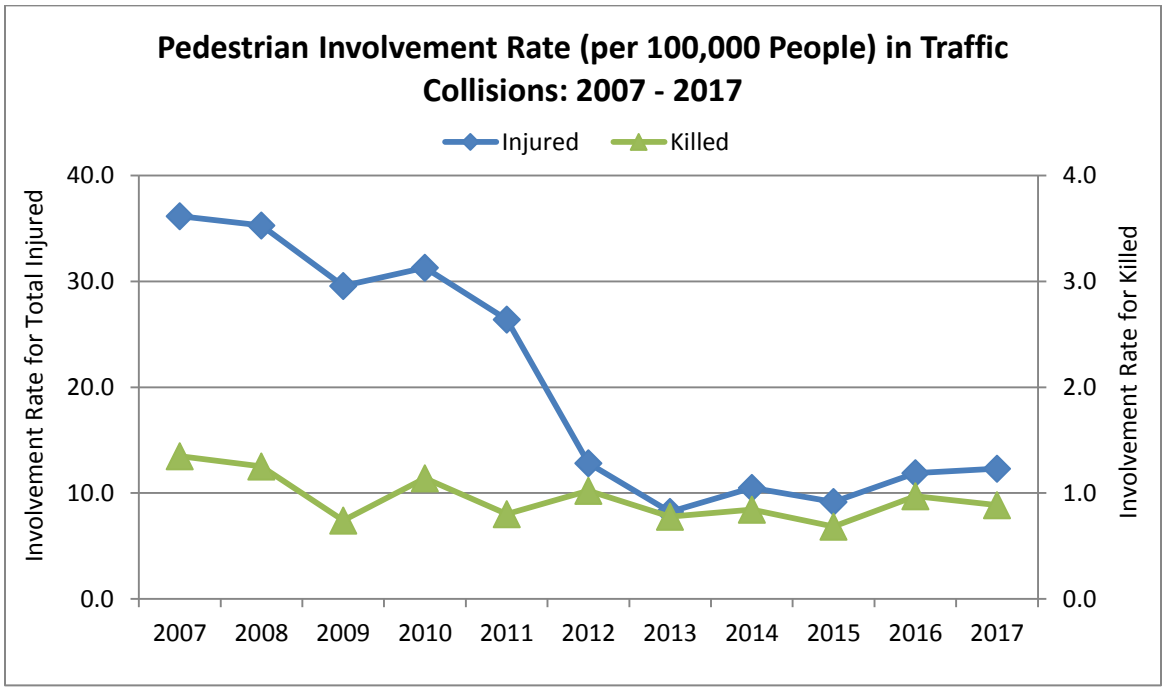
* "% change" in this line compares the current year to the 5-year average

The involvement rate (per 100,000 people in the general population) of pedestrians in traffic collisions in 2017 (13.2) has increased by 3% compared to 2016 (12.8) and by 16% compared to the previous five year (2012 to 2016) annual average (11.4).

Pedestrian involvement rate in traffic collisions in 2017 where a pedestrian:

- Is killed (0.9) has decreased by 9% compared to 2016 (1.0), but is relatively unchanged compared to the previous five year average (0.9);
- Is injured (12.3) has increased by 4% compared to 2016 (11.9) and by 17% compared to the previous five year average (10.5);
- Sustains serious injuries (1.6) has decreased by 20% compared to 2016 and by 4% compared to the previous five years;
- Sustains minor injuries (5.7) has increased by 57% compared to 2016 and by 22% compared to the previous five years;
- Sustains minimal injuries (4.1) has increased by 2% compared to 2016 and by 37% compared to the previous five years; and,
- Sustains an unspecified injury (0.8) has decreased by 63% compared to 2016 and by 26% compared to the previous five years.

Figure 6-1 Pedestrian Involvement Rate (per 100,000 People) in Traffic Collisions



Over the last eleven years, pedestrian injuries resulting from traffic collisions have generally declined from 2007 to 2013, but have gradually increased since 2013.

Over this same time frame, the involvement rate for pedestrians killed in traffic collisions has fluctuated somewhat, but has consistently been between 0.7 and 1.3. The involvement rate in 2017 is in line with the pedestrian involvement rate for deaths recorded in the past eleven years.

Table 6-3 Pedestrians Killed and Injured by Month of Occurrence and Casualty Type

Table 6-3
Total Pedestrians Killed and Injured by Month of Occurrence and Casualty Type: 2017

Month of Occurrence	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
January	1	8.3%	0	-	4	5.1%	7	12.5%	0	-	11	6.6%	**12**	6.7%
February	0	-	0	-	4	5.1%	4	7.1%	0	-	8	4.8%	**8**	4.5%
March	0	-	1	4.5%	5	6.4%	9	16.1%	1	9.1%	16	9.6%	**16**	8.9%
April	1	8.3%	0	-	7	9.0%	0	-	2	18.2%	9	5.4%	**10**	5.6%
May	1	8.3%	3	13.6%	8	10.3%	8	14.3%	0	-	19	11.4%	**20**	11.2%
June	0	-	2	9.1%	7	9.0%	3	5.4%	3	27.3%	15	9.0%	**15**	8.4%
July	2	16.7%	0	-	2	2.6%	2	3.6%	1	9.1%	5	3.0%	**7**	3.9%
August	0	-	3	13.6%	9	11.5%	1	1.8%	0	-	13	7.8%	**13**	7.3%
September	2	16.7%	3	13.6%	4	5.1%	4	7.1%	0	-	11	6.6%	**13**	7.3%
October	3	25.0%	3	13.6%	12	15.4%	6	10.7%	1	9.1%	22	13.2%	**25**	14.0%
November	1	8.3%	4	18.2%	9	11.5%	8	14.3%	0	-	21	12.6%	**22**	12.3%
December	1	8.3%	3	13.6%	7	9.0%	4	7.1%	3	27.3%	17	10.2%	**18**	10.1%
Total	12	100%	22	100%	78	100%	56	100%	11	100%	167	100%	**179**	100%

Table 6-3a Pedestrians Killed and Injured by Month of Occurrence and Casualty Type for Previous Five Years

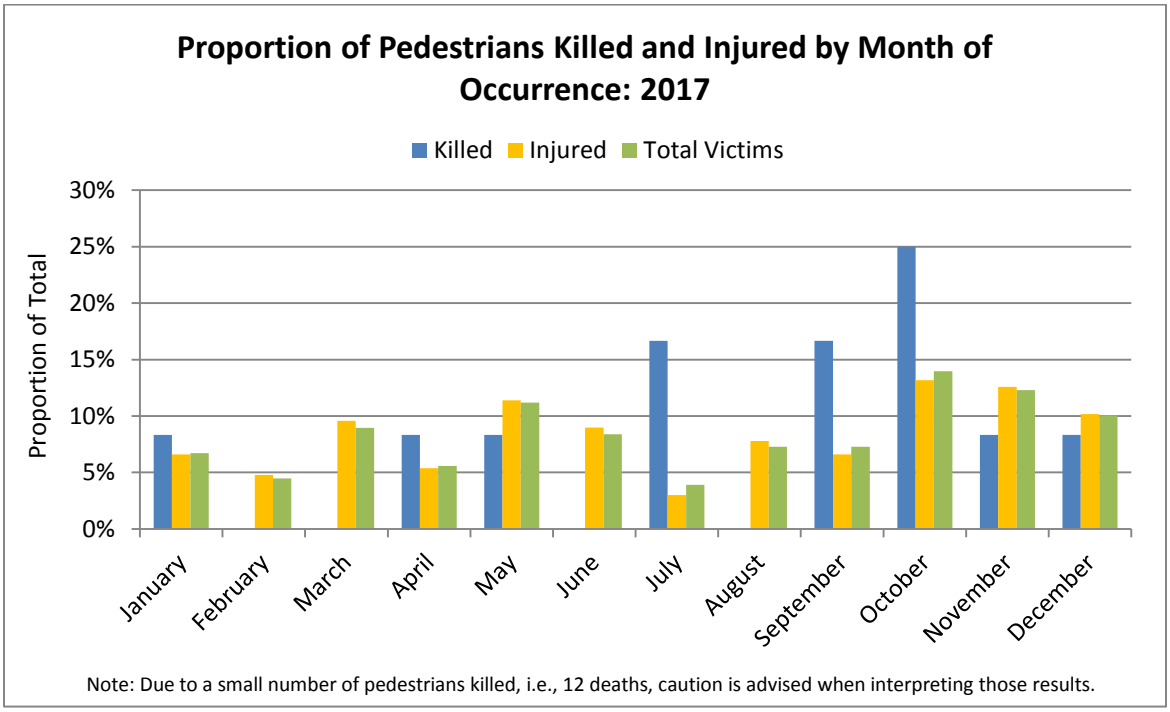
Table 6-3a
Pedestrians Killed and Injured by Month of Occurrence and Casualty Type: 2012-2016 Average

Month of Occurrence	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
January	<1	3	6	3	1	13	13	9.0%
February	<1	2	4	3	<1	9	10	6.9%
March	<1	2	6	4	1	13	13	9.0%
April	1	<1	6	2	<1	8	10	6.9%
May	<1	2	6	5	<1	12	13	8.8%
June	1	1	4	4	2	11	12	8.1%
July	2	<1	5	2	2	9	11	7.4%
August	1	3	4	4	3	14	15	10.2%
September	1	2	4	2	1	9	11	7.1%
October	<1	3	6	4	<1	12	14	9.3%
November	<1	2	6	4	2	13	14	9.4%
December	1	1	4	4	<1	10	12	7.8%
Total	11	22	61	39	14	137	148	100%

Note: Counts of pedestrians in the 2012-2016 average may not add to the total due to rounding.

In 2017, 7 of 12 pedestrians killed in collisions on Manitoba roadways are killed between July and October. Pedestrians are most likely to be injured in October (13%) and November (13%). During the previous five year (2012 to 2016) annual average, August stands out as the month with the highest involvement of pedestrian casualties in collisions.

Figure 6-2 Proportion of Pedestrians Killed and Injured by Month of Occurrence



Note: Due to a small number of pedestrians killed, i.e., 12 deaths, caution is advised when interpreting those results.

Table 6-4 Total Pedestrians Killed and Injured by Day of Occurrence and Casualty Type

Table 6-4
Total Pedestrians Killed and Injured by Day of Occurrence and Casualty Type: 2017

Day of the Week	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Sunday	3	25.0%	2	9.1%	5	6.4%	4	7.1%	1	9.1%	12	7.2%	**15**	8.4%
Monday	2	16.7%	4	18.2%	10	12.8%	11	19.6%	1	9.1%	26	15.6%	**28**	15.6%
Tuesday	1	8.3%	5	22.7%	20	25.6%	11	19.6%	1	9.1%	37	22.2%	**38**	21.2%
Wednesday	1	8.3%	3	13.6%	8	10.3%	11	19.6%	0	-	22	13.2%	**23**	12.8%
Thursday	1	8.3%	4	18.2%	13	16.7%	5	8.9%	6	54.5%	28	16.8%	**29**	16.2%
Friday	2	16.7%	1	4.5%	13	16.7%	11	19.6%	1	9.1%	26	15.6%	**28**	15.6%
Saturday	2	16.7%	3	13.6%	9	11.5%	3	5.4%	1	9.1%	16	9.6%	**18**	10.1%
Total	12	100%	22	100%	78	100%	56	100%	11	100%	167	100%	**179**	100%

Table 6-4a Pedestrians Killed and Injured by Day of Occurrence and Casualty Type for Previous Five Years

Table 6-4a
Pedestrians Killed and Injured by Day of Occurrence and Casualty Type: 2012-2016 Average

Day of the Week	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Sunday	1	1	4	3	2	11	12	8.1%
Monday	2	3	6	6	2	17	18	12.4%
Tuesday	2	4	11	5	1	21	23	15.5%
Wednesday	<1	4	12	8	2	25	26	17.4%
Thursday	2	4	9	7	1	22	24	16.2%
Friday	1	3	11	7	4	26	27	18.3%
Saturday	3	2	7	3	2	15	18	12.1%
Total	11	22	61	39	14	137	148	100%

Note: Counts of pedestrians in the 2012-2016 average may not add to the total due to rounding.

In 2017, pedestrians involved in traffic collisions on weekdays (Monday to Friday) account for 82% of all casualties. This is very similar to the previous five year (2012 to 2016) annual average, where weekdays (Monday to Friday) account for 80% of all pedestrian casualties.

In 2017, 7 of 12 pedestrians are killed in traffic collisions on weekdays (Monday to Friday), while another 5 are killed on the weekend (Saturday and Sunday). This is similar to the previous five year (2012 to 2016) annual average.

Figure 6-3 Proportion of Pedestrians Killed and Injured by Day of Occurrence

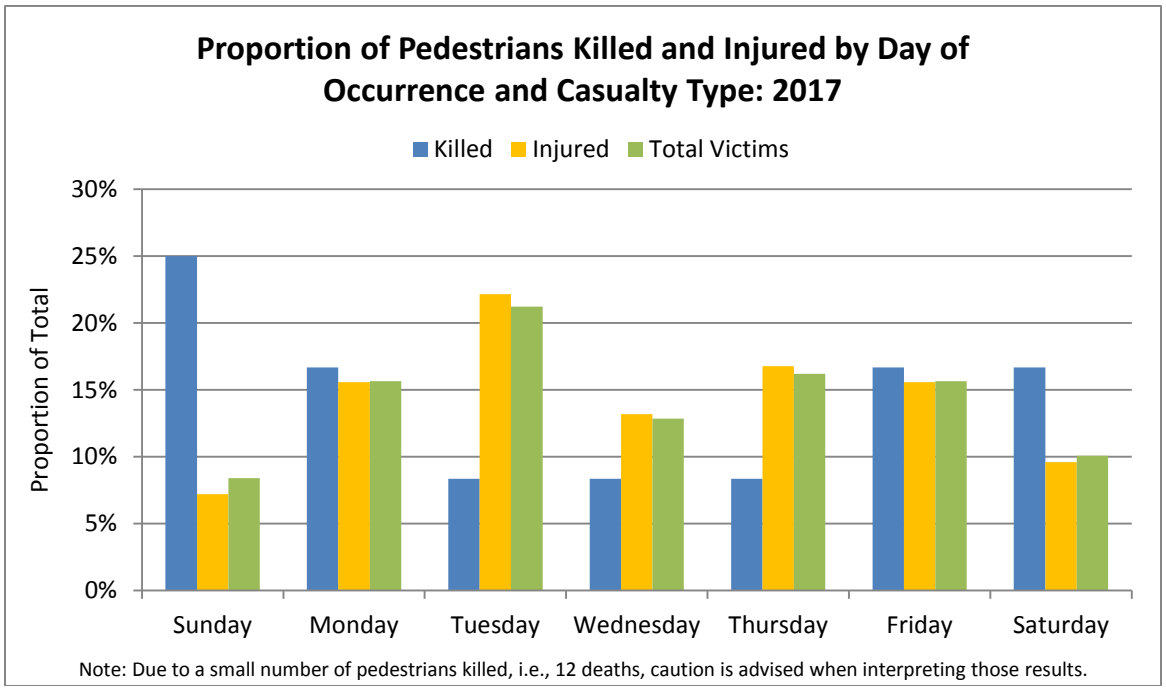


Table 6-5 Total Pedestrians Killed and Injured by Time of Occurrence and Casualty Type

Table 6-5
Total Pedestrians Killed and Injured by Time of Occurrence and Casualty Type: 2017

Time of the Day	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims*
	Killed	% of Total Killed*	Serious Injury	% of Total Serious Injury*	Minor Injury	% of Total Minor Injury*	Minimal Injury	% of Total Minimal Injury*	Other Injury	% of Total Other Injury*	Total Injured	% of Total Injured*		
00:00 - 02:59	3	25.0%	2	9.1%	0	-	1	1.8%	1	9.1%	4	2.4%	**7**	3.9%
03:00 - 05:59	2	16.7%	0	-	1	1.3%	0	-	0	-	1	0.6%	**3**	1.7%
06:00 - 08:59	2	16.7%	0	-	16	20.5%	8	14.3%	1	9.1%	25	15.0%	**27**	15.1%
09:00 - 11:59	1	8.3%	4	18.2%	10	12.8%	10	17.9%	1	9.1%	25	15.0%	**26**	14.5%
12:00 - 14:59	1	8.3%	4	18.2%	18	23.1%	8	14.3%	4	36.4%	34	20.4%	**35**	19.6%
15:00 - 17:59	1	8.3%	4	18.2%	18	23.1%	18	32.1%	2	18.2%	42	25.1%	**43**	24.0%
18:00 - 20:59	1	8.3%	7	31.8%	9	11.5%	7	12.5%	0	-	23	13.8%	**24**	13.4%
21:00 - 23:59	1	8.3%	1	4.5%	6	7.7%	4	7.1%	2	18.2%	13	7.8%	**14**	7.8%
Not Stated	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
Total	12	100%	22	100%	78	100%	56	100%	11	100%	167	100%	**179**	100%

*Percentage of the total does not include the 'not stated' category.

Table 6-5a Pedestrian Victims by Time of Occurrence and Casualty Type for the Previous Five Years

Table 6-5a
Pedestrians Killed and Injured by Time of Occurrence and Casualty: 2012-2016 Average

Time of the Day	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims*
00:00 - 02:59	<1	2	3	<1	2	7	7	4.9%
03:00 - 05:59	2	<1	<1	<1	<1	2	4	2.7%
06:00 - 08:59	<1	2	7	5	2	15	15	10.5%
09:00 - 11:59	<1	2	8	6	2	17	18	12.2%
12:00 - 14:59	1	4	11	9	4	28	30	20.3%
15:00 - 17:59	1	6	16	12	3	36	37	25.6%
18:00 - 20:59	2	3	10	3	1	18	20	13.7%
21:00 - 23:59	3	3	5	3	1	12	15	10.0%
Not Stated	<1	<1	<1	<1	<1	2	2	-
Total	11	22	61	39	14	137	148	100%

Note: Counts of pedestrians in the 2012-2016 average may not add to the total due to rounding.
*Percentage of the total does not include the 'not stated' category.

In 2017, 20% of all pedestrian victims are involved in traffic collisions between noon and 3 p.m. (12:00-14:59) while 24% are involved in traffic collisions between 3 p.m. and 6 p.m. (15:00 to 17:59). This is similar to the previous five year (2012 to 2016) annual average (12:00-14:59 – 20% of all pedestrian victims; 15:00 to 17:59 – 26%).

In 2017, 8 of 12 pedestrians are killed from midnight to noon. In the previous five year (2012 to 2016) annual average, 7 of 11 pedestrians are killed from noon to midnight.

Figure 6-4 Proportion of Pedestrians Killed and Injured by Time of Occurrence

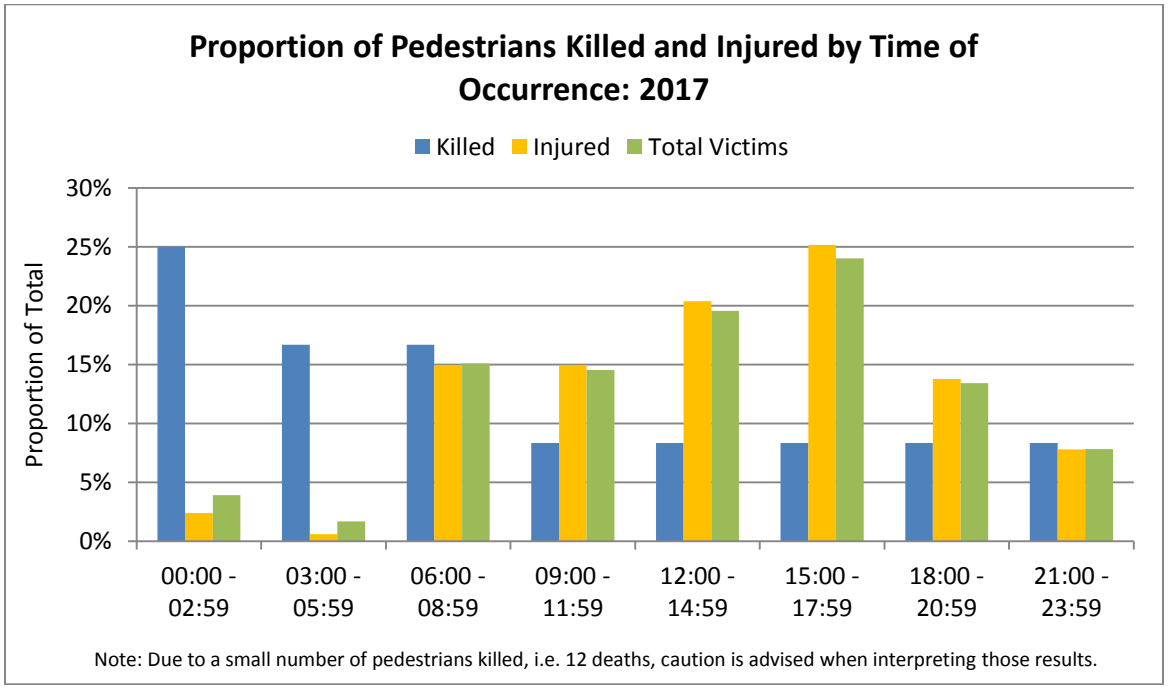


Table 6-6 Total Pedestrians Killed and Injured by Age Group and Casualty Type

Table 6-6
Total Pedestrians Killed and Injured by Age Group and Casualty Type: 2017

Age Group	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims*
	Killed	% of Total Killed*	Serious Injury	% of Total Serious Injury*	Minor Injury	% of Total Minor Injury*	Minimal Injury	% of Total Minimal Injury*	Other Injury	% of Total Other Injury*	Total Injured	% of Total Injured*		
0-4	0	-	0	-	2	2.7%	3	5.9%	0	-	5	3.2%	**5**	3.0%
5-9	0	-	2	9.1%	2	2.7%	0	-	0	-	4	2.6%	**4**	2.4%
10-14	0	-	1	4.5%	3	4.1%	1	2.0%	0	-	5	3.2%	**5**	3.0%
15-19	0	-	3	13.6%	7	9.5%	4	7.8%	0	-	14	9.0%	**14**	8.3%
20-24	2	16.7%	1	4.5%	6	8.1%	4	7.8%	1	11.1%	12	7.7%	**14**	8.3%
25-34	2	16.7%	4	18.2%	13	17.6%	10	19.6%	1	11.1%	28	17.9%	**30**	17.9%
35-44	2	16.7%	5	22.7%	4	5.4%	8	15.7%	1	11.1%	18	11.5%	**20**	11.9%
45-54	2	16.7%	0	-	13	17.6%	9	17.6%	0	-	22	14.1%	**24**	14.3%
55-64	3	25.0%	2	9.1%	13	17.6%	4	7.8%	6	66.7%	25	16.0%	**28**	16.7%
65+	1	8.3%	4	18.2%	11	14.9%	8	15.7%	0	-	23	14.7%	**24**	14.3%
Not Stated	0	-	0	-	4	-	5	-	2	-	11	-	**11**	-
Total	12	100%	22	100%	78	100%	56	100%	11	100%	167	100%	**179**	100%

*Percentage of the total does not include the 'Not Stated' category.
Note: The reader is cautioned that age is missing ('Not Stated') in several collisions - interpret with caution.

Table 6-6a Pedestrians Killed and Injured by Age and Casualty Type for Previous Five Years

Table 6-6a
Pedestrians Killed and Injured by Age Group and Casualty Type: 2012-2016 Average

Age Group	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims*
0-4	<1	<1	3	<1	<1	4	4	3.1%
5-9	-	1	2	<1	<1	4	4	2.8%
10-14	<1	1	4	1	-	6	6	4.3%
15-19	2	1	5	3	1	10	12	8.7%
20-24	2	2	8	4	2	17	19	13.2%
25-34	2	3	10	6	2	21	23	16.1%
35-44	<1	3	8	7	1	19	20	13.9%
45-54	<1	3	8	6	1	19	19	13.8%
55-64	<1	2	6	5	2	15	16	11.4%
65+	3	4	5	4	1	15	18	12.8%
Not Stated	-	<1	2	2	3	8	8	-
Total	11	22	61	39	14	137	148	100%

Note: Counts of pedestrians in the 2012-2016 average may not add to the total due to rounding.
*Percentage of the total does not include the 'Not Stated' category.
Note: The reader is cautioned that age is missing ('Not Stated') in several collisions - interpret with caution.

In 2017, 17% of pedestrian casualties are under the age of 20 (5% under age 10; 11% age 10 to 19), while 26% are between the ages of 20 and 34, and 26% are between the ages of 35 and 54. Adults aged 55 and older account for 31% of pedestrian victims. This distribution of pedestrian casualties by age is somewhat similar to what it is in the previous five years. In the five year (2012 to 2016) annual average, 19% of pedestrian victims are under the age of 20, 29% were age 20 to 34, 28% were age 35 to 54 and 24% were age 55 and older.

People aged 55 to 64 represent the largest proportion of pedestrians killed in 2017 (3 of 12 killed, 25%). In the previous five year (2012 to 2016) annual average, 27% of pedestrians killed are aged 65 and older.

In 2017, there are no pedestrians under age twenty killed in traffic collisions in Manitoba. In the previous five year period (2012 to 2016) there were an average of 2 killed in this age group each year.

Figure 6-5 Proportion of Pedestrians Killed and Injured by Age Group

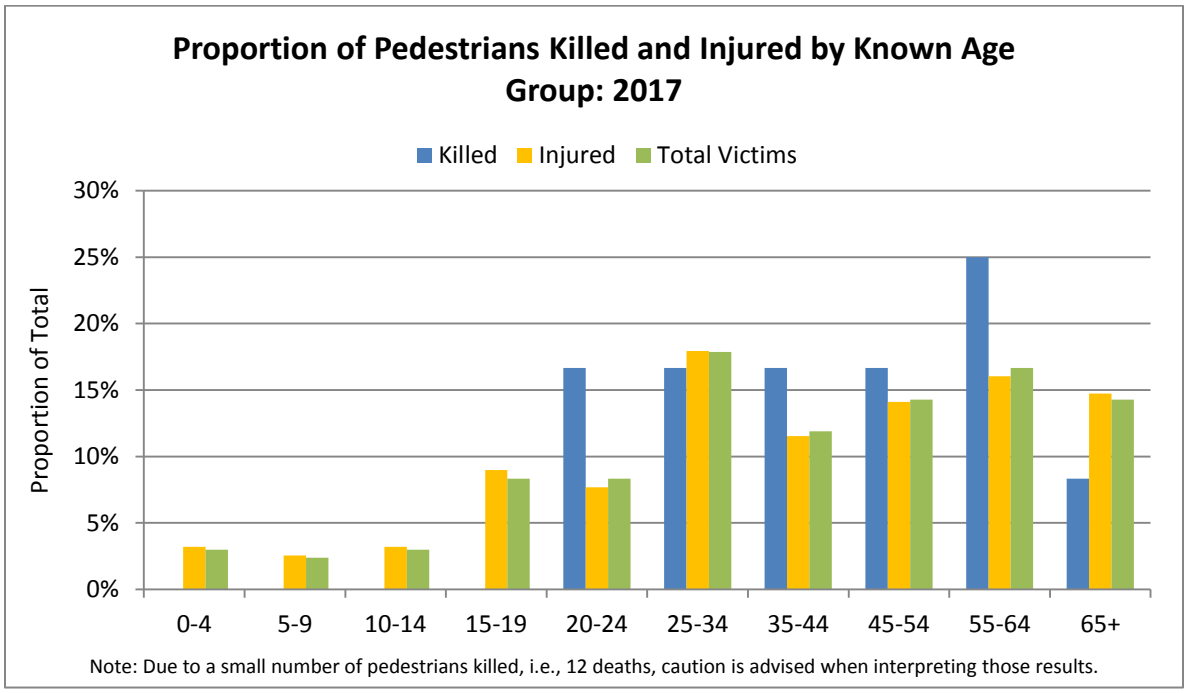


Table 6-7 Pedestrian Involvement Rate (per 100,000 People) in Traffic Collisions by Age Group

Table 6-7

Pedestrian Involvement Rate (per 100,000 People) in Traffic Collisions by Age Group: 2017, 2012-2016 Average

Age Group	2017 Casualty Type						**2017 Total Victims**	2012-2016 Average Involvement Rate		
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured		Killed	Injured	Total Victims
0-4	-	-	2.3	3.5	-	5.8	**5.8**	0.2	5.0	5.3
5-9	-	2.3	2.3	-	-	4.6	**4.6**	-	4.9	4.9
10-14	-	1.2	3.6	1.2	-	6.1	**6.1**	0.5	7.0	7.5
15-19	-	3.5	8.1	4.7	-	16.3	**16.3**	2.1	11.9	14.0
20-24	2.1	1.0	6.2	4.1	1.0	12.4	**14.5**	2.1	17.3	19.4
25-34	1.0	2.1	6.7	5.2	0.5	14.5	**15.6**	1.0	11.6	12.6
35-44	1.1	2.9	2.3	4.6	0.6	10.3	**11.5**	0.4	11.3	11.7
45-54	1.1	-	7.5	5.2	-	12.6	**13.8**	0.4	10.3	10.8
55-64	1.8	1.2	7.6	2.3	3.5	14.6	**16.4**	0.4	9.6	10.0
65+	0.5	1.9	5.4	3.9	-	11.2	**11.7**	1.6	7.9	9.5
Total	0.9	1.6	5.7	4.1	0.8	12.3	**13.2**	0.9	10.5	11.4

Manitobans aged 55 to 64 have the highest pedestrian involvement rate (per 100,000 people) in traffic collisions, at 16.4 in 2017 (10.0 in the previous five years), followed by those aged 15 to 19 at 16.3 (14.0 in the previous five years).

Pedestrian involvement rates in traffic collisions have increased in 2017 compared to the previous five year (2012 to 2016) annual average. The involvement rates have decreased for pedestrians under the age of 15, stayed about the same for those aged 15 to 44, and increased for those 45 and older, compared to the previous five years.

Table 6-8 Pedestrian Action and Casualty Type

Table 6-8

Pedestrian Action and Casualty Type: 2017

Pedestrian Action	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims*
	Killed	% of Total Killed*	Serious Injury	% of Total Serious Injury*	Minor Injury	% of Total Minor Injury*	Minimal Injury	% of Total Minimal Injury*	Other Injury	% of Total Other Injury*	Total Injured	% of Total Injured*		
At intersection, with right of way	1	25.0%	6	40.0%	22	40.7%	25	51.0%	3	42.9%	56	44.8%	**57**	44.2%
At intersection, without right of way	0	-	3	20.0%	3	5.6%	5	10.2%	0	-	11	8.8%	**11**	8.5%
At intersection, no traffic control	0	-	0	-	4	7.4%	2	4.1%	0	-	6	4.8%	**6**	4.7%
Between intersections	0	-	1	6.7%	5	9.3%	1	2.0%	0	-	7	5.6%	**7**	5.4%
Walking along roadway against traffic	0	-	1	6.7%	1	1.9%	0	-	0	-	2	1.6%	**2**	1.6%
Walking along roadway with traffic	0	-	1	6.7%	0	-	0	-	1	14.3%	2	1.6%	**2**	1.6%
On sidewalk/median/safety zone	0	-	0	-	2	3.7%	3	6.1%	1	14.3%	6	4.8%	**6**	4.7%
Walking on roadway (travelled portion)	1	25.0%	1	6.7%	0	-	2	4.1%	1	14.3%	4	3.2%	**5**	3.9%
From behind vehicle/object on roadside	0	-	0	-	2	3.7%	0	-	0	-	2	1.6%	**2**	1.6%
Running into roadway	1	25.0%	0	-	3	5.6%	0	-	0	-	3	2.4%	**4**	3.1%
Getting on/off vehicle	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
Pushing/working on vehicle	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
Playing on roadway	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
Working on roadway	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
Lying on roadway	0	-	1	6.7%	0	-	0	-	0	-	1	0.8%	**1**	0.8%
Other	1	25.0%	1	6.7%	12	22.2%	11	22.4%	1	14.3%	25	20.0%	**26**	20.2%
Unknown	8	-	7	-	24	-	7	-	4	-	42	-	**50**	-
Total	12	100%	22	100%	78	100%	56	100%	11	100%	167	100%	**179**	100%

*Percentage of the total has been rebased to exclude the 'unknown' category.

Table 6-8a Pedestrian Action and Casualty Type for the Previous Five Years

Table 6-8a
Pedestrian Action and Casualty Type: 2012-2016 Average

Pedestrian Action	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims*
At intersection, with right of way	2	4	19	13	2	38	39	41.4%
At intersection, without right of way	<1	1	2	<1	<1	4	4	4.4%
At intersection, no traffic control	-	<1	1	2	<1	4	4	4.6%
Between intersections	<1	2	4	1	1	8	8	8.2%
Walking along roadway against traffic	<1	<1	<1	<1	-	2	2	2.3%
Walking along roadway with traffic	<1	<1	1	1	<1	3	3	3.4%
On sidewalk/median/safety zone	<1	<1	2	2	-	4	4	4.2%
Walking on roadway (travelled portion)	<1	1	2	1	<1	4	5	5.0%
From behind vehicle/object on roadside	-	<1	1	1	<1	3	3	3.4%
Running into roadway	<1	2	2	<1	<1	4	5	5.0%
Getting on/off vehicle	-	<1	<1	<1	-	1	1	0.6%
Pushing/working on vehicle	-	-	-	-	-	0	0	-
Playing on roadway	<1	<1	<1	<1	-	1	1	1.3%
Working on roadway	-	-	-	-	-	0	0	-
Lying on roadway	<1	<1	-	-	<1	1	1	1.5%
Other	<1	1	6	6	1	14	14	14.7%
Unknown	6	8	19	9	8	43	49	-
Total	11	21	59	38	14	133	144	100%

Note: Counts of pedestrians in the 2012-2016 average may not add to the total due to rounding.
*Percentage of the total has been rebased to exclude the 'unknown' category.
Note: There are several victims in 2014 where pedestrian action was not captured; these are not included in the average calculation.

Where the actions of the pedestrian immediately prior to the collision are known, most pedestrian casualties in 2017 occur when the pedestrian is:

- At an intersection, crossing with the right of way (44% of pedestrian casualties);
- At an intersection, crossing without the right of way (nearly 9% of pedestrian casualties); and
- Between intersections (5% of pedestrian casualties).

For the 12 pedestrians killed in traffic collisions in 2017, 1 is killed at an intersection while crossing with the right of way, 1 is killed walking on roadway, and 1 is killed running into the roadway. No pedestrian action was recorded for 8 of the 12 pedestrians killed.

SECTION 7 – Vehicle Involvement

Introduction

This section counts the number of vehicles involved in traffic collisions. Vehicle involvement in a collision is calculated for each vehicle type (such as passenger vehicles, vans, pick-up trucks, types of emergency vehicles). Vehicles involved in collisions that were, or were not, transporting hazardous loads and the nature of these loads is also indicated.

Key Highlights

In 2017, there are 72,055 vehicles involved in traffic collisions. Of these:

- 88 are involved in fatal collisions;
- 16,748 are involved in injury collisions; and,
- 55,219 are involved in PDO collisions.

Vehicle involvement in traffic collisions per 10,000 registered vehicles (vehicle involvement rate) has increased in 2017 compared to 2016 and to the previous five year (2012 to 2016) annual average. The vehicle involvement rate in collisions in 2017 for:

- Total collisions is 796.2 – increased by 8% from 2016 and by 10% from the previous five years;
- Fatal collisions is 1.0 – decreased by 39% from 2016 and by nearly 28% from the previous five years;
- Injury collisions is 185.1 – decreased by 2% from 2016, but increased by nearly 1% from the previous five years; and,
- PDO collisions is 610.1 – increased by 11% from 2016 and by 13% from the previous five years.

Light duty vehicles, including passenger vehicles, minivans, and light trucks, represent nearly 97% of the vehicles involved in all traffic collisions in 2017, the same as 2016 and similar to the previous five year (2012 to 2016) annual average (97%). Commercial vehicles represent 3% of the vehicles involved (the same as in the previous five years) while motorcycles, scooters, and mopeds represent 0.3% of the vehicles involved (the same as in the previous five years).

Major Elements Examined

Counts of vehicles involved in collisions in Manitoba for 2017 and previous years are taken from Traffic Accident Reports (TARs) completed by Manitoba Public Insurance and law enforcement agencies, and compiled by Manitoba Public Insurance. These counts are presented for all reportable collisions, fatal collisions, injury collisions, and property damage only (PDO) collisions.

It is important to note that the number of collisions is not equal to the number of vehicles involved in those collisions. All collisions reported involve at least one vehicle, but may involve more than one as well.

The reader is cautioned that not all percentages and calculations in the following tables will add to 100% of the total noted. Rounding error will often produce a difference of one or two percentage points. Likewise, average calculations are presented for historical data from the years 2012 to 2016. Rounding error in these calculations will cause individual average counts not to add to total average counts in some cases.

Due to the small numbers of fatal collisions, fluctuations year-over-year could be dramatic; a small change in the total count of these types of collisions could have a significant effect on statistics such as percentage change to previous years and vehicle involvement rates. Therefore, the reader is strongly cautioned when interpreting results regarding fatal collisions.

Terms and Definitions

"Vehicles"

- The number of vehicles involved in collisions. It excludes pedestrians, but includes automobiles, trucks, vans, buses, mobility vehicles, motorcycles, scooters, mopeds, bicycles, off-road vehicles, farm and construction equipment, and trains.

"Collision Severity"

- A classification of a collision based on the most severe result of the collision, i.e., whether someone was killed (fatal), injured (injury) or property damage only (PDO) occurred.

"Fatal Collision"

- A motor vehicle collision in which at least one person is killed as a result of the collision. The death must have occurred within thirty days of the collision occurrence.

"Injury Collision"

- A motor vehicle collision in which at least one person has been recorded as sustaining some level of personal injury, but in which no one is fatally injured or killed. Levels of injury include: 'major' (admitted to hospital); 'minor' (treated and released from hospital); and, 'minimal' (no hospital treatment required).

"Property Damage Only (PDO) Collision"

- A motor vehicle collision in which no injury or fatality is sustained and only property damage is the result.

"Vehicle Involvement Rate"

- A calculation of the number of vehicles involved in traffic collisions for every 10,000 vehicles registered in Manitoba. The total number of vehicles registered is based on a point-in-time observation of the number of vehicles registered in specific vehicle classes. More detail regarding the methodology used to count registered vehicles can be found in "*Section 3 Vehicle Registrations*" of this report.

"Light Duty Vehicles"

- A classification of vehicle types including those defined in the Traffic Accident Report (TAR) as: passenger vehicles (automobile), mini/multi-purpose van, van under 4,500 kg, and pick-up under 4,500 kg.

"NSC Commercial Vehicles"

- The National Safety Code (NSC) classification of vehicles is a classification of vehicle types including those defined in the Traffic Accident Report (TAR) as: "Truck greater than 4,500 kilograms (unit chassis)", "Power Unit for Semi-Trailer", "Truck (Other)" (where the type and size of truck is unknown), "School Bus", "Transit Bus (Urban)", "Inter-City Bus", and "Bus (Other)". These vehicles bear a National Safety Code Number and are entered onto the National Safety Code Collision Monitoring Report.

"PSV Vehicles"

- Also known as 'public service vehicles', a classification of vehicle types including those defined in the Traffic Accident Report (TAR) as: "Other school vehicle", and "Emergency vehicles", including ambulance, fire and police vehicles.

Table 7-1 Historical Summary of Vehicles Involved in Traffic Collisions

Table 7-1
Historical Summary of Vehicles Involved in Traffic Collisions: 2007 to 2017

Year	Collision Severity						Total Collisions	% change to previous year
	Fatal	% change to previous year	Injury	% change to previous year	PDO	% change to previous year		
2007	141	-	11,099	-	37,251	-	48,491	-
2008	141	0.0%	10,219	-7.9%	34,195	-8.2%	44,555	-8.1%
2009	126	-10.6%	9,268	-9.3%	34,216	0.1%	43,610	-2.1%
2010	110	-12.7%	9,358	1.0%	35,511	3.8%	44,979	3.1%
2011	141	28.2%	10,956	17.1%	42,419	19.5%	53,516	19.0%
2012	126	-10.6%	14,802	35.1%	44,628	5.2%	59,556	11.3%
2013	111	-11.9%	15,663	5.8%	48,542	8.8%	64,316	8.0%
2014	95	-14.4%	16,233	3.6%	45,949	-5.3%	62,277	-3.2%
2015	106	11.6%	16,184	-0.3%	45,421	-1.1%	61,711	-0.9%
2016	143	34.9%	16,927	4.6%	48,993	7.9%	66,063	7.1%
2017	**88**	**-38.5%**	**16,748**	**-1.1%**	**55,219**	**12.7%**	**72,055**	**9.1%**
2012-2016 Average*	116	-24.3%	15,962	4.9%	46,707	18.2%	62,785	14.8%

* "% change" in this line compares the current year to the 5-year average

In 2017, there are 72,055 vehicles involved in traffic collisions. Of these:

- 88 are involved in fatal collisions;
- 16,748 are involved in injury collisions; and,
- 55,219 are involved in PDO collisions.

Overall, there are more vehicles involved in traffic collisions in 2017 (72,055) than in 2016 (66,063), and more than in the previous five year (2012 to 2016) annual average (62,785). In 2017, there are:

- 5,992 more vehicles involved in total collisions than in 2016 (a 9% increase) and 9,270 more than in the previous five year average (a 15% increase);
- 55 fewer vehicles involved in fatal collisions than in 2016 (a nearly 39% decrease) and 28 fewer than in the previous five years (a 24% decrease);
- 179 fewer vehicles involved in injury collisions compared to 2016 (a 1% decrease) and 786 more than in the previous five years (a 5% increase); and,
- 6,226 more vehicles involved in PDO collisions compared to 2016 (a 13% increase) and 8,512 more than in the previous five years (an 18% increase).

Table 7-2 Historical Summary of Vehicle Involvement Rate (per 10,000 Registered Vehicles) in Traffic Collisions

Table 7-2
Historical Summary of Vehicle Involvement Rate (per 10,000 Registered Vehicles) in Traffic Collisions: 2007 to 2017

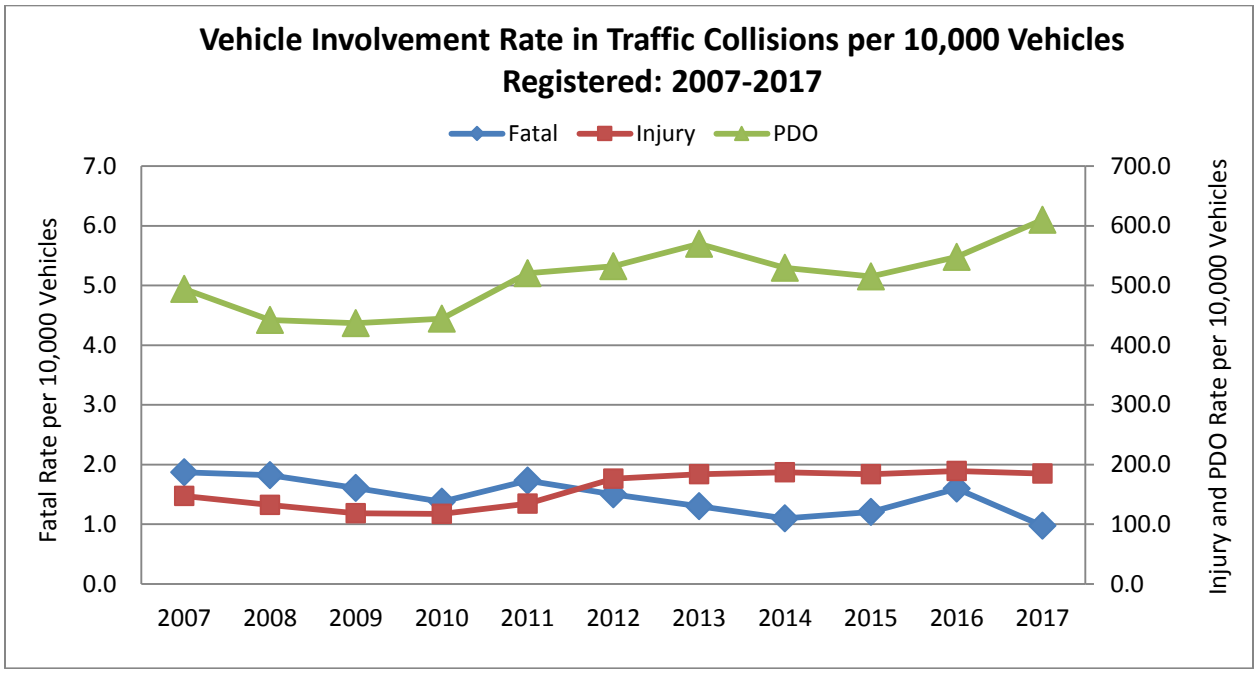
Year	Collision Severity						Total Collisions	% change to previous year
	Fatal	% change to previous year	Injury	% change to previous year	PDO	% change to previous year		
2007	1.9	-	147.3	-	494.2	-	643.4	-
2008	1.8	-2.6%	132.1	-10.3%	442.0	-10.6%	575.9	-10.5%
2009	1.6	-11.8%	118.3	-10.4%	436.7	-1.2%	556.7	-3.3%
2010	1.4	-14.4%	117.1	-1.0%	444.3	1.7%	562.7	1.1%
2011	1.7	25.7%	134.5	14.9%	520.6	17.2%	656.8	16.7%
2012	1.5	-13.2%	176.5	31.3%	532.2	2.2%	710.2	8.1%
2013	1.3	-13.3%	183.8	4.1%	569.7	7.0%	754.8	6.3%
2014	1.1	-15.9%	187.2	1.8%	529.8	-7.0%	718.0	-4.9%
2015	1.2	9.8%	183.6	-1.9%	515.4	-2.7%	700.2	-2.5%
2016	1.6	32.9%	189.2	3.0%	547.6	6.3%	738.4	5.5%
2017	**1.0**	**-39.2%**	**185.1**	**-2.2%**	**610.1**	**11.4%**	**796.2**	**7.8%**
2012-2016 Average*	1.3	-27.5%	184.1	0.5%	538.9	13.2%	724.3	9.9%

* "% change" in this line compares the current year to the 5-year average

Vehicle involvement in traffic collisions per 10,000 registered vehicles (vehicle involvement rate) has increased in 2017 compared to 2016 and to the previous five year (2012 to 2016) annual average. The vehicle involvement rate in collisions in 2017 for:

- Total collisions is 796.2 – increased by 8% from 2016 and by 10% from the previous five years;
- Fatal collisions is 1.0 – decreased by 39% from 2016 and by nearly 28% from the previous five years;
- Injury collisions is 185.1 – decreased by 2% from 2016, but increased by nearly 1% from the previous five years; and,
- PDO collisions is 610.1 – increased by 11% from 2016 and by 13% from the previous five years.

Figure 7-1 Vehicle Involvement Rate (per 10,000 Registered Vehicles) in Fatal, Injury and PDO Collisions



As shown in Figure 7-1, vehicle involvement rates for injury crashes and PDO crashes in 2017 are among the highest they have been in recent years, however, vehicle involvement rate for fatal crashes in 2017 is the lowest in the last ten years.

Table 7-3 Vehicle Types (as defined in TAR) Involved in Traffic Collisions and Collision Severity

Table 7-3

Vehicle Types (as defined in TAR) Involved in Traffic Collisions and Collision Severity: 2017, 2012-2016 Average

Vehicle Type	2017 Collision Severity						**2017 Total**	% of 2017 Total	2012-2016 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Passenger vehicle (automobile)	38	44.2%	12,600	75.2%	38,727	70.1%	**51,365**	71.3%	54	11,770	32,426	44,251	70.5%
Mini/Multi-Purpose Van	6	7.0%	1,191	7.1%	3,795	6.9%	**4,992**	6.9%	9	1,371	3,936	5,316	8.5%
Van under 4500 kg	1	1.2%	122	0.7%	475	0.9%	**598**	0.8%	<1	149	433	584	0.9%
Pick-up under 4500 kg	19	22.1%	2,081	12.4%	10,142	18.4%	**12,242**	17.0%	27	2,038	8,286	10,351	16.5%
Truck over 4500 kg (unit chassis)	6	7.0%	201	1.2%	948	1.7%	**1,155**	1.6%	5	187	856	1,047	1.7%
Power Unit for Semi-Trailer	10	11.6%	122	0.7%	513	0.9%	**645**	0.9%	9	113	338	460	0.7%
Truck/Camper	0	-	0	-	0	-	**0**	-	<1	<1	2	2	<0.1%
Motor home	0	-	3	<0.1%	41	<0.1%	**44**	<0.1%	<1	3	19	22	<0.1%
Truck (other)	0	-	23	0.1%	71	0.1%	**94**	0.1%	1	24	64	90	0.1%
School Bus	0	-	8	<0.1%	63	0.1%	**71**	<0.1%	<1	5	8	13	<0.1%
Other School Vehicle	0	-	0	-	0	-	**0**	-	<1	<1	<1	0	-
Transit Bus – urban	1	1.2%	82	0.5%	35	<0.1%	**118**	0.2%	<1	40	62	103	0.2%
Para-transit Bus	0	-	0	-	6	<0.1%	**6**	<0.1%	<1	3	5	8	<0.1%
Intercity Bus	0	-	0	-	13	<0.1%	**13**	<0.1%	<1	2	7	9	<0.1%
Bus (other)	0	-	11	<0.1%	68	0.1%	**79**	0.1%	<1	26	87	113	0.2%
Motorcycle/Scooter	4	4.7%	128	0.8%	63	0.1%	**195**	0.3%	4	124	53	182	0.3%
Moped	0	-	8	<0.1%	3	<0.1%	**11**	<0.1%	<1	14	5	19	<0.1%
Bicycle	0	-	139	0.8%	139	0.3%	**278**	0.4%	4	86	99	189	0.3%
Ambulance	0	-	5	<0.1%	27	<0.1%	**32**	<0.1%	<1	<1	3	3	<0.1%
Fire	0	-	15	<0.1%	78	0.1%	**93**	0.1%	<1	2	12	14	<0.1%
Police	0	-	0	-	0	-	**0**	-	<1	<1	<1	0	-
Mobility Vehicle	0	-	0	-	0	-	**0**	-	<1	<1	<1	0	<0.1%
Motorized Snow Vehicle HTA	0	-	0	-	0	-	**0**	-	<1	<1	<1	1	<0.1%
Farm Equipment	0	-	1	<0.1%	0	-	**1**	<0.1%	<1	<1	<1	0	<0.1%
Construction Equipment	0	-	0	-	2	<0.1%	**2**	<0.1%	<1	<1	<1	0	<0.1%
Train/Other Rail Vehicle	0	-	0	-	0	-	**0**	-	<1	<1	<1	0	-
Off-Road Vehicles	1	1.2%	7	<0.1%	8	<0.1%	**16**	<0.1%	<1	1	1	8	<0.1%
Total	86	100%	16,747	100%	55,217	100%	**72,050**	100%	116	15,962	46,707	62,785	100%

Note: Counts of vehicles in the 2012-2016 average may not add to the total due to rounding.
Note: Some vehicles are not identified by vehicle type due to a hit and run scenario.

Table 7-4 Combined Select Vehicle Categories Involved in Traffic Collisions by Collision Severity

Table 7-4

Vehicle Types (Combined Select Categories) Involved in Traffic Collisions and Collision Severity: 2017, 2012-2016 Average

Vehicle Type	2017 Collision Severity						**2017 Total**	% of 2017 Total	2012-2016 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Light Duty Vehicles	64	74.4%	15,994	96.3%	53,139	96.6%	**69,197**	96.5%	90	15,328	45,082	60,502	96.7%
Passenger vehicles	45	52.3%	13,913	83.8%	42,997	78.1%	**56,955**	79.4%	63	13,291	36,796	50,151	80.2%
Light trucks	19	22.1%	2,081	12.5%	10,142	18.4%	**12,242**	17.1%	27	2,038	8,286	10,351	16.5%
NSC Commercial Vehicles	17	19.8%	447	2.7%	1,717	3.1%	**2,181**	3.0%	16	399	1,428	1,843	2.9%
PSV Vehicles	0	-	20	0.1%	105	0.2%	**125**	0.2%	0	2	15	18	<0.1%
Motorcycle/Moped/Scooter	4	4.7%	136	0.8%	66	0.1%	**206**	0.3%	4	138	58	201	0.3%
Off-Road vehicles	1	1.2%	7	<0.1%	8	<0.1%	**16**	<0.1%	<1	1	1	8	<0.1%

Note: Counts of vehicles in the 2012-2016 average may not add to the total due to rounding.
Note: The above categories are not an exhaustive list. Only primary vehicle types are included; vehicle types such as trains, bicycles, truck/camper units and motor homes are not.

Table 7-5 Vehicle Involvement (per 10,000 Registered Vehicles) in Traffic Collision by Combined Vehicle Types and Collision Severity

Table 7-5

Vehicle Involvement (per 10,000 Registered Vehicles) in Traffic Collisions by Combined Vehicle Types and Collision Severity: 2017, 2012-2016 Average

Vehicle Type	2017 Collision Severity				2012-2016 Average			
	Fatal	Injury	PDO	**2017 Total**	Fatal	Injury	PDO	Total
Light Duty Vehicles	0.9	221.3	735.1	**957.3**	1.3	218.0	641.2	860.5
Passenger vehicles	0.8	243.4	752.1	**996.2**	1.1	240.7	666.3	908.1
Light trucks	1.3	137.7	671.0	**810.0**	1.8	135.0	549.1	685.9
NSC Commercial Vehicles	1.7	44.5	171.0	**217.2**	1.8	45.8	163.7	211.4
PSV Vehicles	0.0	13.2	69.4	**82.6**	0.0	1.5	12.6	14.4
Motorcycle/Moped/Scooter	2.6	88.6	43.0	**134.2**	3.2	104.2	43.7	151.1

Light duty vehicles, including passenger vehicles, minivans, and light trucks, represent nearly 97% of the vehicles involved in all traffic collisions in 2017, the same as 2016 and similar to the previous five year (2012 to 2016) annual average (97%). Commercial vehicles represent 3% of the vehicles involved (the same as in the previous five years) while motorcycles, scooters, and mopeds represent 0.3% of the vehicles involved (the same as in the previous five years).

Light duty vehicles have the highest vehicle involvement rate (per 10,000 registered vehicles) among all the vehicle types examined. Light duty vehicles (passenger vehicles and light trucks, combined) have an involvement rate of 957.3 in 2017 and 860.5 in the previous five year (2012 to 2016) annual average. NSC commercial vehicles have an involvement rate of 217.2 in 2017 and 211.4 in the previous five years.

Motorcycles (including scooters and mopeds) have the second lowest rates of involvement in traffic collisions among all vehicle types examined. Motorcycles have a rate of involvement of 134.2 in 2017 and 151.1 for the previous five year (2012 to 2016) annual average.

Few PSV vehicles are recorded as being involved in traffic collisions in 2017 (only 125 in total). They had an involvement rate (per 10,000 registered vehicles) of 82.6 in 2017 and 14.4 in the previous five years.

Motorcycles (including scooters and mopeds) are much more likely than light duty vehicles to be involved in a fatal collision. In 2017, motorcycles have an involvement rate of 2.6 in fatal collisions, almost three times the involvement rate of light duty vehicles in fatal collisions (0.9). In the previous five year (2012 to 2016) annual average, motorcycles had a vehicle involvement rate of 3.2 in fatal collisions, more than double the rate of light duty vehicles.

NOTE: No vehicle involvement rate for off-road vehicles (ORV) is calculated due to difficulty in developing a reliable and accurate population count of these vehicles.

SECTION 8 – Driver Involvement

Introduction

This section counts the number of drivers involved in traffic collisions and breaks this down by age and gender of the driver. The rate of involvement (per 10,000 licensed drivers) in traffic collisions is also detailed.

Key Highlights

In 2017, there are 68,447 drivers involved in traffic collisions. Of these:

- 85 are involved in fatal collisions;
- 16,531 are involved in injury collisions; and,
- 51,831 are involved in PDO collisions.

Drivers aged 16 to 24, 25 to 34, and those age 35 to 44 account for the largest proportions of drivers (by age group) involved in traffic collisions in 2017.

Young drivers have a much higher rate of involvement in traffic collisions than older drivers. In 2017, drivers aged 16 to 24 years old have an involvement rate (per 10,000 licensed drivers) in traffic collisions of 1,103.0. This is:

- 1.2 times that of drivers aged 25 to 34 (rate of 914.3);
- 1.3 times that of drivers aged 35 to 44 (rate of 842.5);
- 1.5 times that of drivers aged 45 to 54 (rate of 742.8);
- 1.9 times that of drivers aged 55 to 64 (rate of 575.4); and,
- More than two-and-a-half times that of drivers aged 65 and older (rate of 432.0).

The majority of drivers involved in traffic collisions are male. Among all drivers involved in traffic collisions in 2017 where the driver gender is known, nearly 61% are male and nearly 40% are female.

- Fatal collisions: nearly 77% are male drivers, nearly 24% are female drivers
- Injury collisions: 53% are male drivers, 47% are female drivers
- PDO collisions: 63% are male drivers, 37% are female drivers

The rate of involvement for men in traffic collisions in 2017 is 884.7, nearly one-and-a-half times that of females (615.9). Driver involvement rates in 2017:

- Fatal collisions: male rate – 1.4, female rate – 0.5
- Injury collisions: male rate – 187.4, female rate – 177.2
- PDO collisions: male rate – 695.9, female rate – 438.3

The reader should note that neither the count of drivers involved in collisions nor the calculated rate of involvement takes into account exposure to risk in terms of hours of driving, kilometres driven, or driving situations.

Major Elements Examined

Counts of drivers involved in collisions in Manitoba for 2017 and previous years are taken from Traffic Accident Reports (TARs) completed by Manitoba Public Insurance and law enforcement agencies, and compiled by Manitoba Public Insurance. These counts are presented for all reportable collisions, fatal collisions, injury collisions, and property damage only (PDO) collisions.

It is important to note that the number of collisions is not equal to the number of drivers involved in those collisions; nor is the number of vehicles involved in collisions. Some collisions involve more than one driver while others involve a single driver; the number of drivers will not equal the number of collisions. Likewise, not every vehicle involved in a collision will have a driver. Some collisions involve parked vehicles while others may involve driverless vehicles, such as construction or farm equipment (a full definition of what constitutes a "driver" for this report is provided under the "*Terms and Definitions*" heading). As there are more drivers involved in collisions than collisions overall, involvement rates calculated based on the number of drivers will be higher than the involvement rates calculated based on the number of collisions.

The reader is cautioned that not all percentages and calculations in the following tables will add to 100% of the total noted. Rounding error will often produce a difference of one or two percentage points. Likewise, average calculations are presented for historical data from the years 2012 to 2016. Rounding errors in these calculations will cause individual average counts not to add to total average counts in some cases.

Due to the small numbers of fatal collisions, fluctuations year-over-year could be dramatic; a small change in the total count of these types of collisions could have a significant effect on statistics such as percentage change to previous years and involvement rates. Therefore, the reader is strongly cautioned when interpreting results regarding fatal collisions.

Terms and Definitions

"Drivers"

- The number of drivers involved in collisions. It excludes pedestrians, bicyclists, snowmobiles, off-road vehicles, farm and construction equipment, trains and parked vehicles.

"Collision Severity"

- A classification of a collision based on the most severe result of the collision, i.e., whether someone was killed (fatal), injured (injury) or property damage only (PDO) occurred.

"Fatal Collision"

- A motor vehicle collision in which at least one person is killed as a result of the collision. The death must have occurred within thirty days of the collision occurrence.

"Injury Collision"

- A motor vehicle collision in which at least one person has been recorded as sustaining some level of personal injury, but in which no one is fatally injured or killed. Levels of injury include: 'major' (admitted to hospital); 'minor' (treated and released from hospital); and, 'minimal' (no hospital treatment required).

"Property Damage Only (PDO) Collision"

- A motor vehicle collision in which no injury or fatality is sustained and only property damage is the result.

"Driver Involvement Rate"

- A calculation of the number of drivers involved in traffic collisions for every 10,000 drivers licensed in Manitoba. The total number of drivers licensed to drive includes both active and suspended drivers. This involvement rate does not take into account the number of vehicle kilometres driven by each driver group. More detail regarding the methodology used to count licensed drivers can be found in "*Section 2 Licensed Drivers*" of this report.

Table 8-1 Historical Summary of Drivers Involved in Traffic Collisions

Table 8-1
Historical Summary of Drivers Involved in Traffic Collisions: 2007 to 2017

Year	Collision Severity						Total Collisions	% change to previous year
	Fatal	% change to previous year	Injury	% change to previous year	PDO	% change to previous year		
2007	135	-	10,696	-	33,983	-	44,814	-
2008	121	-10.4%	9,854	-7.9%	32,145	-5.4%	42,120	-6.0%
2009	120	-0.8%	8,938	-9.3%	32,039	-0.3%	41,097	-2.4%
2010	105	-12.5%	8,969	0.3%	33,236	3.7%	42,310	3.0%
2011	130	23.8%	10,644	18.7%	40,505	21.9%	51,279	21.2%
2012	119	-8.5%	14,696	38.1%	44,062	8.8%	58,877	14.8%
2013	106	-10.9%	15,539	5.7%	47,856	8.6%	63,501	7.9%
2014	90	-15.1%	16,120	3.7%	45,084	-5.8%	61,294	-3.5%
2015	103	14.4%	16,088	-0.2%	43,525	-3.5%	59,716	-2.6%
2016	138	34.0%	16,753	4.1%	46,948	7.9%	63,839	6.9%
2017	**85**	**-38.4%**	**16,531**	**-1.3%**	**51,831**	**10.4%**	**68,447**	**7.2%**
2012-2016 Average*	111	-23.6%	15,839	4.4%	45,495	13.9%	61,445	11.4%

* "% change" in this line compares the current year to the 5-year average

In 2017, there are 68,447 drivers involved in traffic collisions. Of these:

- 85 are involved in fatal collisions;
- 16,531 are involved in injury collisions; and,
- 51,831 are involved in PDO collisions.

Overall, the number of drivers involved in traffic collisions in 2017 increased from 2016 (up 7%) and from the previous five year (2012 to 2016) annual average (up 11%). In 2017, there are:

- 4,608 more drivers involved in total collisions than in 2016 and 7,002 more than in the previous five years;
- 53 fewer drivers involved in fatal collisions than in 2016 (a 38% decrease) and 26 fewer than in the previous five years (a 24% decrease);
- 222 fewer drivers involved in injury collisions compared to 2016 (a 1% decrease) but 692 more than in the previous five years (a 4% increase); and,
- 4,883 more drivers involved in PDO collisions compared to 2016 (a 10% increase) and 6,336 more than in the previous five years (a 14% increase).

Table 8-2 Historical Summary of Driver Involvement Rate (per 10,000 Licensed Drivers) in Traffic Collisions

Table 8-2

Historical Summary of Driver Involvement Rate (per 10,000 Licensed Drivers) in Traffic Collisions: 2007 to 2017

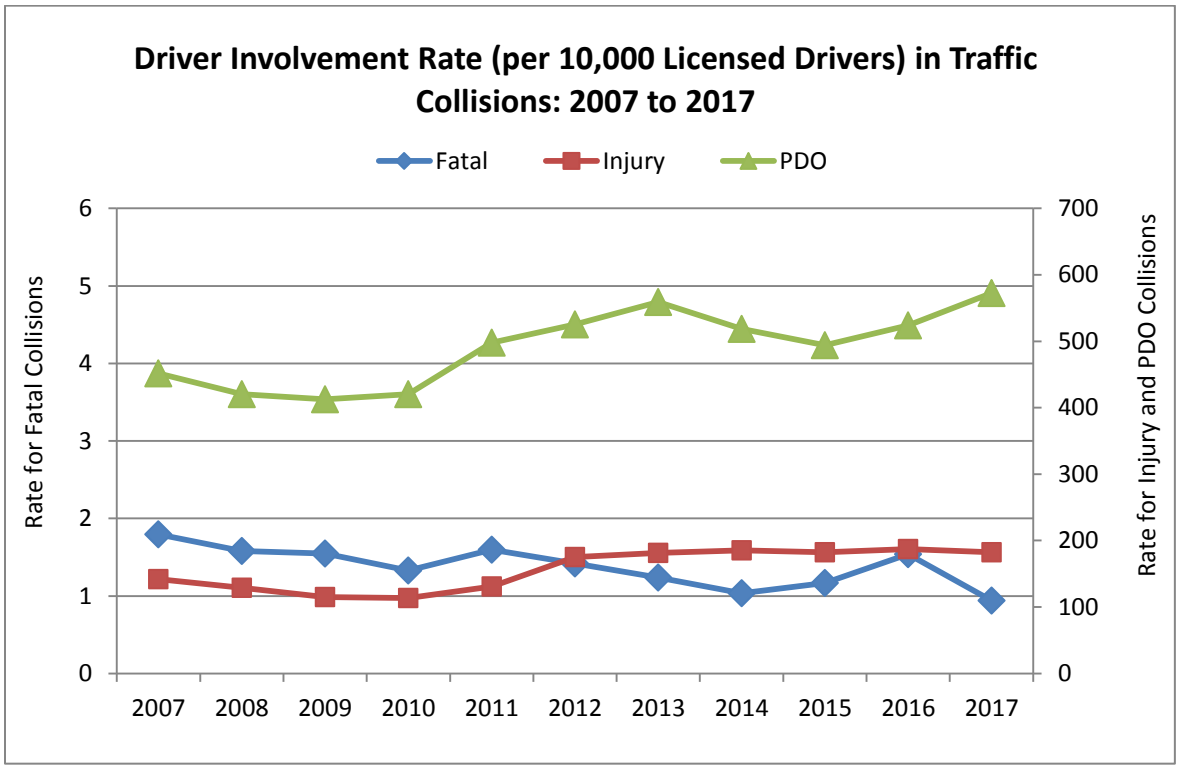
Year	Collision Severity						Total Collisions	% change to previous year
	Fatal	% change to previous year	Injury	% change to previous year	PDO	% change to previous year		
2007	1.8	-	142.2	-	451.7	-	595.6	-
2008	1.6	-11.8%	128.8	-9.4%	420.2	-7.0%	550.6	-7.6%
2009	1.5	-2.3%	115.1	-10.6%	412.8	-1.8%	529.5	-3.8%
2010	1.3	-14.1%	113.5	-1.4%	420.5	1.9%	535.3	1.1%
2011	1.6	20.3%	130.8	15.3%	497.8	18.4%	630.2	17.7%
2012	1.4	-11.2%	175.3	34.0%	525.5	5.6%	702.2	11.4%
2013	1.2	-12.7%	181.6	3.6%	559.2	6.4%	742.0	5.7%
2014	1.0	-16.4%	185.4	2.1%	518.7	-7.2%	705.1	-5.0%
2015	1.2	12.9%	182.5	-1.6%	493.9	-4.8%	677.6	-3.9%
2016	1.5	31.8%	187.0	2.4%	524.0	6.1%	712.6	5.2%
2017	**0.9**	**-39.1%**	**182.6**	**-2.4%**	**572.5**	**9.2%**	**756.0**	**6.1%**
2012-2016 Average*	1.3	-26.7%	182.4	0.1%	524.3	9.2%	707.9	6.8%

* "% change" in this line compares the current year to the 5-year average

The driver involvement rate (per 10,000 licensed drivers) in traffic collisions in 2017 is 756.0, an increase of 6% compared to the rate in 2016 (712.6) and an increase of 7% from the previous five year (2012 to 2016) annual average (707.9). In 2017, driver involvement in:

- Fatal collisions (0.9) decreased by 39% from 2016 and by 27% compared to the previous five years;
- Injury collisions (182.6) decreased by 2% from 2016 and is relatively unchanged compared to the previous five years; and,
- PDO collisions (572.5) increased by 9% from 2016 and by 9% compared to the previous five years.

Figure 8-1 Driver Involvement Rate (per 10,000 Licensed Drivers) in Traffic Collisions by Severity



A downward trend in the rate of involvement for drivers in PDO collisions had been fairly consistent between 2007 and 2009. Between 2009 and 2010, the rates were relatively stable and appear to have hit a low. The rate increased in 2011, 2012 and 2013, before falling in 2014 and 2015, and increased again in 2016 and 2017. The increased driver involvement rates in PDO collisions since 2011 (compared to 2007 to 2010) are at least partially attributable to changes in the reporting structure that took effect in 2011.

The driver involvement rate for injury collisions increased in 2011 and 2012, and were relatively stable from 2013 through 2017. The rate for fatal collisions had steadily decreased until increases in 2015 and 2016, then decreased again in 2017. The increases in driver involvement in injury collisions since 2011 are at least partially attributable to changes in the reporting structure that took effect in 2011. However, changes in driver involvement in fatal collisions cannot be attributed to this reporting structure change.

Table 8-3 Drivers Involved in Traffic Collisions by Age Group and Collision Severity

Table 8-3

Drivers Involved in Traffic Collisions by Age Group and Collision Severity: 2017, 2012-2016 Average

Age Group	2017 Collision Severity						**2017 Total Collisions**	% of 2017 Total Collisions*	2012-2016 Average Count of Drivers				
	Fatal	% of Total Fatal*	Injury	% of Total Injury*	PDO	% of Total PDO*			Fatal	Injury	PDO	Total	% of Total Collisions*
<16	0	-	15	<0.1%	49	<0.1%	**64**	<0.1%	0	18	43	62	0.1%
16-19	6	7.1%	1,165	7.1%	3,837	7.4%	**5,008**	7.3%	12	1,213	3,728	4,952	8.1%
20-24	9	10.6%	1,977	12.0%	6,528	12.6%	**8,514**	12.5%	15	1,938	5,973	7,926	12.9%
25-34	15	17.6%	3,646	22.1%	11,108	21.5%	**14,769**	21.6%	26	3,404	9,516	12,947	21.1%
35-44	10	11.8%	3,187	19.3%	9,540	18.4%	**12,737**	18.6%	14	3,009	8,083	11,106	18.1%
45-54	20	23.5%	2,833	17.2%	8,486	16.4%	**11,339**	16.6%	17	2,870	7,778	10,664	17.4%
55-64	15	17.6%	2,067	12.5%	6,688	12.9%	**8,770**	12.8%	12	1,977	5,720	7,709	12.6%
65+	10	11.8%	1,627	9.9%	5,491	10.6%	**7,128**	10.4%	16	1,396	4,577	5,988	9.8%
Not Stated	0	-	14	-	104	-	**118**	-	1	14	76	91	-
Total*	**85**	**100%**	**16,531**	**100%**	**51,831**	**100%**	**68,447**	100%	111	15,839	45,495	61,445	100%

*Percentage of the total does not include the 'not stated' category.
Note: Counts of drivers in the 2012-2016 average may not add to the total due to rounding.

Drivers aged 16 to 24, 25 to 34, and those age 35 to 44 account for the largest proportions of drivers (by age group) involved in traffic collisions in 2017. Overall, these proportions are very similar to previous years.

- Total collisions: aged 16 to 24 – 20%; aged 25 to 34 – 22%; aged 35 to 44 – 19%; aged 45 to 54 – 17%; aged 55 to 64 – 13%; aged 65 and older – 10%.
- Fatal collisions: aged 16 to 24 – 18%; aged 25 to 34 – 18%; aged 35 to 44 – 12%; aged 45 to 54 – nearly 24%; aged 55 to 64 – 18%; aged 65 and older – 12%.
- Injury collisions: aged 16 to 24 – 19%; aged 25 to 34 – 22%; aged 35 to 44 – 19%; aged 45 to 54 – 17%; aged 55 to 64 – nearly 13%; aged 65 and older – 10%.
- PDO collisions: aged 16 to 24 – 20%; aged 25 to 34 – nearly 22%; aged 35 to 44 – 18%; aged 45 to 54 – 16%; aged 55 to 64 – 13%; aged 65 and older – 11%.

Figure 8-2 Proportion of Traffic Collisions by Driver Age and Collision Severity

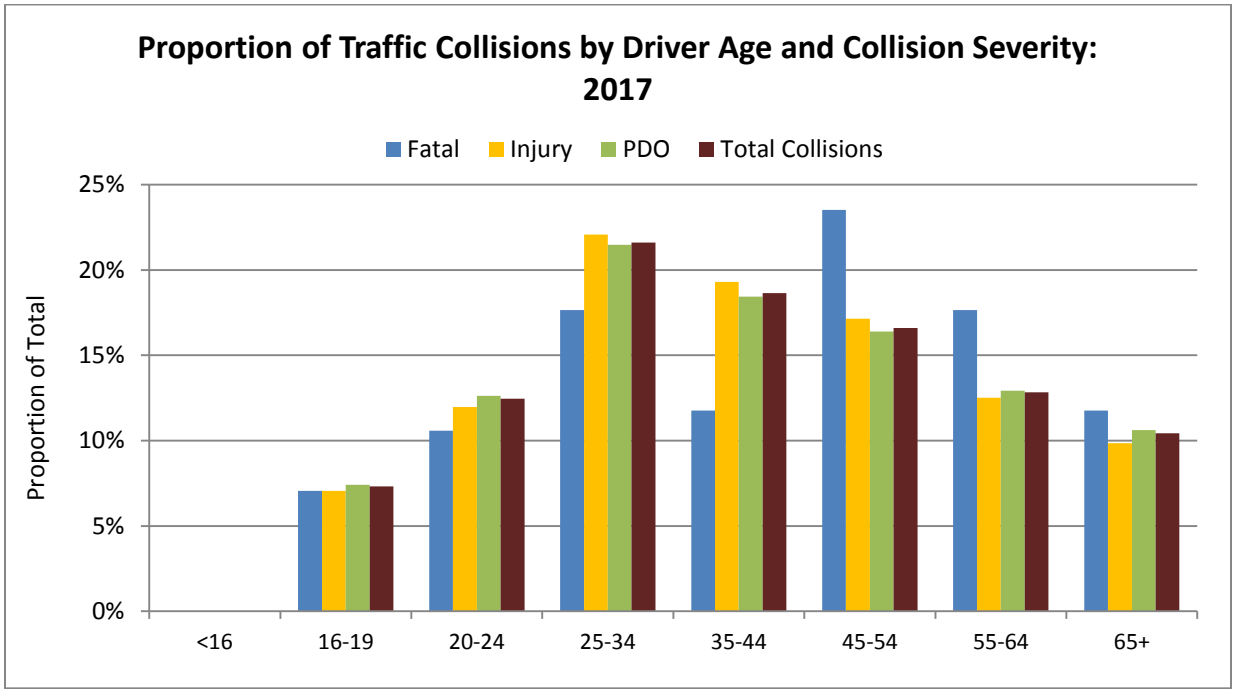


Table 8-4 Driver Involvement Rate (per 10,000 Licensed Drivers) in Traffic Collisions by Age Group and Collision Severity

Table 8-4
Driver Involvement Rate (per 10,000 Licensed Drivers) in Traffic Collisions by Age Group and Collision Severity: 2017, 2012-2016 Average

Age Group	2017 Collision Severity			**2017 Total Collisions**	2012-2016 Average			
	Fatal	Injury	PDO		Fatal	Injury	PDO	Total
<16	-	-	-	**-**	-	-	-	-
16-19	1.3	244.7	805.9	**1,051.9**	2.4	250.3	769.5	1,022.1
20-24	1.2	263.7	870.6	**1,135.5**	2.0	264.4	814.9	1,081.3
25-34	0.9	225.7	687.7	**914.3**	1.7	228.4	638.4	868.5
35-44	0.7	210.8	631.0	**842.5**	1.0	208.4	559.7	769.0
45-54	1.3	185.6	555.9	**742.8**	1.0	180.8	490.0	671.8
55-64	1.0	135.6	438.8	**575.4**	0.8	138.2	399.9	538.9
65+	0.6	98.6	332.8	**432.0**	1.0	92.3	302.8	396.2

Recognizing that counts of drivers involved in collisions could be impacted either positively or negatively by changing population statistics, involvement rates per 10,000 licensed drivers are examined to provide a standardized collision rate comparison. This eliminates the effect of changing population size and focuses on how many drivers are involved in collisions instead of simply a raw count of drivers. Further, in the absence of the number of kilometres driven, the driver involvement rate acts as a proxy for exposure to collision risk.

Young drivers have a much higher rate of involvement in traffic collisions than older drivers. In 2017, drivers aged 16 to 24 years old have an involvement rate (per 10,000 licensed drivers) in traffic collisions of 1,103.0. This is:

- 1.2 times that of drivers aged 25 to 34 (rate of 914.3);
- 1.3 times that of drivers aged 35 to 44 (rate of 842.5);
- 1.5 times that of drivers aged 45 to 54 (rate of 742.8);
- 1.9 times that of drivers aged 55 to 64 (rate of 575.4); and,
- More than two-and-a-half times that of drivers aged 65 and older (rate of 432.0).

Table 8-5 Drivers Involved in Traffic Collisions by Gender and Age Group and Collision Severity

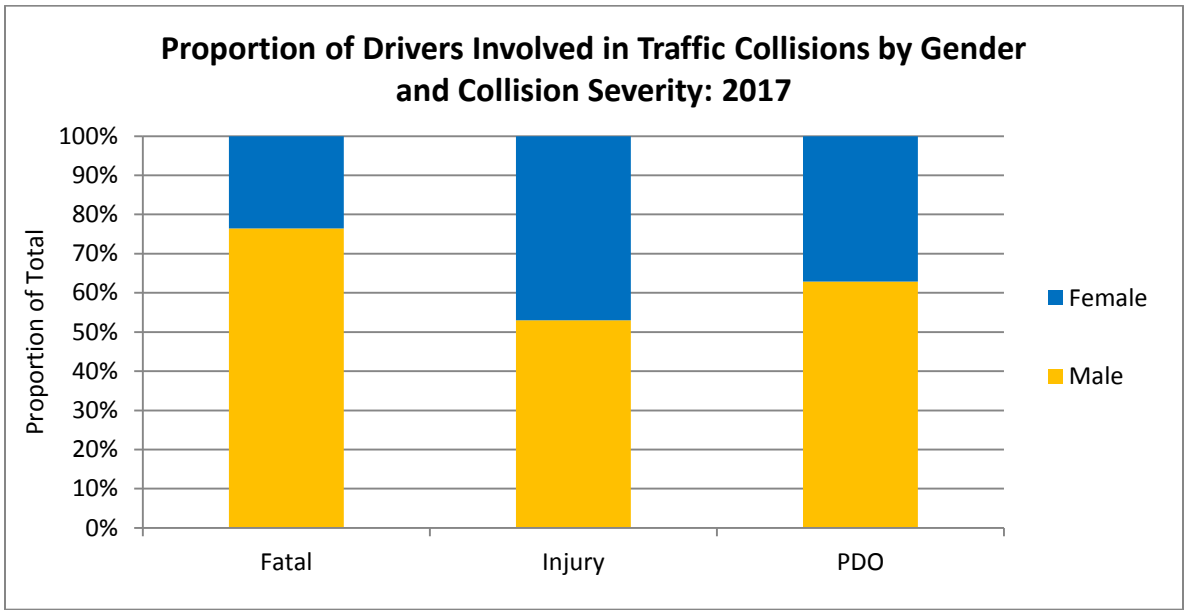
Table 8-5

Total Drivers Involved in Traffic Collisions by Gender and Age Group and Collision Severity: 2017, 2012-2016 Average

Gender - Age Group		2017 Collision Severity						**2017 Total Collisions**	% of 2017 Total Collisions*	2012-2016 Average Count of Drivers				
		Fatal	% of Total Fatal*	Injury	% of Total Injury*	PDO	% of Total PDO*			Fatal	Injury	PDO	Total	% of Total Collisions*
Female	<16	0	-	11	0.1%	21	0.1%	**32**	0.1%	<1	6	17	23	<0.1%
	16-19	2	10.0%	554	7.1%	1,446	7.5%	**2,002**	7.4%	4	555	1,418	1,976	8.1%
	20-24	2	10.0%	931	12.0%	2,353	12.3%	**3,286**	12.2%	5	939	2,247	3,191	13.1%
	25-34	4	20.0%	1,773	22.8%	4,213	22.0%	**5,990**	22.2%	6	1,654	3,574	5,235	21.4%
	35-44	4	20.0%	1,532	19.7%	3,743	19.5%	**5,279**	19.6%	3	1,483	3,137	4,622	18.9%
	45-54	2	10.0%	1,323	17.0%	3,154	16.4%	**4,479**	16.6%	5	1,369	2,863	4,238	17.3%
	55-64	5	25.0%	945	12.2%	2,316	12.1%	**3,266**	12.1%	2	900	2,069	2,971	12.2%
	65+	1	5.0%	692	8.9%	1,936	10.1%	**2,629**	9.8%	5	573	1,608	2,186	8.9%
	Not Stated	0	-	1	-	15	-	**16**	-	<1	<1	5	6	-
	Total Female*	**20**	**100%**	**7,762**	**100%**	**19,197**	**100%**	**26,979**	100%	30	7,479	16,938	24,448	100%
Male	<16	0	-	4	<0.1%	28	<0.1%	**32**	<0.1%	<1	13	26	39	0.1%
	16-19	4	6.2%	610	7.0%	2,386	7.3%	**3,000**	7.3%	7	657	2,308	2,972	8.1%
	20-24	7	10.8%	1,045	11.9%	4,162	12.8%	**5,214**	12.6%	10	998	3,722	4,730	12.8%
	25-34	11	16.9%	1,873	21.4%	6,890	21.2%	**8,774**	21.2%	19	1,749	5,940	7,708	20.9%
	35-44	6	9.2%	1,655	18.9%	5,792	17.8%	**7,453**	18.0%	11	1,526	4,945	6,482	17.6%
	45-54	18	27.7%	1,510	17.2%	5,330	16.4%	**6,858**	16.6%	11	1,500	4,913	6,424	17.4%
	55-64	10	15.4%	1,122	12.8%	4,368	13.4%	**5,500**	13.3%	10	1,076	3,651	4,737	12.8%
	65+	9	13.8%	935	10.7%	3,555	10.9%	**4,499**	10.9%	11	822	2,968	3,801	10.3%
	Not Stated	0	-	4	-	14	-	**18**	-	<1	2	10	12	-
	Total Male*	**65**	**100%**	**8,758**	**100%**	**32,525**	**100%**	**41,348**	100%	80	8,343	28,482	36,905	100%

*Percentage of the total does not include the 'not stated' category.
Note: Counts of drivers in the 2012-2016 average may not add to the total due to rounding.
Note: Some drivers do not have age and gender recorded and are therefore missing from the table above.

Figure 8-3 Proportion of Drivers Involved in Traffic Collisions by Gender and Collision Severity



The majority of drivers involved in traffic collisions are male. Among all drivers involved in traffic collisions in 2017 where the driver gender is known, nearly 61% are male and nearly 40% are female.

- Fatal collisions: nearly 77% are male drivers, nearly 24% are female drivers
- Injury collisions: 53% are male drivers, 47% are female drivers
- PDO collisions: 63% are male drivers, 37% are female drivers

The reader should note that the count of drivers involved in collisions does not take into account exposure to risk in terms of driving situations, hours driven or kilometres driven.

As shown in Table 8-6 (on the following page), young drivers account for the highest proportions of collisions. In particular, young male drivers account for a larger proportion of collisions than any other group of drivers. In 2017:

- Male drivers aged 16 to 24 account for 12% of all collisions, 13% of fatal collisions, 10% of injury collisions, and 13% of PDO collisions;
- Male drivers aged 25 to 34 account for 13% of all collisions, 13% of fatal collisions, 11% of injury collisions, and 13% of PDO collisions;
- Female drivers aged 16 to 24 account for 8% of all collisions, 5% of fatal collisions, 9% of injury collisions and 7% of PDO collisions; and,
- Female drivers aged 25 to 34 account for 9% of all collisions, 5% of fatal collisions, 11% of injury collisions and 8% of PDO collisions.

Table 8-6 Drivers Involved in Traffic Collisions by Age Group and Gender and Collision Severity

Table 8-6

Total Drivers Involved in Traffic Collisions by Age Group and Gender and Collision Severity: 2017, 2012-2016 Average

Age Group - Gender		2017 Collision Severity						**2017 Total Collisions**	% of 2017 Total Collisions*	2012-2016 Average Count of Drivers				
		Fatal	% of Total Fatal*	Injury	% of Total Injury*	PDO	% of Total PDO*			Fatal	Injury	PDO	Total	% of Total Collisions*
<16	Female	0	-	11	<0.1%	21	<0.1%	**32**	<0.1%	<1	6	17	23	<0.1%
	Male	0	-	4	<0.1%	28	<0.1%	**32**	<0.1%	<1	13	26	39	<0.1%
16 to 24	Female	4	4.7%	1,485	9.0%	3,799	7.3%	**5,288**	7.7%	9	1,494	3,664	5,167	8.4%
	Male	11	12.9%	1,655	10.0%	6,548	12.7%	**8,214**	12.0%	17	1,655	6,030	7,702	12.6%
25 to 34	Female	4	4.7%	1,773	10.7%	4,213	8.2%	**5,990**	8.8%	6	1,654	3,574	5,235	8.5%
	Male	11	12.9%	1,873	11.3%	6,890	13.3%	**8,774**	12.8%	19	1,749	5,940	7,708	12.6%
35 to 44	Female	4	4.7%	1,532	9.3%	3,743	7.2%	**5,279**	7.7%	3	1,483	3,137	4,622	7.5%
	Male	6	7.1%	1,655	10.0%	5,792	11.2%	**7,453**	10.9%	11	1,526	4,945	6,482	10.6%
45 to 54	Female	2	2.4%	1,323	8.0%	3,154	6.1%	**4,479**	6.6%	5	1,369	2,863	4,238	6.9%
	Male	18	21.2%	1,510	9.1%	5,330	10.3%	**6,858**	10.0%	11	1,500	4,913	6,424	10.5%
55 to 64	Female	5	5.9%	945	5.7%	2,316	4.5%	**3,266**	4.8%	2	900	2,069	2,971	4.8%
	Male	10	11.8%	1,122	6.8%	4,368	8.4%	**5,500**	8.1%	10	1,076	3,651	4,737	7.7%
65 and older	Female	1	1.2%	692	4.2%	1,936	3.7%	**2,629**	3.8%	5	573	1,608	2,186	3.6%
	Male	9	10.6%	935	5.7%	3,555	6.9%	**4,499**	6.6%	11	822	2,968	3,801	6.2%
Not Stated	Female	0	-	1	-	15	-	**16**	-	<1	<1	5	6	-
	Male	0	-	4	-	14	-	**18**	-	<1	2	10	12	-
Total	Female	20	23.5%	7,762	46.9%	19,197	37.1%	**26,979**	39.5%	30	7,479	16,938	24,448	39.8%
	Male	65	76.5%	8,758	53.0%	32,525	62.8%	**41,348**	60.5%	80	8,343	28,482	36,905	60.1%

*Percentage of the total does not include the 'not stated' category.
Note: Counts of drivers in the 2012-2016 average may not add to the total due to rounding.
Note: Some drivers do not have age and gender recorded and are therefore missing from the table above.

Table 8-7 Driver Involvement Rate (per 10,000 Licensed Drivers) in Traffic Collisions by Gender and Age Group and Collision Severity

Table 8-7
Driver Involvement Rate (per 10,000 Licensed Drivers) in Traffic Collisions by Gender and Age Group and Collision Severity: 2017, 2012-2016 Average

Gender - Age Group		2017 Collision Severity			**2017 Total Collisions**	2012-2016 Average			
		Fatal	Injury	PDO		Fatal	Injury	PDO	Total
Female	<16	-	-	-	**-**	-	-	-	-
	16-19	0.9	240.6	628.1	**869.6**	1.8	236.8	605.2	843.8
	20-24	0.6	261.2	660.2	**921.9**	1.4	265.5	635.2	902.1
	25-34	0.5	225.8	536.5	**762.7**	0.9	228.8	494.3	724.0
	35-44	0.5	207.9	508.0	**716.5**	0.4	211.2	446.8	658.4
	45-54	0.3	179.2	427.2	**606.7**	0.7	179.2	374.8	554.7
	55-64	0.7	128.6	315.3	**444.6**	0.2	130.3	299.7	430.2
	65+	0.1	86.7	242.4	**329.2**	0.7	79.9	224.3	305.0
	Total	0.5	177.2	438.3	**615.9**	0.7	178.7	404.8	584.3
Male	<16	-	-	-	**-**	-	-	-	-
	16-19	1.6	248.1	970.4	**1,220.1**	3.0	262.5	922.1	1,187.6
	20-24	1.8	265.6	1,058.0	**1,325.4**	2.5	263.2	981.2	1,246.9
	25-34	1.3	225.7	830.1	**1,057.1**	2.5	227.8	773.8	1,004.1
	35-44	0.8	213.5	747.2	**961.5**	1.5	205.6	666.2	873.4
	45-54	2.3	191.6	676.3	**870.1**	1.4	182.2	596.8	780.4
	55-64	1.3	142.1	553.3	**696.7**	1.4	145.5	493.4	640.2
	65+	1.1	109.8	417.5	**528.4**	1.3	103.5	373.6	478.5
	Total	1.4	187.4	695.9	**884.7**	1.8	185.5	633.4	820.7

The rate of involvement for men in traffic collisions in 2017 is 884.7, nearly one-and-a-half times that of women (615.9). Driver involvement rates in 2017:

- Fatal collisions: male rate – 1.4, female rate – 0.5
- Injury collisions: male rate – 187.4, female rate – 177.2
- PDO collisions: male rate – 695.9, female rate – 438.3

The reader should note that the calculated driver involvement rates do not take into account exposure to risk in terms of driving situations, hours driven or kilometres driven.

In 2017, young males, especially those under age 25, have the highest driver involvement rates of all driver gender-age groups. Young females under age 25 have higher driver involvement rates in total collisions than female drivers aged 25 and older.

Compared to the previous five year (2012 to 2016) annual average, driver involvement rates in 2017 for all gender-age groups increased for overall traffic collisions, while there had been some decreases in driver involvement rates for fatal and injury collisions in 2017.

Driver involvement rates in fatal collisions show some variations. Comparing 2017 to the previous five year (2012 to 2016) annual average:

- Female involvement rates in fatal collisions decreased by 37% overall. However, the rates increased for females age 35 to 44 and age 55 to 64 while all other age groups decreased.
- Male involvement rates in fatal collisions decreased by 22% overall. However, the rates among male drivers age 45 to 54 increased while all other age groups decreased.

SECTION 9 – Contributing Factors

Introduction

This section examines the contributing factors to traffic collisions as reported on the Traffic Accident Report (TAR). Detail is provided at the collision level, at the victim level and at the driver level. Driver involvement rates (per 10,000 licensed drivers) in collisions with specific contributing factors are also provided and discussed. The reader is cautioned to note that more than one contributing factor can be recorded for each vehicle and/or driver involved in a collision. The total count of contributing factors noted will add to more than the number of collisions, vehicles, drivers, or victims in those crashes.

Key Highlights

In 2017, 64% of all collisions have some at-fault contributing factor recorded (92% of fatal collisions; 77% of injury collisions). In 2017:

- A driver action is a contributing factor in 56% of all **collisions** (77% of fatal collisions; 74% of injury collisions; 52% of PDO collisions);
- A human condition is a contributing factor in nearly 1% of all **collisions** (40% of fatal collisions; 1% of injury collisions; 0.4% of PDO collisions); and,
- Environmental conditions are contributing factors in 13% of all **collisions** (12% of fatal collisions; 8% of injury collisions; 14% of PDO collisions).

The most prevalent **contributing factors recorded for collisions** in 2017 include:

- Distracted driving – 30% of all collisions (40% fatal; 36% injury; 28% PDO);
- "Following too closely" – 12% of all collisions (nearly 2% fatal; 24% injury; 9% PDO);
- Speed – 7% of all collisions (nearly 19% fatal; 9% injury; 7% PDO);
- "Backing unsafely" – 7% of all collisions (no fatal; 3% injury; 8% PDO);
- The actions of a wild animal – 7% of all collisions (nearly 2% fatal; 1% injury; 8% PDO);
- "Turning improperly" – 5% of all collisions (5% fatal; nearly 9% injury; 5% PDO);
- "Fail to yield right-of-way" – 5% of all collisions (15% fatal; nearly 10% injury; 4% PDO);
- "Changing lanes improperly" – 4% of all collisions (3% fatal; 4% injury; 4% PDO);
- "Slippery road surface" – 4% of all collisions (nearly 2% fatal; 5% injury; 4% PDO); and,
- "Lost control/Drive off the road" – 3% of all collisions (nearly 19% fatal; 3% injury; 2% PDO).

Considering the **victims from collisions** in 2017:

- 76% of all victims resulted from a collision where at least one driver is noted as having a driver action contributing to the collision (78% of people killed; nearly 84% of people seriously injured);
- 1% of all victims resulted from a collision where at least one driver is noted as having a human condition contributing to the collision (38% of people killed; 11% of people seriously injured); and,
- 8% of all victims resulted from a collision where environmental conditions are noted as contributing to the collision (11% of people killed; 14% of people seriously injured).

The most prevalent contributing factors recorded for collisions where **people are killed or seriously injured** in 2017 include:

- Distracted driving – 41% of people killed and 42% of people seriously injured;
- Impaired – nearly 32% of people killed and 6% of people seriously injured;
- Speed – 18% of people killed and 16% of people seriously injured;
- "Fail to yield right-of-way" – 16% of people killed and 14% of people seriously injured;
- "Lost control/Drive off the road" – 16% of people killed and 11% of people seriously injured;
- "Turning improperly" – 8% of people killed and 8% of people seriously injured;
- "Disobey traffic control" – 8% of people killed and 6% of people seriously injured;
- "Drive wrong way on roadway" – 8% of people killed and 2% of people seriously injured;
- "Loss of consciousness" – nearly 6% of people killed and 2% of people seriously injured;
- "Pedestrian error/confusion" – nearly 6% of people killed and nearly 1% of people seriously injured;
- "Leave stop sign before safe to do so" – 4% of people killed and 4% of people seriously injured; and,
- "View obstructed" – 4% of the people killed and 2% of people seriously injured.

In 2017, nearly 51% of the **drivers involved in traffic collisions** were recorded as not being at-fault in the collision.

- 32% of the drivers involved in a fatal collision were noted as not being at-fault.
- 54% of the drivers in an injury collision were noted as not being at-fault.
- 49% of the drivers in a PDO collision were noted as not being at-fault.

Driver actions were recorded for 43% of the **drivers involved in traffic collisions** in 2017.

- Nearly 57% of the drivers involved in fatal collisions had a driver action recorded.
- 44% of the drivers involved in injury collisions had a driver action recorded.
- 42% of the drivers involved in PDO collisions had a driver action recorded.

Human conditions were recorded as contributing factors for 0.4% of the **drivers involved in traffic collisions** in 2017.

- 25% of the drivers involved in fatal collisions had a human condition recorded.
- 0.5% of the drivers involved in injury collisions had a human condition recorded.
- 0.3% of the drivers involved in PDO collisions had a human condition recorded.

Environmental conditions were recorded as contributing factors for 9% of **drivers involved in traffic collisions** in 2017.

- 8% of the drivers involved in fatal collisions had some environmental condition recorded.
- 5% of the drivers involved in injury collisions had some environmental condition recorded.
- 11% of the drivers involved in PDO collisions had some environmental condition recorded.

In 2017, the **driver involvement rate** (per 10,000 licensed drivers) in traffic collisions where:

- Any driver action is a contributing factor is 323.7, increased by 11% from the previous five years (292.0);
- Any human condition is a contributing factor is 2.9, decreased by nearly 38% from the previous five years (4.6);
- Environmental conditions are a contributing factor is 71.4, increased by 6% from the previous five years (67.3);
- Distracted driving is a contributing factor is 170.1, increased by 82% from the previous five years (93.3);
- Speed is a contributing factor is 40.7, increased by nearly 32% from the previous five years (31.0); and,
- Impaired is a contributing factor is 1.3, decreased by 7% from the previous five years (1.4).

Major Elements Examined

Counts of drivers involved in collisions in Manitoba for 2017 and previous years are taken from Traffic Accident Reports (TARs) completed by Manitoba Public Insurance and law enforcement agencies, and compiled by Manitoba Public Insurance. These counts are presented for all reportable collisions, fatal collisions, injury collisions, and property damage only (PDO) collisions.

When reviewing the “Contributing Factors” for a traffic collision, the reader is cautioned to note that more than one contributing factor can be recorded for each collision. The total count of contributing factors noted will add to more than the number of collisions, vehicles, drivers or victims in those crashes.

For the purposes of this report, speed as a contributing factor is discussed as being a combination of the individual factors “exceeding speed limit”, “driving too fast for conditions” and “unsafe operating speed (too fast or too slow)”.

For the purposes of this report, impaired as a contributing factor is discussed as being a combination of the individual factors “ability impaired by alcohol”, “ability impaired by drugs” and “had been drinking/suspected alcohol use”.

For the purposes of this report, distracted driving as a contributing factor is discussed as being a combination of the individual factors “careless driving” and “distraction/inattention”.

It is important to note that the number of collisions is not equal to the number of drivers involved in collisions because some collisions involve more than one driver while others involve a single driver. (A full definition of what constitutes a "driver" for this report is provided under the "Terms and Definitions" heading.) Because there are more drivers involved in collisions than collisions overall, relative involvement rates calculated based on the number of drivers will be higher than the relative involvement rates calculated based on the number of collisions.

When exploring the number of drivers in different age groups involved in traffic collisions, the reader is cautioned that the driver's age is missing in some collisions.

The reader is cautioned that not all percentages and calculations in the following tables will add to 100% of the total noted. Rounding error will often produce a difference of one or two percentage points. Average annual calculations are presented for historical data from the years 2012 to 2016. Rounding error in these calculations will cause individual average counts not to add to total average counts in some cases.

Due to the small numbers of fatal collisions, fluctuations year-over-year could be dramatic; a small change in the total count of these types of collisions could have a significant effect on statistics such as percentage change to previous years and relative involvement rates. Therefore, the reader is strongly cautioned when interpreting results regarding fatal collisions.

Terms and Definitions

"Contributing Factor"

- Those circumstances or factors recorded as having contributed to the collision or its severity. Factors can be selected from four categories: driver action, human condition, vehicle condition, or environmental condition. The TAR allows for up to three contributing factors to be recorded for each driver or vehicle involved in the collision.

"At-fault Contributing Factor"

- A contributing factor where some action or condition other than "driving properly" and "apparently normal" has been noted.

"Driver Action"

- A category of contributing factors attributed to actions taken or performed by a driver immediately prior to a collision.

"Human Condition"

- A category of contributing factors attributed to the physical or mental condition of a driver immediately prior to a collision, most often that limit the driver's ability to drive safely or properly.

"Vehicle Condition"

- A category of contributing factors attributed to the physical condition of a vehicle immediately prior to a collision.

"Environmental Condition"

- A category of contributing factors attributed to environmental conditions (i.e., weather, road surface and animal actions) immediately prior to a collision.

"Drivers"

- The number of drivers involved in collisions. It excludes pedestrians, bicyclists, snowmobiles, off-road vehicles, farm and construction equipment, trains and parked vehicles.

"Collision Severity"

- A classification of a collision based on the most severe result of the collision; i.e., whether someone was killed (fatal), injured (injury) or property damage only (PDO) occurred.

“Fatal Collision”

- A motor vehicle collision in which at least one person is killed as a result of the collision. The death must have occurred within thirty days of the collision occurrence.

“Injury Collision”

- A motor vehicle collision in which at least one person has been recorded as sustaining some level of personal injury, but in which no one is fatally injured or killed. Levels of injury include: ‘major’ (admitted to hospital); ‘minor’ (treated and released from hospital); and, ‘minimal’ (no hospital treatment required).

“Property Damage Only (PDO) Collision”

- A motor vehicle collision in which no injury or fatality is sustained and only property damage is the result.

“Driver Involvement Rate”

- A calculation of the number of drivers involved in traffic collisions for every 10,000 drivers licensed in Manitoba. The total number of drivers licensed to drive includes both active and suspended drivers. This involvement rate does not take into account the number of vehicle kilometers driven by each driver group.

Table 9-1 Contributing Factors to a Collision by Collision Severity

Table 9-1

Contributing Factors to a Collision by Collision Severity: 2017

Contributing Factor	2017 Collision Severity						**2017 Total Collisions**	**% of 2017 Total Collisions**
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Driver Action - Driving Properly and Human Condition - Apparently Normal	24	36.9%	8,004	82.6%	27,607	65.6%	**35,635**	**68.7%**
Driver Action - Driving properly	1	1.5%	54	0.6%	159	0.4%	**214**	**0.4%**
Any Driver Action	50	76.9%	7,210	74.4%	21,738	51.6%	**28,998**	**55.9%**
Follow too closely	1	1.5%	2,319	23.9%	3,960	9.4%	**6,280**	**12.1%**
Turning improperly	3	4.6%	822	8.5%	1,937	4.6%	**2,762**	**5.3%**
Passing improperly	2	3.1%	27	0.3%	127	0.3%	**156**	**0.3%**
Changing lanes improperly	2	3.1%	409	4.2%	1,738	4.1%	**2,149**	**4.1%**
Fail to yield right-of-way	10	15.4%	920	9.5%	1,680	4.0%	**2,610**	**5.0%**
Disobey traffic control device/officer	5	7.7%	266	2.7%	287	0.7%	**558**	**1.1%**
Drive wrong way on roadway	5	7.7%	6	<0.1%	14	<0.1%	**25**	**<0.1%**
Passing a vehicle at pedestrian X-walk	0	-	1	<0.1%	2	<0.1%	**3**	**<0.1%**
Back unsafely	0	-	253	2.6%	3,243	7.7%	**3,496**	**6.7%**
Parking improperly	0	-	12	0.1%	200	0.5%	**212**	**0.4%**
Lost control/Drive off road	12	18.5%	305	3.1%	1,030	2.4%	**1,347**	**2.6%**
Driverless vehicle ran out of control	0	-	15	0.2%	38	<0.1%	**53**	**0.1%**
Leave stop sign before safe to do so	2	3.1%	319	3.3%	548	1.3%	**869**	**1.7%**
Failed to signal	0	-	11	0.1%	20	<0.1%	**31**	**<0.1%**
Take avoiding action	1	1.5%	111	1.1%	432	1.0%	**544**	**1.0%**
Driver inexperience	2	3.1%	60	0.6%	173	0.4%	**235**	**0.5%**
Pedestrian error/confusion	4	6.2%	30	0.3%	37	<0.1%	**71**	**0.1%**
NET Speed	12	18.5%	830	8.6%	2,850	6.8%	**3,692**	**7.1%**
Exceeding speed limit	1	1.5%	9	<0.1%	21	<0.1%	**31**	**<0.1%**
Driving too fast for conditions	9	13.8%	815	8.4%	2,819	6.7%	**3,643**	**7.0%**
Unsafe operating speed (Too fast or too slow)	2	3.1%	7	<0.1%	14	<0.1%	**23**	**<0.1%**
NET Distracted driving	26	40.0%	3,495	36.1%	11,882	28.2%	**15,403**	**29.7%**
Careless Driving	18	27.7%	3,387	34.9%	11,619	27.6%	**15,024**	**29.0%**
Distraction/Inattention	9	13.8%	267	2.8%	792	1.9%	**1,068**	**2.1%**

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Collision Severity						2017 Total Collisions	% of 2017 Total Collisions
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Human Condition - Apparently Normal	3	4.6%	4,132	42.6%	15,972	37.9%	**20,107**	**38.8%**
Any Human Condition	26	40.0%	94	1.0%	158	0.4%	**278**	**0.5%**
Loss of consciousness/Blackout prior to collision	4	6.2%	24	0.2%	26	<0.1%	**54**	**0.1%**
Extreme fatigue/Fell asleep	2	3.1%	18	0.2%	50	0.1%	**70**	**0.1%**
Defective eyesight	0	-	1	<0.1%	1	<0.1%	**2**	**<0.1%**
Defective hearing	0	-	0	-	0	-	**0**	**-**
Medical disability	0	-	9	<0.1%	6	<0.1%	**15**	**<0.1%**
Physical disability	0	-	0	-	3	<0.1%	**3**	**<0.1%**
Mental disability	0	-	2	<0.1%	1	<0.1%	**3**	**<0.1%**
Mental confusion/Inability to remember	0	-	9	<0.1%	10	<0.1%	**19**	**<0.1%**
Sudden illness	0	-	3	<0.1%	3	<0.1%	**6**	**<0.1%**
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	**0**	**-**
NET Impaired	21	32.3%	42	0.4%	70	0.2%	**133**	**0.3%**
Ability impaired alcohol	12	18.5%	35	0.4%	62	0.1%	**109**	**0.2%**
Ability impaired drugs	1	1.5%	1	<0.1%	6	<0.1%	**8**	**<0.1%**
Had been drinking/Suspected alcohol use	10	15.4%	10	0.1%	7	<0.1%	**27**	**<0.1%**
No Apparent (Vehicle) Defect	0	-	8,947	92.3%	36,955	87.8%	**45,902**	**88.5%**
Any Vehicle Defect	1	1.5%	37	0.4%	304	0.7%	**342**	**0.7%**
Defective brakes	0	-	12	0.1%	19	<0.1%	**31**	**<0.1%**
Defective steering	0	-	1	<0.1%	4	<0.1%	**5**	**<0.1%**
Defective headlights	0	-	1	<0.1%	1	<0.1%	**2**	**<0.1%**
Defective brake lights	0	-	0	-	3	<0.1%	**3**	**<0.1%**
Defective lighting (unspecified)	1	1.5%	1	<0.1%	2	<0.1%	**4**	**<0.1%**
Defective engine controls/drive train	0	-	2	<0.1%	5	<0.1%	**7**	**<0.1%**
Defective suspension/wheels	0	-	3	<0.1%	55	0.1%	**58**	**0.1%**
Defective tires	0	-	6	<0.1%	94	0.2%	**100**	**0.2%**
Tow hitch/yoke defective	0	-	4	<0.1%	11	<0.1%	**15**	**<0.1%**
Defective exhaust system	0	-	0	-	0	-	**0**	**-**
Hood/tailgate/door/covering opened	0	-	1	<0.1%	4	<0.1%	**5**	**<0.1%**
Defective glazing (obscured windows)	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Vehicle modifications	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Fire	0	-	1	<0.1%	0	-	**1**	**<0.1%**
Overloaded/oversized	0	-	0	-	4	<0.1%	**4**	**<0.1%**
Load shifted/spilled	0	-	3	<0.1%	34	<0.1%	**37**	**<0.1%**

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Collision Severity						2017 Total Collisions	% of 2017 Total Collisions
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Jack-knife/trailer swing	0	-	2	<0.1%	69	0.2%	**71**	**0.1%**
Hydroplaning tires	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Any Environmental Condition	8	12.3%	795	8.2%	5,725	13.6%	**6,528**	**12.6%**
Animal action - Wild	1	1.5%	115	1.2%	3,321	7.9%	**3,437**	**6.6%**
Animal action - Domestic	0	-	14	0.1%	53	0.1%	**67**	**0.1%**
Slippery road surface	1	1.5%	458	4.7%	1,570	3.7%	**2,029**	**3.9%**
Snow drift	0	-	11	0.1%	87	0.2%	**98**	**0.2%**
Obstruction/debris on roadway	0	-	26	0.3%	254	0.6%	**280**	**0.5%**
View obstructed/limited	3	4.6%	59	0.6%	173	0.4%	**235**	**0.5%**
Glare/reflection	1	1.5%	7	<0.1%	27	<0.1%	**35**	**<0.1%**
Construction zone	0	-	4	<0.1%	17	<0.1%	**21**	**<0.1%**
Defective driving surface	1	1.5%	17	0.2%	119	0.3%	**137**	**0.3%**
Shoulders defective	0	-	1	<0.1%	2	<0.1%	**3**	**<0.1%**
Lane markings inadequate	0	-	0	-	4	<0.1%	**4**	**<0.1%**
Defective/inoperative traffic control device	0	-	11	0.1%	6	<0.1%	**17**	**<0.1%**
Weather	2	3.1%	66	0.7%	145	0.3%	**213**	**0.4%**
Pedestrian corridor in use	1	1.5%	27	0.3%	17	<0.1%	**45**	**<0.1%**
Uninvolved vehicle	0	-	8	<0.1%	11	<0.1%	**19**	**<0.1%**
Uninvolved pedestrian	0	-	7	<0.1%	6	<0.1%	**13**	**<0.1%**
Presence of prior accident	0	-	0	-	1	<0.1%	**1**	**<0.1%**
No Contributing Factor(s) Identified	1	1.5%	144	1.5%	282	0.7%	**427**	**0.8%**
Not Stated	0	-	16	0.2%	36	<0.1%	**52**	**0.1%**
Total	65	100%	9,691	100%	42,088	100%	**51,844**	**100.0%**

*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each collision severity will add to more than the total collisions of that severity.

Table 9-1a Contributing Factors to a Collision by Collision Severity for Previous Five Years

Table 9-1a

Contributing Factors to a Collision by Collision Severity: 2012-2016 Average

Contributing Factor	2012-2016 Average Count				
	Fatal	Injury	PDO	Total Collisions	% of Total Collisions
Driver Action - Driving Properly and Human Condition - Apparently Normal	35	7,246	19,782	27,063	65.0%
Driver Action - Driving properly	2	208	480	690	1.7%
Any Driver Action	59	6,093	18,965	25,118	60.3%
Following too closely	2	2,245	4,101	6,348	15.2%
Turning improperly	2	617	1,554	2,174	5.2%
Passing improperly	2	30	120	152	0.4%
Changing lanes improperly	<1	284	1,461	1,746	4.2%
Fail to yield right-of-way	8	666	1,374	2,049	4.9%
Disobey traffic control device/officer	6	195	252	452	1.1%
Drive wrong way on roadway	2	7	12	21	<0.1%
Passing a vehicle at pedestrian X-walk	-	<1	-	<1	<0.1%
Back unsafely	<1	199	2,759	2,957	7.1%
Parking improperly	<1	10	129	139	0.3%
Lost control/Drive off road	14	325	1,075	1,414	3.4%
Driverless vehicle ran out of control	<1	5	22	28	<0.1%
Leave stop sign before safe to do so	3	267	519	790	1.9%
Failed to signal	-	6	10	16	<0.1%
Take avoiding action	2	70	374	446	1.1%
Driver inexperience	2	41	113	156	0.4%
Pedestrian error/confusion	4	19	22	46	0.1%
NET Speed	15	608	2,064	2,688	6.5%
Exceeding speed limit	7	8	13	29	<0.1%
Driving too fast for conditions	6	586	2,026	2,618	6.3%
Unsafe operating speed (Too fast or too slow)	3	17	27	48	0.1%
NET Distracted driving	24	1,782	6,296	8,101	19.4%
Careless Driving	16	1,656	6,032	7,704	18.5%
Distraction/Inattention	9	172	358	540	1.3%
Human Condition - Apparently Normal	16	1,742	5,636	7,393	17.7%
Any Human Condition	29	151	228	408	1.0%
Loss of consciousness/Blackout prior to collision	1	22	14	37	<0.1%
Extreme fatigue/Fell asleep	1	22	42	66	0.2%
Defective eyesight	<1	2	3	6	<0.1%
Defective hearing	<1	-	<1	<1	<0.1%
Medical disability	<1	6	6	11	<0.1%
Physical disability	<1	<1	2	3	<0.1%
Mental disability	<1	2	1	4	<0.1%
Mental confusion/Inability to remember	-	10	10	20	<0.1%
Sudden illness	<1	4	3	9	<0.1%
Exceed hours of service (commercial drivers only)	-	-	-	-	-
NET Impaired	22	48	59	128	0.3%
Ability impaired alcohol	15	36	46	97	0.2%
Ability impaired drugs	1	2	1	5	<0.1%
Had been drinking/Suspected alcohol use	7	14	13	34	<0.1%
No Apparent (Vehicle) Defect	45	7,557	21,938	29,540	70.9%
Any Vehicle Defect	2	27	213	243	0.6%
Defective brakes	<1	6	15	21	<0.1%
Defective steering	-	1	6	7	<0.1%
Defective headlights	-	-	-	-	-
Defective brake lights	<1	1	4	5	<0.1%
Defective lighting (unspecified)	<1	<1	<1	2	<0.1%
Defective engine controls/drive train	-	1	6	7	<0.1%

(continued on next page)

(continued from previous page)

Contributing Factor	2012-2016 Average Count				
	Fatal	Injury	PDO	Total Collisions	% of Total Collisions
Defective suspension/wheels	-	4	36	39	<0.1%
Defective tires	<1	5	52	57	0.1%
Tow hitch/yoke defective	-	<1	16	16	<0.1%
Defective exhaust system	<1	-	-	<1	<0.1%
Hood/tailgate/door/covering opened	<1	<1	5	6	<0.1%
Defective glazing (obscured windows)	-	<1	2	3	<0.1%
Vehicle modifications	-	<1	1	1	<0.1%
Fire	-	1	2	3	<0.1%
Overloaded/oversized	-	<1	2	2	<0.1%
Load shifted/spilled	-	2	16	18	<0.1%
Jack-knife/trailer swing	<1	2	51	53	0.1%
Hydroplaning tires	<1	2	5	7	<0.1%
Any Environmental Condition	9	667	5,172	5,848	14.0%
Animal action - Wild	<1	162	3,342	3,505	8.4%
Animal action - Domestic	-	7	38	44	0.1%
Slippery road surface	4	340	1,217	1,561	3.7%
Snow drift	<1	11	76	87	0.2%
Obstruction/debris on roadway	<1	13	170	183	0.4%
View obstructed/limited	1	46	93	140	0.3%
Glare/reflection	-	12	25	36	<0.1%
Construction zone	-	5	14	19	<0.1%
Defective driving surface	<1	12	73	85	0.2%
Shoulders defective	<1	3	5	8	<0.1%
Lane markings inadequate	-	2	5	7	<0.1%
Defective/inoperative traffic control device	<1	5	7	12	<0.1%
Weather	3	54	136	193	0.5%
Pedestrian corridor in use	<1	7	8	15	<0.1%
Uninvolved vehicle	-	7	15	22	<0.1%
Uninvolved pedestrian	-	3	3	6	<0.1%
Presence of prior accident	-	1	2	4	<0.1%
No Contributing Factor(s) Identified	7	772	1,583	2,362	5.7%
Not Stated	-	7	25	32	<0.1%
Total	77	8,948	32,640	41,665	100%

Note: Counts of collisions in the 2012-2016 average may not add to the total due to rounding.
*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each collision severity will add to more than the total collisions of that severity.

While contributing factors are recorded for each vehicle and/or driver involved in a collision, examining contributing factors at the driver level does not reveal the full detail of what may have caused the collision overall. To understand the **contributing factors to a collision**, contributing factors recorded for each vehicle and/or driver involved in the collision are examined at the collision level, that is, rather than at the individual driver level. In this analysis (presented in Table 9-1 and Table 9-1a), all factors noted as contributing to the collision overall are examined.

In 2017, 64% of **all collisions** have at least one driver noted as having an at-fault contributing factor[2]. Most fatal collisions (92%) have at least one driver with an at-fault contributing factor while 77% of injury collisions do. In the previous five year (2012 to 2016) annual average, 72% of all collisions have at least one driver noted as having an at-fault contributing factor, including 86% of fatal collisions and nearly 73% of injury collisions.

In 2017:

- A driver action is a contributing factor in 56% of all collisions (77% of fatal collisions; 74% of injury collisions; 52% of PDO collisions);
- A human condition is a contributing factor in nearly 1% of all collisions (40% of fatal collisions; 1% of injury collisions; 0.4% of PDO collisions);
- Environmental conditions are contributing factors in 13% of all collisions (12% of fatal collisions; 8% of injury collisions; 14% of PDO collisions); and,
- Some vehicle defect is noted as contributing factor in 1% of all collisions, including 1 fatal collision.

In the five year (2012 to 2016) annual average:

- 60% of all collisions have at least one driver noted as having a driver action (77% of fatal collisions; 68% of injury collisions; 58% of PDO collisions);
- 1% of all collisions have at least one driver noted as having a human condition (38% of fatal collisions; 2% of injury collisions; 1% of PDO collisions);
- 14% of all collisions have an environmental condition noted as contributing to the collision (12% of fatal collisions; nearly 8% of injury collisions; 16% of PDO collisions); and,
- 0.6% of collisions have a vehicle defect noted as contributing to the collision, including 2 fatal collisions each year.

The most prevalent **contributing factors recorded for collisions** in 2017 include:

- Distracted driving – 30% of all collisions (40% fatal; 36% injury; 28% PDO);
- "Following too closely" – 12% of all collisions (nearly 2% fatal; 24% injury; 9% PDO);
- Speed – 7% of all collisions (nearly 19% fatal; 9% injury; 7% PDO);
- "Backing unsafely" – 7% of all collisions (no fatal; 3% injury; 8% PDO);
- The actions of a wild animal – 7% of all collisions (nearly 2% fatal; 1% injury; 8% PDO);
- "Turning improperly" – 5% of all collisions (5% fatal; nearly 9% injury; 5% PDO);
- "Fail to yield right-of-way" – 5% of all collisions (15% fatal; nearly 10% injury; 4% PDO);
- "Changing lanes improperly" – 4% of all collisions (3% fatal; 4% injury; 4% PDO);
- "Slippery road surface" – 4% of all collisions (nearly 2% fatal; 5% injury; 4% PDO); and,
- "Lost control/Drive off the road" – 3% of all collisions (nearly 19% fatal; 3% injury; 2% PDO).

NOTE: For a detailed count of contributing factors recorded for collisions occurring in each year from 2012 to 2017, please refer to "*Table 9-6 Historical Summary of Contributing Factors to a Collision*" at the end of this section.

[2] An "at-fault contributing factor" is an indication that some action or condition of the driver, vehicle or environment has been recorded as contributing to the collision. It excludes indications of the driver "driving properly" and being "apparently normal".

Table 9-2 Contributing Factors for Victims of a Collision by Casualty Type

Table 9-2
Contributing Factors for Each Victim of a Collision by Casualty Type: 2017

Contributing Factor	2017 Casualty Type								**2017 Total Casualties**	**% of 2017 Total Casualties**
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Other Injuries	% of Total Other Injuries	Total Injuries	% of Total Injuries		
Driver Action - Driving Properly and Human Condition - Apparently Normal	28	38.4%	262	59.3%	10,349	85.2%	10,611	84.3%	**10,639**	**84.0%**
Driver Action - Driving properly	1	1.4%	3	0.7%	70	0.6%	73	0.6%	**74**	**0.6%**
Any Driver Action	57	78.1%	369	83.5%	9,231	76.0%	9,600	76.3%	**9,657**	**76.3%**
Following too closely	1	1.4%	26	5.9%	3,143	25.9%	3,169	25.2%	**3,170**	**25.0%**
Turning improperly	6	8.2%	37	8.4%	1,079	8.9%	1,116	8.9%	**1,122**	**8.9%**
Passing improperly	2	2.7%	4	0.9%	35	0.3%	39	0.3%	**41**	**0.3%**
Changing lanes improperly	2	2.7%	14	3.2%	506	4.2%	520	4.1%	**522**	**4.1%**
Fail to yield right-of-way	12	16.4%	62	14.0%	1,207	9.9%	1,269	10.1%	**1,281**	**10.1%**
Disobey traffic control device/officer	6	8.2%	26	5.9%	377	3.1%	403	3.2%	**409**	**3.2%**
Drive wrong way on roadway	6	8.2%	9	2.0%	11	<0.1%	20	0.2%	**26**	**0.2%**
Passing a vehicle at pedestrian X-walk	0	-	0	-	1	<0.1%	1	<0.1%	**1**	**<0.1%**
Back unsafely	0	-	6	1.4%	287	2.4%	293	2.3%	**293**	**2.3%**
Parking improperly	0	-	0	-	14	0.1%	14	0.1%	**14**	**0.1%**
Lost control/Drive off road	12	16.4%	47	10.6%	344	2.8%	391	3.1%	**403**	**3.2%**
Driverless vehicle ran out of control	0	-	1	0.2%	18	0.1%	19	0.2%	**19**	**0.2%**
Leave stop sign before safe to do so	3	4.1%	16	3.6%	417	3.4%	433	3.4%	**436**	**3.4%**
Failed to signal	0	-	2	0.5%	12	<0.1%	14	0.1%	**14**	**0.1%**
Take avoiding action	1	1.4%	12	2.7%	120	1.0%	132	1.0%	**133**	**1.1%**
Driver inexperience	2	2.7%	10	2.3%	75	0.6%	85	0.7%	**87**	**0.7%**
Pedestrian error/confusion	4	5.5%	2	0.5%	35	0.3%	37	0.3%	**41**	**0.3%**
NET Speed	13	17.8%	69	15.6%	1,010	8.3%	1,079	8.6%	**1,092**	**8.6%**
Exceeding speed limit	1	1.4%	5	1.1%	13	0.1%	18	0.1%	**19**	**0.2%**
Driving too fast for conditions	10	13.7%	62	14.0%	992	8.2%	1,054	8.4%	**1,064**	**8.4%**
Unsafe operating speed (Too fast or too slow)	2	2.7%	3	0.7%	6	<0.1%	9	<0.1%	**11**	**<0.1%**
NET Distracted driving	30	41.1%	184	41.6%	4,448	36.6%	4,632	36.8%	**4,662**	**36.8%**
Careless Driving	21	28.8%	173	39.1%	4,296	35.4%	4,469	35.5%	**4,490**	**35.5%**
Distraction/Inattention	10	13.7%	22	5.0%	372	3.1%	394	3.1%	**404**	**3.2%**

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Casualty Type								**2017 Total Casualties**	**% of 2017 Total Casualties**
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Other Injuries	% of Total Other Injuries	Total Injuries	% of Total Injuries		
Human Condition - Apparently Normal	3	4.1%	144	32.6%	5,233	43.1%	5,377	42.7%	**5,380**	**42.5%**
Any Human Condition	28	38.4%	49	11.1%	97	0.8%	146	1.2%	**174**	**1.4%**
Loss of consciousness/Blackout prior to collision	4	5.5%	9	2.0%	21	0.2%	30	0.2%	**34**	**0.3%**
Extreme fatigue/Fell asleep	2	2.7%	8	1.8%	14	0.1%	22	0.2%	**24**	**0.2%**
Defective eyesight	0	-	1	0.2%	1	<0.1%	2	<0.1%	**2**	**<0.1%**
Defective hearing	0	-	0	-	0	-	0	-	**0**	**-**
Medical disability	0	-	3	0.7%	9	<0.1%	12	<0.1%	**12**	**<0.1%**
Physical disability	0	-	0	-	0	-	0	-	**0**	**-**
Mental disability	0	-	1	0.2%	1	<0.1%	2	<0.1%	**2**	**<0.1%**
Mental confusion/Inability to remember	0	-	5	1.1%	8	<0.1%	13	0.1%	**13**	**0.1%**
Sudden illness	0	-	2	0.5%	2	<0.1%	4	<0.1%	**4**	**<0.1%**
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	0	-	**0**	**-**
NET Impaired	23	31.5%	27	6.1%	54	0.4%	81	0.6%	**104**	**0.8%**
Ability impaired alcohol	13	17.8%	15	3.4%	43	0.4%	58	0.5%	**71**	**0.6%**
Ability impaired drugs	1	1.4%	1	0.2%	0	-	1	<0.1%	**2**	**<0.1%**
Had been drinking/Suspected alcohol use	11	15.1%	13	2.9%	14	0.1%	27	0.2%	**38**	**0.3%**
No Apparent (Vehicle) Defect	0	-	274	62.0%	11,365	93.6%	11,639	92.5%	**11,639**	**91.9%**
Any Vehicle Defect	1	1.4%	2	0.5%	49	0.4%	51	0.4%	**52**	**0.4%**
Defective brakes	0	-	0	-	18	0.1%	18	0.1%	**18**	**0.1%**
Defective steering	0	-	0	-	2	<0.1%	2	<0.1%	**2**	**<0.1%**
Defective headlights	0	-	0	-	1	<0.1%	1	<0.1%	**1**	**<0.1%**
Defective brake lights	0	-	0	-	0	-	0	-	**0**	**-**
Defective lighting (unspecified)	1	1.4%	0	-	1	<0.1%	1	<0.1%	**2**	**<0.1%**
Defective engine controls/drive train	0	-	0	-	2	<0.1%	2	<0.1%	**2**	**<0.1%**
Defective suspension/wheels	0	-	0	-	3	<0.1%	3	<0.1%	**3**	**<0.1%**
Defective tires	0	-	1	0.2%	7	<0.1%	8	<0.1%	**8**	**<0.1%**
Tow hitch/yoke defective	0	-	1	0.2%	5	<0.1%	6	<0.1%	**6**	**<0.1%**
Defective exhaust system	0	-	0	-	0	-	0	-	**0**	**-**
Hood/tailgate/door/covering opened	0	-	0	-	1	<0.1%	1	<0.1%	**1**	**<0.1%**
Defective glazing (obscured windows)	0	-	0	-	0	-	0	-	**0**	**-**
Vehicle modifications	0	-	0	-	0	-	0	-	**0**	**-**
Fire	0	-	0	-	2	<0.1%	2	<0.1%	**2**	**<0.1%**
Overloaded/oversized	0	-	0	-	0	-	0	-	**0**	**-**
Load shifted/spilled	0	-	0	-	5	<0.1%	5	<0.1%	**5**	**<0.1%**

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Casualty Type								**2017 Total Casualties**	**% of 2017 Total Casualties**
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Other Injuries	% of Total Other Injuries	Total Injuries	% of Total Injuries		
Jack-knife/trailer swing	0	-	0	-	2	<0.1%	2	<0.1%	**2**	**<0.1%**
Hydroplaning tires	0	-	0	-	0	-	0	-	**0**	**-**
Any Environmental Condition	8	11.0%	62	14.0%	965	7.9%	1,027	8.2%	**1,035**	**8.2%**
Animal action - Wild	1	1.4%	9	2.0%	121	1.0%	130	1.0%	**131**	**1.0%**
Animal action - Domestic	0	-	0	-	18	0.1%	18	0.1%	**18**	**0.1%**
Slippery road surface	1	1.4%	31	7.0%	570	4.7%	601	4.8%	**602**	**4.8%**
Snow drift	0	-	1	0.2%	12	<0.1%	13	0.1%	**13**	**0.1%**
Obstruction/debris on roadway	0	-	2	0.5%	34	0.3%	36	0.3%	**36**	**0.3%**
View obstructed/limited	3	4.1%	8	1.8%	84	0.7%	92	0.7%	**95**	**0.8%**
Glare/reflection	1	1.4%	0	-	8	<0.1%	8	<0.1%	**9**	**<0.1%**
Construction zone	0	-	0	-	6	<0.1%	6	<0.1%	**6**	**<0.1%**
Defective driving surface	1	1.4%	1	0.2%	28	0.2%	29	0.2%	**30**	**0.2%**
Shoulders defective	0	-	0	-	1	<0.1%	1	<0.1%	**1**	**<0.1%**
Lane markings inadequate	0	-	0	-	0	-	0	-	**0**	**-**
Defective/inoperative traffic control device	0	-	3	0.7%	11	<0.1%	14	0.1%	**14**	**0.1%**
Weather	2	2.7%	5	1.1%	81	0.7%	86	0.7%	**88**	**0.7%**
Pedestrian corridor in use	1	1.4%	5	1.1%	27	0.2%	32	0.3%	**33**	**0.3%**
Uninvolved vehicle	0	-	1	0.2%	7	<0.1%	8	<0.1%	**8**	**<0.1%**
Uninvolved pedestrian	0	-	0	-	7	<0.1%	7	<0.1%	**7**	**<0.1%**
Presence of prior accident	0	-	0	-	0	-	0	-	**0**	**-**
No Contributing Factor(s) Identified	1	1.4%	11	2.5%	160	1.3%	171	1.4%	**172**	**1.4%**
Not Stated	0	-	1	0.2%	17	0.1%	18	0.1%	**18**	**0.1%**
Total	73	100%	442	100.0%	12,144	100.0%	12,586	100.0%	**12,659**	**100.0%**

*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each casualty type will add to more than the total victims of that casualty type.
"Other Injuries" includes injuries defined as "Minor", Minimal" and "Other", or undefined in severity.

Table 9-2a Contributing Factors for Victims of a Collision by Casualty Type for Previous Five Years

Table 9-2a
Contributing Factors for Each Victim of a Collision by Casualty Type: 2012-2016 Average

Contributing Factor	2012-2016 Average Count of Casualties					
	Killed	Serious Injury	Other Injuries	Total Injuries	Total Casualties	% of Total Casualties
Driver Action - Driving Properly and Human Condition - Apparently Normal	41	207	9,292	9,499	9,540	82.0%
Driver Action - Driving properly	2	11	283	294	296	2.5%
Any Driver Action	67	252	7,727	7,979	8,046	69.1%
Following too closely	2	22	2,880	2,901	2,904	24.9%
Turning improperly	2	27	811	838	841	7.2%
Passing improperly	3	4	39	43	46	0.4%
Changing lanes improperly	<1	5	344	349	350	3.0%
Fail to yield right-of-way	9	36	901	938	947	8.1%
Disobey traffic control device/officer	6	13	283	296	302	2.6%
Drive wrong way on roadway	3	2	12	14	17	0.1%
Passing a vehicle at pedestrian X-walk	-	<1	<1	<1	<1	<0.1%
Back unsafely	<1	1	226	228	228	2.0%
Parking improperly	<1	<1	11	12	12	0.1%
Lost control/Drive off road	15	47	363	410	425	3.6%
Driverless vehicle ran out of control	<1	<1	7	7	7	<0.1%
Leave stop sign before safe to do so	4	20	354	373	377	3.2%
Failed to signal	-	-	7	7	7	<0.1%
Take avoiding action	2	5	82	86	88	0.8%
Driver inexperience	2	5	50	54	56	0.5%
Pedestrian error/confusion	4	5	18	23	27	0.2%
NET Speed	18	48	751	800	818	7.0%
Exceeding speed limit	8	8	12	20	28	0.2%
Driving too fast for conditions	7	35	723	758	765	6.6%
Unsafe operating speed (Too fast or too slow)	4	7	19	26	31	0.3%
NET Distracted driving	28	93	2,248	2,341	2,369	20.4%
Careless Driving	19	77	2,080	2,158	2,177	18.7%
Distraction/Inattention	10	21	230	252	262	2.3%
Human Condition - Apparently Normal	17	56	2,240	2,295	2,312	19.9%
Any Human Condition	33	50	178	228	262	2.2%
Loss of consciousness/Blackout prior to collision	2	8	19	27	29	0.2%
Extreme fatigue/Fell asleep	1	5	23	28	29	0.3%
Defective eyesight	<1	1	2	3	4	<0.1%
Defective hearing	<1	-	<1	<1	<1	<0.1%
Medical disability	<1	1	6	7	8	<0.1%
Physical disability	<1	<1	1	1	2	<0.1%
Mental disability	<1	1	3	4	5	<0.1%
Mental confusion/Inability to remember	-	3	10	13	13	0.1%
Sudden illness	<1	1	3	5	5	<0.1%
Exceed hours of service (commercial drivers only)	-	-	-	-	-	-
NET Impaired	25	27	68	95	120	1.0%
Ability impaired alcohol	17	20	47	67	84	0.7%
Ability impaired drugs	2	1	4	6	7	<0.1%
Had been drinking/Suspected alcohol use	8	8	22	30	38	0.3%
No Apparent (Vehicle) Defect	51	233	9,642	9,876	9,927	85.3%
Any Vehicle Defect	3	3	35	38	41	0.4%
Defective brakes	<1	<1	8	9	9	<0.1%
Defective steering	-	-	2	2	2	<0.1%
Defective headlights	-	-	-	-	-	-

(continued on next page)

(continued from previous page)

Contributing Factor	2012-2016 Average Count of Casualties					
	Killed	Serious Injury	Other Injuries	Total Injuries	Total Casualties	% of Total Casualties
Defective brake lights	<1	<1	2	2	3	<0.1%
Defective lighting (unspecified)	<1	-	1	1	2	<0.1%
Defective engine controls/drive train	-	<1	1	1	1	<0.1%
Defective suspension/wheels	-	<1	5	5	5	<0.1%
Defective tires	<1	1	6	7	8	<0.1%
Tow hitch/yoke defective	-	-	<1	<1	<1	<0.1%
Defective exhaust system	<1	-	-	-	<1	<0.1%
Hood/tailgate/door/covering opened	<1	-	<1	<1	1	<0.1%
Defective glazing (obscured windows)	-	-	1	1	1	<0.1%
Vehicle modifications	-	-	<1	<1	<1	<0.1%
Fire	-	<1	1	1	1	<0.1%
Overloaded/oversized	-	-	<1	<1	<1	<0.1%
Load shifted/spilled	-	<1	2	2	2	<0.1%
Jack-knife/trailer swing	<1	<1	2	2	2	<0.1%
Hydroplaning tires	<1	<1	2	2	2	<0.1%
Any Environmental Condition	10	41	806	847	857	7.4%
Animal action - Wild	<1	7	185	192	193	1.7%
Animal action - Domestic	-	<1	8	9	9	<0.1%
Slippery road surface	4	18	425	442	446	3.8%
Snow drift	<1	1	13	15	15	0.1%
Obstruction/debris on roadway	<1	<1	16	17	17	0.1%
View obstructed/limited	2	4	57	61	63	0.5%
Glare/reflection	-	<1	15	16	16	0.1%
Construction zone	-	<1	7	7	7	<0.1%
Defective driving surface	<1	3	13	16	17	0.1%
Shoulders defective	<1	<1	3	3	3	<0.1%
Lane markings inadequate	-	<1	2	2	2	<0.1%
Defective/inoperative traffic control device	<1	<1	7	8	8	<0.1%
Weather	3	6	65	71	74	0.6%
Pedestrian corridor in use	<1	1	6	7	7	<0.1%
Uninvolved vehicle	-	<1	8	8	8	<0.1%
Uninvolved pedestrian	-	-	3	3	3	<0.1%
Presence of prior accident	-	-	2	2	2	<0.1%
No Contributing Factor(s) Identified	7	49	983	1,033	1,040	8.9%
Not Stated	-	<1	7	8	8	<0.1%
Total	87	368	11,185	11,554	11,641	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.
*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each casualty type will add to more than the total victims of that casualty type.
"Other Injuries" includes injuries defined as "Minor", Minimal" and "Other", or undefined in severity.

Contributing factors recorded for each vehicle and/or driver involved in the collision are examined at the **victim level** in Table 9-2 and Table 9-2a. In this analysis, the contributing factors recorded for any driver involved in a fatal or injury collision is considered as contributing to the person being killed or injured.

In 2017, at-fault contributing factors are recorded for 79% of all **casualties**. At-fault contributing factors are recorded for:

- 92% of people killed;
- 88% of people seriously injured; and,
- 78% of victims with other injuries (including minor, minimal and undefined injuries).

In 2017, driver actions are recorded for nearly 76% of **all victims** (78% of people killed and nearly 84% of people seriously injured) while human conditions are recorded for 1% of all victims (38% of people killed and 11% of people seriously injured). Environmental conditions are recorded as a contributing factor for 8% of all victims (11% of people killed and 14% of people seriously injured).

In the previous five year (2012 to 2016) annual average, driver actions are recorded for 69% of all victims (77% of people killed and nearly 69% of people seriously injured), while human conditions are recorded for 2% of all victims (38% of people killed and 14% of people seriously injured). Environmental conditions are recorded as a contributing factor for 7% of all victims (12% of people killed and 11% of people seriously injured).

The most prevalent contributing factors recorded for collisions where **people are killed or seriously injured** in 2017 include:

- Distracted driving – 41% of people killed and 42% of people seriously injured;
- Impaired – nearly 32% of people killed and 6% of people seriously injured;
- Speed – 18% of people killed and 16% of people seriously injured;
- “Fail to yield right-of-way” – 16% of people killed and 14% of people seriously injured;
- “Lost control/Drive off the road” – 16% of people killed and 11% of people seriously injured;
- “Turning improperly” – 8% of people killed and 8% of people seriously injured;
- “Disobey traffic control” – 8% of people killed and 6% of people seriously injured;
- “Drive wrong way on roadway” – 8% of people killed and 2% of people seriously injured;
- “Loss of consciousness” – nearly 6% of people killed and 2% of people seriously injured;
- “Pedestrian error/confusion” – nearly 6% of people killed and nearly 1% of people seriously injured;
- “Leave stop sign before safe to do so” – 4% of people killed and 4% of people seriously injured; and,
- “View obstructed” – 4% of the people killed and 2% of people seriously injured.

NOTE: For a detailed count of contributing factors recorded for collisions occurring in each year from 2012 to 2017, please refer to “*Table 9-7 Historical Summary of Contributing Factors Recorded for Victims of Collisions*” at the end of this section.

Table 9-3 Drivers Involved in Traffic Collisions by Contributing Factor and Collision Severity

Table 9-3

Drivers Involved in Collisions by Contributing Factors and Collision Severity: 2017

Contributing Factor	2017 Collision Severity						**2017 Total Drivers**	**% of 2017 Total Drivers**
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Driver Action - Driving Properly and Human Condition - Apparently Normal	26	30.6%	8,798	53.2%	25,457	49.1%	**34,281**	**50.1%**
Driver Action - Driving properly	1	1.2%	52	0.3%	158	0.3%	**211**	**0.3%**
Any Driver Action	48	56.5%	7,277	44.0%	21,982	42.4%	**29,307**	**42.8%**
Following too closely	1	1.2%	2,326	14.1%	3,965	7.6%	**6,292**	**9.2%**
Turning improperly	3	3.5%	825	5.0%	1,941	3.7%	**2,769**	**4.0%**
Passing improperly	2	2.4%	27	0.2%	129	0.2%	**158**	**0.2%**
Changing lanes improperly	2	2.4%	416	2.5%	1,806	3.5%	**2,224**	**3.2%**
Fail to yield right-of-way	8	9.4%	911	5.5%	1,684	3.2%	**2,603**	**3.8%**
Disobey traffic control device/officer	5	5.9%	260	1.6%	277	0.5%	**542**	**0.8%**
Drive wrong way on roadway	5	5.9%	6	<0.1%	13	<0.1%	**24**	**<0.1%**
Passing a vehicle at pedestrian X-walk	0	-	1	<0.1%	2	<0.1%	**3**	**<0.1%**
Back unsafely	0	-	260	1.6%	3,276	6.3%	**3,536**	**5.2%**
Parking improperly	0	-	12	<0.1%	188	0.4%	**200**	**0.3%**
Lost control/Drive off road	12	14.1%	304	1.8%	1,030	2.0%	**1,346**	**2.0%**
Driverless vehicle ran out of control	0	-	14	<0.1%	31	<0.1%	**45**	**<0.1%**
Leave stop sign before safe to do so	2	2.4%	319	1.9%	551	1.1%	**872**	**1.3%**
Failed to signal	0	-	10	<0.1%	20	<0.1%	**30**	**<0.1%**
Take avoiding action	0	-	101	0.6%	427	0.8%	**528**	**0.8%**
Driver inexperience	2	2.4%	60	0.4%	173	0.3%	**235**	**0.3%**
Pedestrian error/confusion	2	2.4%	12	<0.1%	15	<0.1%	**29**	**<0.1%**
NET Speed	12	14.1%	828	5.0%	2,847	5.5%	**3,687**	**5.4%**
Exceeding speed limit	1	1.2%	9	<0.1%	21	<0.1%	**31**	**<0.1%**
Driving too fast for conditions	9	10.6%	813	4.9%	2,816	5.4%	**3,638**	**5.3%**
Unsafe operating speed (Too fast or too slow)	2	2.4%	7	<0.1%	14	<0.1%	**23**	**<0.1%**
NET Distracted driving	26	30.6%	3,489	21.1%	11,883	22.9%	**15,398**	**22.5%**
Careless Driving	18	21.2%	3,384	20.5%	11,623	22.4%	**15,025**	**22.0%**
Distraction/Inattention	9	10.6%	262	1.6%	783	1.5%	**1,054**	**1.5%**

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Collision Severity						2017 Total Drivers	% of 2017 Total Drivers
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Human Condition - Apparently Normal	0	-	4,093	24.8%	16,043	31.0%	**20,136**	**29.4%**
Any Human Condition	21	24.7%	89	0.5%	152	0.3%	**262**	**0.4%**
Loss of consciousness/Blackout prior to collision	4	4.7%	24	0.1%	26	<0.1%	**54**	**<0.1%**
Extreme fatigue/Fell asleep	2	2.4%	18	0.1%	50	<0.1%	**70**	**0.1%**
Defective eyesight	0	-	1	<0.1%	0	-	**1**	**<0.1%**
Defective hearing	0	-	0	-	0	-	**0**	**-**
Medical disability	0	-	9	<0.1%	5	<0.1%	**14**	**<0.1%**
Physical disability	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Mental disability	0	-	2	<0.1%	1	<0.1%	**3**	**<0.1%**
Mental confusion/Inability to remember	0	-	8	<0.1%	10	<0.1%	**18**	**<0.1%**
Sudden illness	0	-	3	<0.1%	3	<0.1%	**6**	**<0.1%**
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	**0**	**-**
NET Impaired	16	18.8%	38	0.2%	66	0.1%	**120**	**0.2%**
Ability impaired alcohol	10	11.8%	31	0.2%	59	0.1%	**100**	**0.1%**
Ability impaired drugs	1	1.2%	1	<0.1%	5	<0.1%	**7**	**<0.1%**
Had been drinking/Suspected alcohol use	7	8.2%	7	<0.1%	6	<0.1%	**20**	**<0.1%**
No Apparent (Vehicle) Defect	0	-	12,930	78.2%	41,338	79.8%	**54,268**	**79.3%**
Any Vehicle Defect	1	1.2%	36	0.2%	300	0.6%	**337**	**0.5%**
Defective brakes	0	-	12	<0.1%	17	<0.1%	**29**	**<0.1%**
Defective steering	0	-	0	-	4	<0.1%	**4**	**<0.1%**
Defective headlights	0	-	1	<0.1%	1	<0.1%	**2**	**<0.1%**
Defective brake lights	0	-	0	-	3	<0.1%	**3**	**<0.1%**
Defective lighting (unspecified)	1	1.2%	1	<0.1%	2	<0.1%	**4**	**<0.1%**
Defective engine controls/drive train	0	-	2	<0.1%	5	<0.1%	**7**	**<0.1%**
Defective suspension/wheels	0	-	3	<0.1%	55	0.1%	**58**	**<0.1%**
Defective tires	0	-	6	<0.1%	94	0.2%	**100**	**0.1%**
Tow hitch/yoke defective	0	-	4	<0.1%	11	<0.1%	**15**	**<0.1%**
Defective exhaust system	0	-	0	-	0	-	**0**	**-**
Hood/tailgate/door/covering opened	0	-	1	<0.1%	4	<0.1%	**5**	**<0.1%**
Defective glazing (obscured windows)	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Vehicle modifications	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Fire	0	-	1	<0.1%	0	-	**1**	**<0.1%**
Overloaded/oversized	0	-	0	-	4	<0.1%	**4**	**<0.1%**
Load shifted/spilled	0	-	3	<0.1%	32	-	**1**	**<0.1%**

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Collision Severity						2017 Total Drivers	% of 2017 Total Drivers
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Jack-knife/trailer swing	0	-	2	<0.1%	69	0.1%	**71**	**0.1%**
Hydroplaning tires	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Any Environmental Condition	7	8.2%	754	4.6%	5,699	11.0%	**6,460**	**9.4%**
Animal action - Wild	1	1.2%	115	0.7%	3,321	6.4%	**3,437**	**5.0%**
Animal action - Domestic	0	-	14	<0.1%	53	0.1%	**67**	**<0.1%**
Slippery road surface	1	1.2%	458	2.8%	1,570	3.0%	**2,029**	**3.0%**
Snow drift	0	-	11	<0.1%	87	0.2%	**98**	**0.1%**
Obstruction/debris on roadway	0	-	25	0.2%	253	0.5%	**278**	**0.4%**
View obstructed/limited	3	3.5%	44	0.3%	164	0.3%	**211**	**0.3%**
Glare/reflection	1	1.2%	5	<0.1%	24	<0.1%	**30**	**<0.1%**
Construction zone	0	-	2	<0.1%	15	<0.1%	**17**	**<0.1%**
Defective driving surface	1	1.2%	17	0.1%	118	0.2%	**136**	**0.2%**
Shoulders defective	0	-	1	<0.1%	2	<0.1%	**3**	**<0.1%**
Lane markings inadequate	0	-	0	-	4	<0.1%	**4**	**<0.1%**
Defective/inoperative traffic control device	0	-	9	<0.1%	6	<0.1%	**15**	**<0.1%**
Weather	2	2.4%	62	0.4%	145	0.3%	**209**	**0.3%**
Pedestrian corridor in use	0	-	7	<0.1%	7	<0.1%	**14**	**<0.1%**
Uninvolved vehicle	0	-	2	<0.1%	9	<0.1%	**11**	**<0.1%**
Uninvolved pedestrian	0	-	2	<0.1%	1	<0.1%	**3**	**<0.1%**
Presence of prior accident	0	-	0	-	0	-	**0**	**-**
No Contributing Factor(s) Identified	1	1.2%	93	0.6%	211	0.4%	**305**	**0.4%**
Not Stated	0	-	12	<0.1%	32	<0.1%	**44**	**<0.1%**
Total	85	100%	16,531	100.0%	51,831	100.0%	**68,447**	**100.0%**

*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each collision severity will add to more than the total collisions of that severity.

Table 9-3a Drivers Involved in Traffic Collisions by Contributing Factor and Collision Severity for Previous Five Years

Table 9-3a

Drivers Involved in Collisions by Contributing Factors and Collision Severity: 2012-2016 Average

Contributing Factor	2012-2016 Average Count of Drivers				
	Fatal	Injury	PDO	Total Drivers	% of Total Drivers
Driver Action - Driving Properly and Human Condition - Apparently Normal	39	8,156	20,058	28,253	46.0%
Driver Action - Driving properly	2	209	482	692	1.1%
Any Driver Action	58	6,151	19,137	25,346	41.2%
Following too closely	2	2,254	4,116	6,372	10.4%
Turning improperly	2	618	1,562	2,182	3.6%
Passing improperly	2	30	121	154	0.3%
Changing lanes improperly	<1	285	1,489	1,775	2.9%
Fail to yield right-of-way	7	665	1,384	2,055	3.3%
Disobey traffic control device/officer	4	195	253	452	0.7%
Drive wrong way on roadway	2	7	12	21	<0.1%
Passing a vehicle at pedestrian X-walk	-	<1	-	<1	<0.1%
Back unsafely	<1	213	2,778	2,991	4.9%
Parking improperly	<1	9	123	132	0.2%
Lost control/Drive off road	14	324	1,075	1,412	2.3%
Driverless vehicle ran out of control	<1	5	20	26	<0.1%
Leave stop sign before safe to do so	3	269	523	795	1.3%
Failed to signal	-	6	10	16	<0.1%
Take avoiding action	1	70	374	446	0.7%
Driver inexperience	2	41	113	156	0.3%
Pedestrian error/confusion	2	11	18	31	<0.1%
NET Speed	16	608	2,065	2,688	4.4%
Exceeding speed limit	7	8	13	29	<0.1%
Driving too fast for conditions	6	586	2,026	2,618	4.3%
Unsafe operating speed (Too fast or too slow)	3	16	27	46	<0.1%
NET Distracted driving	23	1,782	6,293	8,099	13.2%
Careless Driving	16	1,658	6,031	7,706	12.5%
Distraction/Inattention	9	170	355	534	0.9%
Human Condition - Apparently Normal	13	1,714	5,696	7,422	12.1%
Any Human Condition	27	149	226	402	0.7%
Loss of consciousness/Blackout prior to collision	1	22	14	37	<0.1%
Extreme fatigue/Fell asleep	1	22	42	66	0.1%
Defective eyesight	<1	2	3	5	<0.1%
Defective hearing	-	-	<1	<1	<0.1%
Medical disability	<1	6	6	11	<0.1%
Physical disability	-	<1	2	2	<0.1%
Mental disability	<1	2	1	4	<0.1%
Mental confusion/Inability to remember	-	10	10	20	<0.1%
Sudden illness	<1	4	3	9	<0.1%
Exceed hours of service (commercial drivers only)	-	-	-	-	-
NET Impaired	20	47	57	124	0.2%
Ability impaired alcohol	14	35	45	93	0.2%
Ability impaired drugs	1	2	1	5	<0.1%
Had been drinking/Suspected alcohol use	6	14	13	32	<0.1%
No Apparent (Vehicle) Defect	57	9,666	24,697	34,420	56.0%
Any Vehicle Defect	2	27	212	242	0.4%
Defective brakes	<1	6	15	21	<0.1%
Defective steering	-	1	5	7	<0.1%

(continued on next page)

(continued from previous page)

Contributing Factor	2012-2016 Average Count of Drivers				
	Fatal	Injury	PDO	Total Drivers	% of Total Drivers
Defective headlights	-	-	-	-	-
Defective brake lights	<1	1	4	5	<0.1%
Defective lighting (unspecified)	<1	<1	<1	2	<0.1%
Defective engine controls/drive train	-	1	6	7	<0.1%
Defective suspension/wheels	-	4	36	39	<0.1%
Defective tires	<1	5	52	57	<0.1%
Tow hitch/yoke defective	-	<1	16	16	<0.1%
Defective exhaust system	<1	-	-	<1	<0.1%
Hood/tailgate/door/covering opened	<1	<1	5	6	<0.1%
Defective glazing (obscured windows)	-	<1	2	3	<0.1%
Vehicle modifications	-	<1	1	1	<0.1%
Fire	-	1	2	3	<0.1%
Overloaded/oversized	-	<1	2	2	<0.1%
Load shifted/spilled	-	2	16	18	<0.1%
Jack-knife/trailer swing	<1	2	51	53	<0.1%
Hydroplaning tires	<1	2	5	7	<0.1%
Any Environmental Condition	10	663	5,173	5,847	9.5%
Animal action - Wild	<1	162	3,342	3,505	5.7%
Animal action - Domestic	-	7	38	44	<0.1%
Slippery road surface	5	341	1,218	1,564	2.5%
Snow drift	<1	11	76	88	0.1%
Obstruction/debris on roadway	-	13	170	183	0.3%
View obstructed/limited	1	45	93	138	0.2%
Glare/reflection	-	11	25	36	<0.1%
Construction zone	-	5	14	19	<0.1%
Defective driving surface	<1	11	73	85	0.1%
Shoulders defective	<1	3	5	8	<0.1%
Lane markings inadequate	-	2	5	7	<0.1%
Defective/inoperative traffic control device	<1	5	7	12	<0.1%
Weather	3	54	136	192	0.3%
Pedestrian corridor in use	<1	5	7	12	<0.1%
Uninvolved vehicle	-	6	15	21	<0.1%
Uninvolved pedestrian	-	1	3	4	<0.1%
Presence of prior accident	-	1	2	4	<0.1%
No Contributing Factor(s) Identified	3	702	1,432	2,136	3.5%
Not Stated	-	5	23	28	<0.1%
Total	111	15,839	45,495	61,445	100%

Note: Counts of drivers in the 2012-2016 average may not add to the total due to rounding.
*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each collision severity will add to more than the total collisions of that severity.

Table 9-3 and Table 9-3a examine the contributing factors recorded for each driver involved in a collision.

In 2017, half of the **drivers involved in traffic collisions** (nearly 51%) are recorded as not being at-fault in the collision. Almost all of these drivers (50% overall) are noted in the traffic accident report (TAR) as both "driving properly" and being "apparently normal" at the time of a collision. Less than one percent (0.4%) of drivers have no contributing factors recorded for the collision.

- 32% of the drivers involved in a fatal collision are noted as not being at-fault.
- 54% of the drivers in an injury collision are noted as not being at-fault.
- 49% of the drivers in a PDO collision are noted as not being at-fault.

Driver actions are recorded for 43% of the **drivers involved in traffic collisions** in 2017. This is a slight increase from the previous five year (2012 to 2016) annual average, where driver actions are recorded for 41% of the drivers involved. In 2017:

- Nearly 57% of the drivers involved in **fatal collisions** have a driver action recorded, including:
  - 31% who are driving while distracted (including "careless driving" and "distraction/ inattention");
  - 14% who are speeding (including "exceeding speed limit", "driving too fast for conditions" and "unsafe operating speed");
  - 14% who "lost control/ drive off road";
  - 9% who "fail to yield right-of-way";
  - 6% who "disobey traffic control"; and,
  - 6% who "drive wrong way on roadway".
- 44% of the drivers involved in **injury collisions** have a driver action recorded, including:
  - 21% who are driving while distracted;
  - 14% who are "following too closely";
  - Nearly 6% who "fail to yield right-of-way";
  - 5% who are "turning improperly"; and,
  - 5% who are speeding.
- 42% of the drivers involved in **PDO collisions** have a driver action recorded, including:
  - 23% who are driving while distracted;
  - 8% who are "following too closely";
  - 6% who "back unsafely";
  - Nearly 6% who are speeding;
  - 4% who are "turning improperly"; and,
  - Nearly 4% who are "changing lanes improperly".

Human conditions are recorded for 0.4% of the **drivers involved in traffic collisions** in 2017, a decrease from the previous five year (2012 to 2016) annual average (1%). In 2017:

- 25% of the **drivers involved in fatal collisions** have a human condition recorded, including 19% who are impaired (including "ability impaired by alcohol", "ability impaired by drugs" and "had been drinking/suspected alcohol use"); and,
- 0.5% of the **drivers involved in injury collisions** have a human condition recorded, including 0.2% who are impaired.

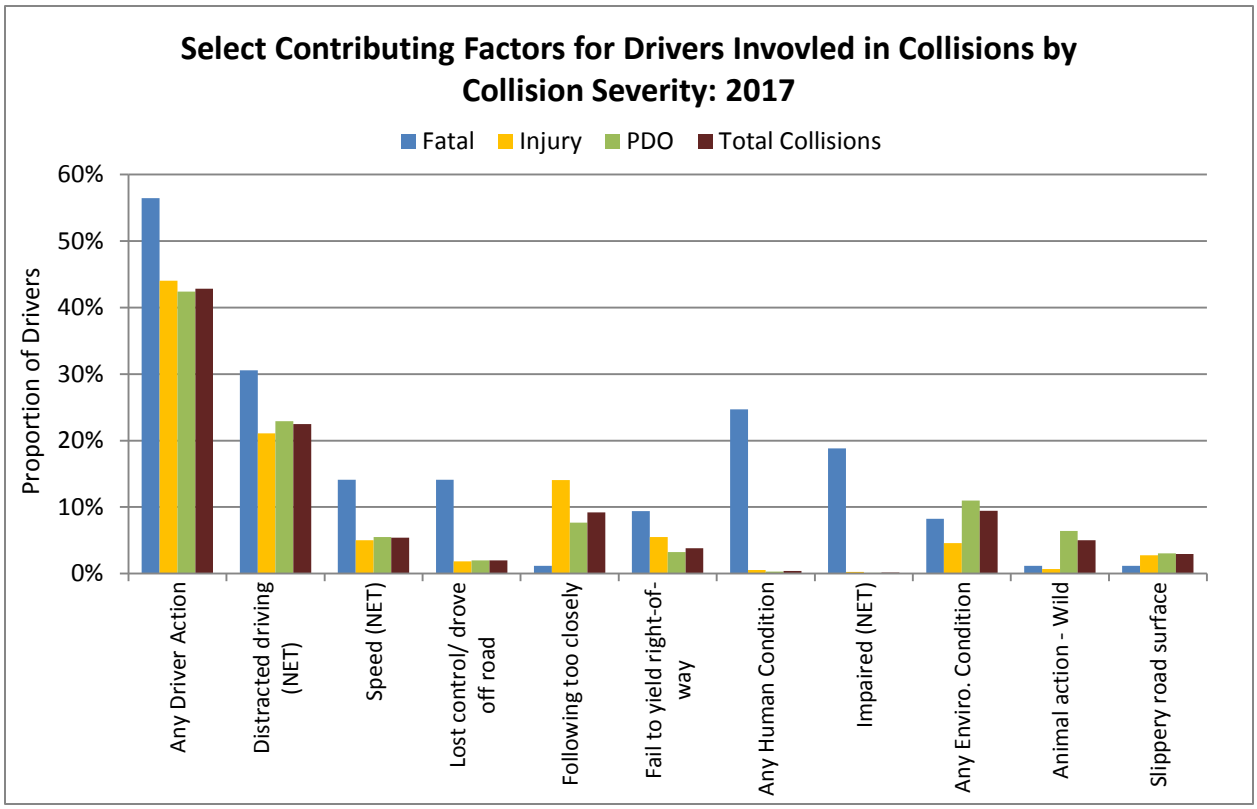
Some vehicle defect is recorded for 0.5% of drivers involved in traffic collisions in 2017 (0.4% in the previous five years, 2012 to 2016, annual average), including 1 driver in a fatal collision.

Environmental conditions are recorded as contributing factors for 9% of **drivers involved in traffic collisions** (8% of fatal, 5% of injury, and 11% of PDO) in 2017; compared to nearly 10% in the previous five year (2012 to 2016) annual average. In 2017:

- 5% of drivers have "animal action – wild" recorded as a contributing factor (one fatal; 0.7% of injury; 6% of PDO); and,
- 3% of drivers have "slippery road surface" recorded as a contributing factor (1% of fatal; 3% of injury; 3% PDO).

NOTE: For a detailed count of contributing factors recorded for drivers involved in collisions occurring in each year from 2012 to 2017, please refer to "*Table 9-8 Historical Summary of Contributing Factors for Drivers Involved in Collisions*" at the end of this section.

Figure 9-1 Select Contributing Factors for Drivers Involved in Collisions by Collision Severity



While many contributing factors are recorded for the **drivers involved in traffic collisions**, generally there are only a few that account for a large proportion of traffic collisions in Manitoba. In 2017, driver actions and human conditions are most often recorded for fatal traffic collisions, with the most frequent of these being distracted driving, impaired driving, speeding, losing control of the vehicle, and failure to yield right-of-way. Driver actions and environmental conditions (including distracted driving, following too closely, speeding, and the actions of wild animals) are the most often recorded contributing factors for PDO collisions.

Table 9-4 Involvement Rate (per 10,000 Licensed Drivers) in Collisions by Contributing Factors and Collisions Severity

Table 9-4

Driver Involvement Rate (per 10,000 Licensed Drivers) in Collisions by Contributing Factors and Collision Severity: 2017, 2012-2016 Average

Contributing Factor	2017 Collision Severity			**2017 Total**	2012-2016 Average			
	Fatal	Injury	PDO		Fatal	Injury	PDO	Total
Any Driver Action	0.5	80.4	242.8	**323.7**	0.7	70.9	220.4	292.0
Following too closely	<0.1	25.7	43.8	**69.5**	<0.1	26.0	47.4	73.4
Turning improperly	<0.1	9.1	21.4	**30.6**	<0.1	7.1	18.0	25.1
Passing improperly	<0.1	0.3	1.4	**1.7**	<0.1	0.3	1.4	1.8
Changing lanes improperly	<0.1	4.6	19.9	**24.6**	<0.1	3.3	17.1	20.4
Fail to yield right-of-way	<0.1	10.1	18.6	**28.8**	<0.1	7.7	15.9	23.7
Disobey traffic control device/officer	<0.1	2.9	3.1	**6.0**	<0.1	2.2	2.9	5.2
Drive wrong way on roadway	<0.1	<0.1	0.1	**0.3**	<0.1	<0.1	0.1	0.2
Passing a vehicle at pedestrian X-walk	-	<0.1	<0.1	**<0.1**	-	<0.1	-	<0.1
Back unsafely	-	2.9	36.2	**39.1**	<0.1	2.4	32.0	34.4
Parking improperly	-	0.1	2.1	**2.2**	<0.1	0.1	1.4	1.5
Lost control/Drive off road	0.1	3.4	11.4	**14.9**	0.2	3.7	12.4	16.3
Driverless vehicle ran out of control	-	0.2	0.3	**0.5**	<0.1	<0.1	0.2	0.3
Leave stop sign before safe to do so	<0.1	3.5	6.1	**9.6**	<0.1	3.1	6.0	9.2
Failed to signal	-	0.1	0.2	**0.3**	-	<0.1	0.1	0.2
Take avoiding action	-	1.1	4.7	**5.8**	<0.1	0.8	4.3	5.1
Driver inexperience	<0.1	0.7	1.9	**2.6**	<0.1	0.5	1.3	1.8
Pedestrian error/confusion	<0.1	0.1	0.2	**0.3**	<0.1	0.1	0.2	0.4
NET Speed	0.1	9.1	31.4	**40.7**	0.2	7.0	23.8	31.0
Exceeding speed limit	<0.1	<0.1	0.2	**0.3**	<0.1	<0.1	0.2	0.3
Driving too fast for conditions	<0.1	9.0	31.1	**40.2**	<0.1	6.7	23.3	30.2
Unsafe operating speed (Too fast or too slow)	<0.1	<0.1	0.2	**0.3**	<0.1	0.2	0.3	0.5
NET Distracted driving	0.3	38.5	131.3	**170.1**	0.3	20.5	72.5	93.3
Careless Driving	0.2	37.4	128.4	**166.0**	0.2	19.1	69.5	88.8
Distraction/Inattention	<0.1	2.9	8.6	**11.6**	0.1	2.0	4.1	6.1

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Collision Severity			2017 Total	2012-2016 Average			
	Fatal	Injury	PDO		Fatal	Injury	PDO	Total
Any Human Condition	0.2	1.0	1.7	**2.9**	0.3	1.7	2.6	4.6
Loss of consciousness/Blackout prior to collision	<0.1	0.3	0.3	**0.6**	<0.1	0.3	0.2	0.4
Extreme fatigue/Fell asleep	<0.1	0.2	0.6	**0.8**	<0.1	0.3	0.5	0.8
Defective eyesight	-	<0.1	-	**<0.1**	<0.1	<0.1	<0.1	<0.1
Defective hearing	-	-	-	**-**	-	-	<0.1	<0.1
Medical disability	-	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	0.1
Physical disability	-	-	<0.1	**<0.1**	-	<0.1	<0.1	<0.1
Mental disability	-	<0.1	<0.1	**<0.1**	<0.1	<0.1	<0.1	<0.1
Mental confusion/Inability to remember	-	<0.1	0.1	**0.2**	-	0.1	0.1	0.2
Sudden illness	-	<0.1	<0.1	**<0.1**	<0.1	<0.1	<0.1	<0.1
Exceed hours of service (commercial drivers only)	-	-	-	**-**	-	-	-	-
NET Impaired	0.2	0.4	0.7	**1.3**	0.2	0.5	0.7	1.4
Ability impaired alcohol	0.1	0.3	0.7	**1.1**	0.2	0.4	0.5	1.1
Ability impaired drugs	<0.1	<0.1	<0.1	**<0.1**	<0.1	<0.1	<0.1	<0.1
Had been drinking/Suspected alcohol use	<0.1	<0.1	<0.1	**0.2**	<0.1	0.2	0.1	0.4
Any Vehicle Defect	<0.1	0.4	3.3	**3.7**	<0.1	0.3	2.4	2.8
Defective brakes	-	0.1	0.2	**0.3**	<0.1	<0.1	0.2	0.2
Defective steering	-	-	<0.1	**<0.1**	-	<0.1	<0.1	<0.1
Defective headlights	-	<0.1	<0.1	**<0.1**	-	-	-	-
Defective brake lights	-	-	<0.1	**<0.1**	<0.1	<0.1	<0.1	<0.1
Defective lighting (unspecified)	<0.1	<0.1	<0.1	**<0.1**	<0.1	<0.1	<0.1	<0.1
Defective engine controls/drive train	-	<0.1	<0.1	**<0.1**	-	<0.1	<0.1	<0.1
Defective suspension/wheels	-	<0.1	0.6	**0.6**	-	<0.1	0.4	0.5
Defective tires	-	<0.1	1.0	**1.1**	<0.1	<0.1	0.6	0.7
Tow hitch/yoke defective	-	<0.1	0.1	**0.2**	-	<0.1	0.2	0.2
Defective exhaust system	-	-	-	**-**	<0.1	-	-	<0.1
Hood/tailgate/door/covering opened	-	<0.1	<0.1	**<0.1**	<0.1	<0.1	<0.1	<0.1
Defective glazing (obscured windows)	-	-	<0.1	**<0.1**	-	<0.1	<0.1	<0.1
Vehicle modifications	-	-	<0.1	**<0.1**	-	<0.1	<0.1	<0.1
Fire	-	<0.1	-	**<0.1**	-	<0.1	<0.1	<0.1
Overloaded/oversized	-	-	<0.1	**<0.1**	-	<0.1	<0.1	<0.1

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Collision Severity			2017 Total	2012-2016 Average			
	Fatal	Injury	PDO		Fatal	Injury	PDO	Total
Load shifted/spilled	-	<0.1	0.4	**<0.1**	-	<0.1	0.2	0.2
Jack-knife/trailer swing	-	<0.1	0.8	**0.8**	<0.1	<0.1	0.6	0.6
Hydroplaning tires	-	-	<0.1	**<0.1**	<0.1	<0.1	<0.1	<0.1
Any Environmental Condition	<0.1	8.3	62.9	**71.4**	0.1	7.6	59.6	67.3
Animal action - Wild	<0.1	1.3	36.7	**38.0**	<0.1	1.9	38.5	40.4
Animal action - Domestic	-	0.2	0.6	**0.7**	-	<0.1	0.4	0.5
Slippery road surface	<0.1	5.1	17.3	**22.4**	<0.1	3.9	14.0	18.0
Snow drift	-	0.1	1.0	**1.1**	<0.1	0.1	0.9	1.0
Obstruction/debris on roadway	-	0.3	2.8	**3.1**	-	0.2	2.0	2.1
View obstructed/limited	<0.1	0.5	1.8	**2.3**	<0.1	0.5	1.1	1.6
Glare/reflection	<0.1	<0.1	0.3	**0.3**	-	0.1	0.3	0.4
Construction zone	-	<0.1	0.2	**0.2**	-	<0.1	0.2	0.2
Defective driving surface	<0.1	0.2	1.3	**1.5**	<0.1	0.1	0.8	1.0
Shoulders defective	-	<0.1	<0.1	**<0.1**	<0.1	<0.1	<0.1	<0.1
Lane markings inadequate	-	-	<0.1	**<0.1**	-	<0.1	<0.1	<0.1
Defective/inoperative traffic control device	-	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	0.1
Weather	<0.1	0.7	1.6	**2.3**	<0.1	0.6	1.6	2.2
Pedestrian corridor in use	-	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	0.1
Uninvolved vehicle	-	<0.1	<0.1	**0.1**	-	<0.1	0.2	0.2
Uninvolved pedestrian	-	<0.1	<0.1	**<0.1**	-	<0.1	<0.1	<0.1
Presence of prior accident	-	-	-	**-**	-	<0.1	<0.1	<0.1

Recognizing that counts of drivers involved in collisions could be impacted either positively or negatively by changing population statistics, relative involvement rates per 10,000 licensed drivers is examined to provide a standardized collision rate comparison. This eliminates the effect of changing population size and focuses on the rate at which drivers are involved in collisions instead of simply a raw count of the number of drivers involved overall.

Driver involvement rates (per 10,000 licensed drivers) in collisions where an at-fault contributing factor has been recorded generally increased in 2017 compared to the previous five years (2012 to 2016) annual average.

In 2017, the **driver involvement rate** (per 10,000 licensed drivers) in traffic collisions where:

- Any driver action is a contributing factor is 323.7, increased by 11% from the previous five years (292.0);
- Any human condition is a contributing factor is 2.9, decreased by nearly 38% from the previous five years (4.6);
- Some environmental condition is a contributing factor is 71.4, increased by 6% from the previous five years (67.3);
- Distracted driving is a contributing factor is 170.1, increased by 82% from the previous five years (93.3);
- "Following too closely" is a contributing factor is 69.5, decreased by 5% from the previous five years (73.4);
- Speed is a contributing factor is 40.7, increased by nearly 32% from the previous five years (31.0);
- "Backing unsafely" is a contributing factor is 39.1, increased by 13% from the previous five years (34.4);
- "Animal action - wild" is a contributing factor is 38.0, decreased by 6% from the previous five years (40.4);
- "Turning improperly" is a contributing factor is 30.6, increased by 22% from the previous five years (25.1);
- "Fail to yield right-of-way" is a contributing factor is 28.8, increased by nearly 22% from the previous five years (23.7);
- "Changing lanes improperly" is a contributing factor is 24.6, increased by 20% from the previous five years (20.4);
- "Slippery road surface" is a contributing factor is 22.4, increased by 24% from the previous five years (18.0);
- "Lost control/Drove off road" is a contributing factor is 14.9, down 9% from the previous five years (16.3);
- "Leave stop sign before safe to do so" is a contributing factor is 9.6, increased by 5% from the previous five years (9.2); and,
- Impaired is a contributing factor is 1.3, decreased by 7% from the previous five years (1.4).

In 2017, the **driver involvement rate** (per 10,000 licensed drivers) in **fatal traffic collisions** where:

- A driver action is a contributing factor is 0.5, down from 0.7 in the previous five years;
- Distracted driving is a contributing factor is 0.3, relatively the same as in the previous five years (0.3);
- A human condition is a contributing factor is 0.2, down from 0.3 in the previous five years;
- Impaired is a contributing factor is 0.2, relatively the same as in the previous five years (0.2);
- Speed is a contributing factor is 0.1, down from 0.2 in the previous five years;
- "Lost control/Drove off road" is a contributing factor is 0.1, down from 0.2 in the previous five years; and,
- An environmental condition is a contributing factor is <0.1, slightly down from 0.1 in the previous five years.

Table 9-5 Driver Involvement Rate (per 10,000 Licensed Drivers) in Collisions by Contributing Factors and Age

Table 9-5

Driver Involvement Rate (per 10,000 Licensed Drivers) in All Collisions by Contributing Factors and Age Group: 2017

Contributing Factor	Age Group						
	16-19	20-24	25-34	35-44	45-54	55-64	65+
Any Driver Action	619.6	559.3	392.1	327.8	273.1	211.7	205.6
Following too closely	143.5	146.2	94.6	71.5	51.8	40.2	29.7
Turning improperly	56.3	54.8	35.7	28.6	25.0	20.7	22.8
Passing improperly	3.4	4.3	2.0	1.4	1.4	0.8	1.5
Changing lanes improperly	42.0	40.4	29.3	24.0	19.8	16.9	19.4
Fail to yield right-of-way	55.2	44.5	33.5	27.6	23.6	19.2	23.5
Disobey traffic control device/officer	11.3	10.5	7.2	5.7	4.9	3.2	4.9
Drive wrong way on roadway	0.8	0.4	0.2	<0.1	0.3	0.3	0.2
Passing a vehicle at pedestrian X-walk	0.4	-	<0.1	-	-	-	-
Back unsafely	46.4	32.3	34.7	44.0	42.3	38.9	36.4
Parking improperly	2.1	1.7	2.8	2.0	2.0	2.1	2.3
Lost control/Drive off road	45.2	33.1	19.2	15.2	10.5	6.6	4.7
Driverless vehicle ran out of control	1.3	0.3	0.4	0.8	0.6	0.3	0.3
Leave stop sign before safe to do so	20.0	14.1	11.1	10.2	7.9	5.9	7.6
Failed to signal	0.2	0.3	0.3	0.4	0.5	0.3	0.3
Take avoiding action	12.4	11.7	8.7	6.1	4.3	2.7	2.5
Driver inexperience	17.4	6.4	2.8	1.7	0.7	0.5	0.5
Pedestrian error/confusion	0.2	0.3	0.4	0.4	0.5	0.3	0.2
NET Speed	106.7	83.5	54.2	40.8	32.8	21.0	14.3
Exceeding speed limit	0.6	0.8	0.6	0.3	0.2	0.2	<0.1
Driving too fast for conditions	105.6	82.3	53.4	40.3	32.3	20.7	14.1
Unsafe operating speed (Too fast or too slow)	0.8	0.7	0.2	0.2	0.3	0.1	0.1
NET Distracted driving	314.8	288.1	203.2	169.3	145.9	113.5	115.0
Careless Driving	306.9	280.6	198.3	165.4	142.2	111.4	112.0
Distraction/Inattention	21.8	19.5	14.4	10.8	9.8	7.7	8.2
Any Human Condition	4.4	6.1	4.5	2.8	1.6	1.4	2.0
Loss of consciousness/Blackout prior to collision	0.4	0.9	0.6	0.9	0.1	0.5	0.7
Extreme fatigue/Fell asleep	2.1	1.5	1.5	0.7	0.3	0.2	0.4
Defective eyesight	-	-	-	<0.1	-	-	-
Defective hearing	-	-	-	-	-	-	-
Medical disability	-	0.1	-	<0.1	-	0.3	0.4
Physical disability	-	-	-	-	-	-	<0.1
Mental disability	-	-	<0.1	-	-	-	0.1
Mental confusion/Inability to remember	-	0.1	0.2	0.1	<0.1	0.3	0.4
Sudden illness	-	0.3	<0.1	-	-	-	0.2
Exceed hours of service (commercial drivers only)	-	-	-	-	-	-	-
NET Impaired	2.1	3.6	2.2	1.4	1.1	0.3	0.2
Ability impaired alcohol	1.9	2.9	1.9	0.9	1.0	0.3	0.2
Ability impaired drugs	0.2	0.1	0.2	<0.1	-	-	<0.1
Had been drinking/Suspected alcohol use	-	0.7	0.3	0.5	0.1	-	<0.1
Any Vehicle Defect	4.6	2.9	1.9	0.9	1.0	0.3	0.2
Defective brakes	0.4	0.5	0.7	0.3	0.2	0.1	0.2
Defective steering	-	-	<0.1	0.2	-	-	-
Defective headlights	-	0.1	-	-	-	<0.1	-
Defective brake lights	-	-	<0.1	0.1	-	-	-
Defective lighting (unspecified)	-	0.1	<0.1	-	<0.1	<0.1	-
Defective engine controls/drive train	0.2	-	-	<0.1	-	0.3	<0.1
Defective suspension/wheels	0.4	0.3	0.9	0.8	0.5	1.2	0.2
Defective tires	2.7	1.7	1.6	1.0	0.7	1.1	0.3
Tow hitch/yoke defective	-	0.3	<0.1	0.2	0.3	0.1	0.2

(continued on next page)

(continued from previous page)

Contributing Factor	Age Group						
	16-19	20-24	25-34	35-44	45-54	55-64	65+
Defective exhaust system	-	-	-	-	-	-	-
Hood/tailgate/door/covering opened	-	-	<0.1	<0.1	<0.1	-	0.1
Defective glazing (obscured windows)	0.2	-	-	-	-	-	-
Vehicle modifications	-	-	-	<0.1	-	-	-
Fire	-	0.1	-	-	-	-	-
Overloaded/oversized	-	-	0.1	<0.1	-	<0.1	-
Load shifted/spilled	0.4	0.1	0.6	0.4	0.5	0.3	0.2
Jack-knife/trailer swing	0.2	0.5	0.9	0.5	1.6	0.9	0.4
Hydroplaning tires	-	-	<0.1	-	-	-	-
Any Environmental Condition	114.5	116.0	87.5	77.7	68.5	56.0	33.4
Animal action - Wild	47.3	53.5	44.3	43.2	38.9	34.4	19.5
Animal action - Domestic	1.7	0.9	0.9	1.1	0.5	0.6	0.2
Slippery road surface	48.5	44.1	30.0	22.0	19.9	13.5	8.3
Snow drift	1.7	1.5	1.6	1.5	0.9	0.7	0.4
Obstruction/debris on roadway	4.6	5.1	3.2	3.0	3.5	2.9	1.5
View obstructed/limited	3.6	3.1	3.0	2.4	1.8	1.6	1.9
Glare/reflection	0.4	0.5	0.3	0.4	0.7	0.1	<0.1
Construction zone	-	-	0.6	0.1	0.2	<0.1	0.1
Defective driving surface	3.4	2.7	1.5	1.7	1.2	1.4	0.6
Shoulders defective	0.2	0.3	-	-	-	-	-
Lane markings inadequate	0.2	-	<0.1	0.1	-	-	-
Defective/inoperative traffic control device	0.2	0.5	0.2	-	0.1	<0.1	0.2
Weather	4.2	5.5	2.7	2.6	1.8	1.6	0.7
Pedestrian corridor in use	0.2	0.1	<0.1	0.3	<0.1	0.1	0.2
Uninvolved vehicle	-	0.1	0.1	0.1	0.1	-	0.2
Uninvolved pedestrian	-	0.1	<0.1	-	-	<0.1	-
Presence of prior accident	-	-	-	-	-	-	-

Table 9-5a Driver Involvement Rate (per 10,000 Licensed Drivers) in Collisions by Contributing Factors and Age for Previous Five Years

Table 9-5a

Driver Involvement Rate (per 10,000 Licensed Drivers) in All Collisions by Contributing Factors and Age Group: 2012-2016 Average

Contributing Factor	Age Group						
	16-19	20-24	25-34	35-44	45-54	55-64	65+
Any Driver Action	542.1	503.8	358.2	289.3	243.8	201.6	180.5
Following too closely	151.2	147.3	99.1	74.3	59.1	43.0	30.1
Turning improperly	43.9	41.8	30.5	22.9	20.1	18.0	19.6
Passing improperly	3.3	2.8	2.3	1.6	1.5	1.3	1.2
Changing lanes improperly	32.6	32.6	23.4	19.2	16.6	15.8	17.2
Fail to yield right-of-way	41.6	35.1	27.7	22.8	19.7	17.2	19.3
Disobey traffic control device/officer	8.7	8.7	6.3	4.8	4.3	3.6	4.1
Drive wrong way on roadway	0.4	0.3	0.3	0.2	0.1	0.2	0.2
Passing a vehicle at pedestrian X-walk	-	-	-	-	<0.1	-	<0.1
Back unsafely	40.7	33.9	32.9	37.9	36.5	34.1	29.0
Parking improperly	1.4	1.7	1.8	1.6	1.3	1.1	1.6
Lost control/Drive off road	45.6	35.8	21.7	15.2	11.5	8.1	5.6
Driverless vehicle ran out of control	0.3	0.4	0.4	0.3	0.3	0.2	0.3
Leave stop sign before safe to do so	16.9	13.1	9.5	8.5	7.7	7.0	8.5
Failed to signal	0.5	0.3	0.2	0.2	<0.1	<0.1	0.2
Take avoiding action	9.3	11.5	7.3	5.5	3.9	2.7	1.7
Driver inexperience	11.6	4.4	1.7	0.9	0.8	0.5	0.3
Pedestrian error/confusion	0.5	0.4	0.4	0.5	0.3	0.3	0.2
NET Speed	71.7	63.2	43.4	31.6	23.2	16.5	11.1
Exceeding speed limit	0.8	0.8	0.5	0.4	0.2	0.1	<0.1
Driving too fast for conditions	69.1	61.6	42.1	30.8	22.7	16.2	11.0
Unsafe operating speed (Too fast or too slow)	2.1	1.1	0.8	0.4	0.4	0.2	0.1
NET Distracted driving	168.4	162.5	114.9	90.3	76.8	64.6	60.9
Careless Driving	159.0	155.3	109.2	86.0	73.1	61.8	57.7
Distraction/Inattention	12.7	10.0	7.6	5.6	4.7	4.1	4.5
Any Human Condition	10.0	9.2	6.1	4.0	3.2	2.8	3.1
Loss of consciousness/Blackout prior to collision	0.6	0.7	0.3	0.4	0.4	0.3	0.5
Extreme fatigue/Fell asleep	2.8	1.9	1.2	0.3	0.4	0.4	0.2
Defective eyesight	<0.1	-	<0.1	<0.1	<0.1	<0.1	0.2
Defective hearing	<0.1	-	-	-	-	-	<0.1
Medical disability	-	0.1	0.1	<0.1	0.1	0.2	0.2
Physical disability	-	-	<0.1	<0.1	<0.1	<0.1	<0.1
Mental disability	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1
Mental confusion/Inability to remember	0.2	0.2	0.1	<0.1	0.1	0.1	0.7
Sudden illness	<0.1	0.1	<0.1	<0.1	0.1	0.1	0.2
Exceed hours of service (commercial drivers only)	-	-	-	-	-	-	-
NET Impaired	3.3	3.5	2.3	1.4	1.0	0.6	0.2
Ability impaired alcohol	2.5	2.6	1.7	1.1	0.8	0.5	0.1
Ability impaired drugs	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	-
Had been drinking/Suspected alcohol use	1.0	1.0	0.6	0.2	0.2	0.2	<0.1
Any Vehicle Defect	3.7	4.6	3.1	2.8	2.8	2.4	1.5
Defective brakes	0.5	0.5	0.3	0.3	0.2	0.1	<0.1
Defective steering	0.2	0.2	<0.1	<0.1	0.1	<0.1	-
Defective headlights	-	-	-	-	-	-	-
Defective brake lights	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
Defective lighting (unspecified)	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Defective engine controls/drive train	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1
Defective suspension/wheels	0.8	0.7	0.6	0.3	0.5	0.4	0.3
Defective tires	1.2	1.2	0.8	0.7	0.6	0.5	0.3
Tow hitch/yoke defective	0.1	0.2	0.2	0.3	0.2	0.2	<0.1

(continued on next page)

(continued from previous page)

Contributing Factor	Age Group						
	16-19	20-24	25-34	35-44	45-54	55-64	65+
Defective exhaust system	-	-	<0.1	-	-	-	-
Hood/tailgate/door/covering opened	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Defective glazing (obscured windows)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Vehicle modifications	-	<0.1	<0.1	-	<0.1	<0.1	-
Fire	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Overloaded/oversized	-	-	<0.1	<0.1	-	<0.1	<0.1
Load shifted/spilled	<0.1	0.3	0.2	0.2	0.3	0.3	0.1
Jack-knife/trailer swing	0.3	0.7	0.6	0.8	0.6	0.6	0.5
Hydroplaning tires	0.2	0.3	0.1	0.1	<0.1	<0.1	<0.1
Any Environmental Condition	96.7	107.1	81.4	74.7	68.6	51.0	31.6
Animal action - Wild	46.6	57.2	46.1	46.1	46.0	34.0	19.1
Animal action - Domestic	0.9	1.0	0.8	0.6	0.4	0.2	0.2
Slippery road surface	36.5	34.3	24.1	19.0	14.7	11.0	7.4
Snow drift	1.8	2.1	1.3	1.1	0.8	0.7	0.3
Obstruction/debris on roadway	2.6	3.2	2.5	2.3	1.9	1.8	1.3
View obstructed/limited	2.4	2.6	2.0	1.8	1.3	1.0	1.1
Glare/reflection	0.6	0.5	0.5	0.3	0.4	0.3	0.4
Construction zone	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Defective driving surface	1.9	1.6	1.1	1.0	1.1	0.8	0.3
Shoulders defective	0.2	0.2	0.1	<0.1	0.1	<0.1	<0.1
Lane markings inadequate	0.2	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Defective/inoperative traffic control device	0.2	0.1	0.2	<0.1	0.2	<0.1	0.1
Weather	3.6	4.4	3.0	2.4	2.0	1.2	1.0
Pedestrian corridor in use	<0.1	0.2	0.2	0.2	0.2	<0.1	<0.1
Uninvolved vehicle	0.4	0.5	0.3	0.3	0.1	0.2	0.1
Uninvolved pedestrian	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	-
Presence of prior accident	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Younger drivers, especially those under the age of 25, tend to have higher **driver involvement rates** in traffic collisions overall and in collisions where specific contributing factors are noted.

In 2017, the involvement rate in collisions for drivers aged 16 to 19 with:

- Any at-fault contributing factor is:
  - 1.1 times that of drivers aged 20 to 24;
  - 1.5 times that of drivers aged 25 to 34;
  - 1.8 times that of drivers aged 35 to 44; and,
  - 2.5 times that of drivers aged 45 and older.
- A driver action as a contributing factor is:
  - 1.1 times that of drivers aged 20 to 24;
  - 1.6 times that of drivers aged 25 to 34;
  - 1.9 times that of drivers aged 35 to 44; and,
  - 2.7 times that of drivers aged 45 and older.
- A human condition as a contributing factor is:
  - 0.7 times that of drivers aged 20 to 24;
  - 1.0 times that of drivers aged 25 to 34;
  - 1.6 times that of drivers aged 35 to 44; and,
  - 2.6 times that of drivers aged 45 and older.
- “Driver inexperience” as a contributing factor is:
  - 2.7 times that of drivers aged 20 to 24;
  - 6.3 times that of drivers aged 25 to 34;
  - 10.5 times that of drivers aged 35 to 44; and,
  - 30.2 times that of drivers aged 45 and older.

In 2017, the involvement rate in collisions for drivers aged 20 to 24 with:

- Any at-fault contributing factor is:
  - 1.4 times that of drivers aged 25 to 34;
  - 1.7 times that of drivers aged 35 to 44; and,
  - 2.3 times that of drivers aged 45 and older.
- A driver action as a contributing factor is:
  - 1.4 times that of drivers aged 25 to 34;
  - 1.7 times that of drivers aged 35 to 44; and,
  - 2.4 times that of drivers aged 45 and older.
- A human condition as a contributing factor is:
  - 1.4 times that of drivers aged 25 to 34;
  - 2.2 times that of drivers aged 35 to 44; and,
  - 3.7 times that of drivers aged 45 and older.
- "Driver inexperience" as a contributing factor is:
  - 2.3 times that of drivers aged 25 to 34;
  - 3.9 times that of drivers aged 35 to 44; and,
  - 11.1 times that of drivers aged 45 and older.

As with **driver involvement rates** in traffic collisions overall, many drivers in specific age groups experienced increases in their involvement in specific contributing factors when comparing 2017 to the previous five years (2012 to 2016) annual average while some experienced decreases.

Table 9-6 Historical Summary of Contributing Factors to a Collision Overall

Table 9-6

Summary of Contributing Factors to a Collision: 2012 to 2017

Contributing Factor	2012 Total Collisions	% of 2012 Total Collisions	2013 Total Collisions	% of 2013 Total Collisions	2014 Total Collisions	% of 2014 Total Collisions	2015 Total Collisions	% of 2015 Total Collisions	2016 Total Collisions	% of 2016 Total Collisions	**2017 Total Collisions**	**% of 2017 Total Collisions**
Driver Action - Driving Properly and Human Condition - Apparently Normal	25,573	65.6%	25,005	59.8%	24,166	59.4%	28,316	68.2%	32,255	71.2%	**35,635**	**68.7%**
Driver Action - Driving properly	843	2.2%	858	2.1%	789	1.9%	530	1.3%	429	0.9%	**214**	**0.4%**
Any Driver Action	20,260	52.0%	25,859	61.8%	26,734	65.7%	25,877	62.3%	26,859	59.3%	**28,998**	**55.9%**
Following too closely	5,247	13.5%	6,190	14.8%	6,581	16.2%	6,958	16.7%	6,763	14.9%	**6,280**	**12.1%**
Turning improperly	1,527	3.9%	2,046	4.9%	2,247	5.5%	2,564	6.2%	2,486	5.5%	**2,762**	**5.3%**
Passing improperly	129	0.3%	169	0.4%	149	0.4%	151	0.4%	164	0.4%	**156**	**0.3%**
Changing lanes improperly	1,351	3.5%	1,615	3.9%	1,770	4.4%	1,914	4.6%	2,080	4.6%	**2,149**	**4.1%**
Fail to yield right-of-way	1,378	3.5%	2,062	4.9%	2,174	5.3%	2,272	5.5%	2,358	5.2%	**2,610**	**5.0%**
Disobey traffic control device/officer	357	0.9%	443	1.1%	433	1.1%	500	1.2%	527	1.2%	**558**	**1.1%**
Drive wrong way on roadway	9	<0.1%	12	<0.1%	38	<0.1%	28	<0.1%	18	<0.1%	**25**	**<0.1%**
Passing a vehicle at pedestrian X-walk	2	<0.1%	0	-	0	-	0	-	0	-	**3**	**<0.1%**
Back unsafely	2,634	6.8%	2,800	6.7%	2,930	7.2%	3,040	7.3%	3,383	7.5%	**3,496**	**6.7%**
Parking improperly	104	0.3%	104	0.2%	155	0.4%	152	0.4%	181	0.4%	**212**	**0.4%**
Lost control/Drive off road	1,064	2.7%	1,598	3.8%	1,415	3.5%	1,589	3.8%	1,403	3.1%	**1,347**	**2.6%**
Driverless vehicle ran out of control	18	<0.1%	12	<0.1%	33	<0.1%	38	<0.1%	37	<0.1%	**53**	**0.1%**
Leave stop sign before safe to do so	493	1.3%	745	1.8%	1,006	2.5%	844	2.0%	861	1.9%	**869**	**1.7%**
Failed to signal	16	<0.1%	8	<0.1%	17	<0.1%	21	<0.1%	17	<0.1%	**31**	**<0.1%**
Take avoiding action	356	0.9%	408	1.0%	458	1.1%	488	1.2%	522	1.2%	**544**	**1.0%**
Driver inexperience	161	0.4%	144	0.3%	122	0.3%	176	0.4%	176	0.4%	**235**	**0.5%**
Pedestrian error/confusion	29	<0.1%	31	<0.1%	49	0.1%	55	0.1%	65	0.1%	**71**	**0.1%**
NET Speed	1,891	4.9%	2,418	5.8%	3,076	7.6%	3,092	7.4%	2,964	6.5%	**3,692**	**7.1%**
Exceeding speed limit	16	<0.1%	14	<0.1%	26	<0.1%	48	0.1%	39	<0.1%	**31**	**<0.1%**
Driving too fast for conditions	1,813	4.7%	2,362	5.6%	3,018	7.4%	3,005	7.2%	2,890	6.4%	**3,643**	**7.0%**
Unsafe operating speed (Too fast or too slow)	67	0.2%	45	0.1%	36	<0.1%	48	0.1%	42	<0.1%	**23**	**<0.1%**
NET Distracted driving	4,780	12.3%	6,709	16.0%	8,468	20.8%	9,463	22.8%	11,086	24.5%	**15,403**	**29.7%**
Careless Driving	4,474	11.5%	6,409	15.3%	8,136	20.0%	8,943	21.5%	10,560	23.3%	**15,024**	**29.0%**
Distraction/Inattention	372	1.0%	359	0.9%	464	1.1%	716	1.7%	787	1.7%	**1,068**	**2.1%**

(continued on next page)

(continued from previous page)

Contributing Factor	2012 Total Collisions	% of 2012 Total Collisions	2013 Total Collisions	% of 2013 Total Collisions	2014 Total Collisions	% of 2014 Total Collisions	2015 Total Collisions	% of 2015 Total Collisions	2016 Total Collisions	% of 2016 Total Collisions	**2017 Total Collisions**	**% of 2017 Total Collisions**
Human Condition - Apparently Normal	6,983	17.9%	2,990	7.1%	3,792	9.3%	7,580	18.2%	15,621	34.5%	**20,107**	**38.8%**
Any Human Condition	607	1.6%	599	1.4%	237	0.6%	297	0.7%	301	0.7%	**278**	**0.5%**
Loss of consciousness/Blackout prior to collision	33	<0.1%	34	<0.1%	37	<0.1%	43	0.1%	40	<0.1%	**54**	**0.1%**
Extreme fatigue/Fell asleep	63	0.2%	63	0.2%	59	0.1%	66	0.2%	79	0.2%	**70**	**0.1%**
Defective eyesight	12	<0.1%	2	<0.1%	5	<0.1%	5	<0.1%	4	<0.1%	**2**	**<0.1%**
Defective hearing	1	<0.1%	0	-	0	-	1	<0.1%	2	<0.1%	**0**	**-**
Medical disability	6	<0.1%	10	<0.1%	10	<0.1%	20	<0.1%	11	<0.1%	**15**	**<0.1%**
Physical disability	1	<0.1%	3	<0.1%	1	<0.1%	5	<0.1%	4	<0.1%	**3**	**<0.1%**
Mental disability	2	<0.1%	4	<0.1%	4	<0.1%	5	<0.1%	4	<0.1%	**3**	**<0.1%**
Mental confusion/Inability to remember	13	<0.1%	22	<0.1%	15	<0.1%	28	<0.1%	24	<0.1%	**19**	**<0.1%**
Sudden illness	10	<0.1%	8	<0.1%	5	<0.1%	8	<0.1%	12	<0.1%	**6**	**<0.1%**
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	0	-	0	-	**0**	**-**
NET Impaired	123	0.3%	119	0.3%	115	0.3%	140	0.3%	145	0.3%	**133**	**0.3%**
Ability impaired alcohol	97	0.2%	94	0.2%	75	0.2%	109	0.3%	110	0.2%	**109**	**0.2%**
Ability impaired drugs	1	<0.1%	3	<0.1%	7	<0.1%	7	<0.1%	8	<0.1%	**8**	**<0.1%**
Had been drinking/Suspected alcohol use	30	<0.1%	31	<0.1%	38	<0.1%	36	<0.1%	34	<0.1%	**27**	**<0.1%**
No Apparent (Vehicle) Defect	26,336	67.6%	24,908	59.6%	25,414	62.5%	32,283	77.7%	38,760	85.5%	**45,902**	**88.5%**
Any Vehicle Defect	163	0.4%	189	0.5%	283	0.7%	300	0.7%	278	0.6%	**342**	**0.7%**
Defective brakes	17	<0.1%	14	<0.1%	23	<0.1%	22	<0.1%	30	<0.1%	**31**	**<0.1%**
Defective steering	3	<0.1%	4	<0.1%	10	<0.1%	15	<0.1%	2	<0.1%	**5**	**<0.1%**
Defective headlights	0	-	0	-	0	-	0	-	0	-	**2**	**<0.1%**
Defective brake lights	1	<0.1%	3	<0.1%	6	<0.1%	5	<0.1%	10	<0.1%	**3**	**<0.1%**
Defective lighting (unspecified)	0	-	3	<0.1%	3	<0.1%	0	-	2	<0.1%	**4**	**<0.1%**
Defective engine controls/drive train	6	<0.1%	8	<0.1%	7	<0.1%	6	<0.1%	9	<0.1%	**7**	**<0.1%**
Defective suspension/wheels	25	<0.1%	31	<0.1%	40	<0.1%	49	0.1%	52	0.1%	**58**	**0.1%**
Defective tires	27	<0.1%	35	<0.1%	80	0.2%	74	0.2%	70	0.2%	**100**	**0.2%**
Tow hitch/yoke defective	14	<0.1%	15	<0.1%	12	<0.1%	25	<0.1%	15	<0.1%	**15**	**<0.1%**
Defective exhaust system	1	<0.1%	0	-	0	-	0	-	0	-	**0**	**-**
Hood/tailgate/door/covering opened	4	<0.1%	3	<0.1%	4	<0.1%	4	<0.1%	13	<0.1%	**5**	**<0.1%**
Defective glazing (obscured windows)	3	<0.1%	2	<0.1%	3	<0.1%	3	<0.1%	2	<0.1%	**1**	**<0.1%**
Vehicle modifications	2	<0.1%	1	<0.1%	1	<0.1%	2	<0.1%	1	<0.1%	**1**	**<0.1%**
Fire	2	<0.1%	3	<0.1%	6	<0.1%	1	<0.1%	3	<0.1%	**1**	**<0.1%**

(continued on next page)

(continued from previous page)

Contributing Factor	2012 Total Collisions	% of 2012 Total Collisions	2013 Total Collisions	% of 2013 Total Collisions	2014 Total Collisions	% of 2014 Total Collisions	2015 Total Collisions	% of 2015 Total Collisions	2016 Total Collisions	% of 2016 Total Collisions	**2017 Total Collisions**	**% of 2017 Total Collisions**
Overloaded/oversized	2	<0.1%	0	-	1	<0.1%	4	<0.1%	4	<0.1%	**4**	**<0.1%**
Load shifted/spilled	15	<0.1%	16	<0.1%	21	<0.1%	23	<0.1%	16	<0.1%	**37**	**<0.1%**
Jack-knife/trailer swing	39	0.1%	44	0.1%	67	0.2%	63	0.2%	51	0.1%	**71**	**0.1%**
Hydroplaning tires	4	<0.1%	10	<0.1%	3	<0.1%	12	<0.1%	6	<0.1%	**1**	**<0.1%**
Any Environmental Condition	6,631	17.0%	7,231	17.3%	6,823	16.8%	4,000	9.6%	4,556	10.1%	**6,528**	**12.6%**
Animal action - Wild	4,967	12.7%	4,756	11.4%	4,017	9.9%	1,892	4.6%	1,892	4.2%	**3,437**	**6.6%**
Animal action - Domestic	41	0.1%	45	0.1%	52	0.1%	33	<0.1%	51	0.1%	**67**	**0.1%**
Slippery road surface	1,151	3.0%	1,737	4.2%	1,859	4.6%	1,357	3.3%	1,700	3.8%	**2,029**	**3.9%**
Snow drift	15	<0.1%	118	0.3%	163	0.4%	45	0.1%	96	0.2%	**98**	**0.2%**
Obstruction/debris on roadway	116	0.3%	152	0.4%	202	0.5%	191	0.5%	255	0.6%	**280**	**0.5%**
View obstructed/limited	66	0.2%	106	0.3%	190	0.5%	155	0.4%	185	0.4%	**235**	**0.5%**
Glare/reflection	26	<0.1%	36	<0.1%	27	<0.1%	41	<0.1%	52	0.1%	**35**	**<0.1%**
Construction zone	27	<0.1%	11	<0.1%	19	<0.1%	15	<0.1%	23	<0.1%	**21**	**<0.1%**
Defective driving surface	45	0.1%	60	0.1%	118	0.3%	82	0.2%	121	0.3%	**137**	**0.3%**
Shoulders defective	4	<0.1%	10	<0.1%	10	<0.1%	9	<0.1%	8	<0.1%	**3**	**<0.1%**
Lane markings inadequate	6	<0.1%	10	<0.1%	6	<0.1%	4	<0.1%	7	<0.1%	**4**	**<0.1%**
Defective/inoperative traffic control device	6	<0.1%	12	<0.1%	10	<0.1%	18	<0.1%	13	<0.1%	**17**	**<0.1%**
Weather	158	0.4%	214	0.5%	189	0.5%	205	0.5%	198	0.4%	**213**	**0.4%**
Pedestrian corridor in use	16	<0.1%	7	<0.1%	16	<0.1%	11	<0.1%	26	<0.1%	**45**	**<0.1%**
Uninvolved vehicle	14	<0.1%	20	<0.1%	18	<0.1%	27	<0.1%	32	<0.1%	**19**	**<0.1%**
Uninvolved pedestrian	8	<0.1%	8	<0.1%	3	<0.1%	4	<0.1%	8	<0.1%	**13**	**<0.1%**
Presence of prior accident	4	<0.1%	9	<0.1%	1	<0.1%	3	<0.1%	2	<0.1%	**1**	**<0.1%**
No Contributing Factor(s) Identified	3,507	9.0%	3,126	7.5%	2,144	5.3%	1,572	3.8%	1,463	3.2%	**427**	**0.8%**
Not Stated	0	-	0	-	14	<0.1%	73	0.2%	74	0.2%	**52**	**0.1%**
Total	38,972	100%	41,819	100%	40,672	100%	41,548	100%	45,316	100%	**51,844**	**100%**

*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each collision severity will add to more than the total collisions of that severity.

Table 9-7 Historical Summary of Contributing Factors Recorded for Victims of Collisions

Table 9-7

Summary of Contributing Factors for Victims (Killed and Injured, Combined) of Collisions: 2012 to 2017

Contributing Factor	2012 Total Victims	% of 2012 Total Victims	2013 Total Victims	% of 2013 Total Victims	2014 Total Victims	% of 2014 Total Victims	2015 Total Victims	% of 2015 Total Victims	2016 Total Victims	% of 2016 Total Victims	**2017 Total Victims**	**% of 2017 Total Victims**
Driver Action - Driving Properly and Human Condition - Apparently Normal	8,678	81.7%	8,886	79.1%	9,367	80.2%	10,041	83.6%	10,726	84.8%	**10,639**	**84.0%**
Driver Action - Driving properly	348	3.3%	364	3.2%	366	3.1%	255	2.1%	147	1.2%	**74**	**0.6%**
Any Driver Action	5,866	55.2%	7,636	68.0%	8,625	73.9%	8,932	74.3%	9,171	72.5%	**9,657**	**76.3%**
Following too closely	2,191	20.6%	2,578	22.9%	3,061	26.2%	3,386	28.2%	3,302	26.1%	**3,170**	**25.0%**
Turning improperly	434	4.1%	717	6.4%	875	7.5%	1,081	9.0%	1,097	8.7%	**1,122**	**8.9%**
Passing improperly	53	0.5%	44	0.4%	32	0.3%	37	0.3%	63	0.5%	**41**	**0.3%**
Changing lanes improperly	270	2.5%	269	2.4%	366	3.1%	391	3.3%	452	3.6%	**522**	**4.1%**
Fail to yield right-of-way	550	5.2%	842	7.5%	1,081	9.3%	1,142	9.5%	1,120	8.9%	**1,281**	**10.1%**
Disobey traffic control device/officer	194	1.8%	245	2.2%	307	2.6%	393	3.3%	373	2.9%	**409**	**3.2%**
Drive wrong way on roadway	17	0.2%	8	<0.1%	21	0.2%	22	0.2%	17	0.1%	**26**	**0.2%**
Passing a vehicle at pedestrian X-walk	2	<0.1%	0	-	0	-	0	-	0	-	**1**	**<0.1%**
Back unsafely	184	1.7%	214	1.9%	252	2.2%	231	1.9%	259	2.0%	**293**	**2.3%**
Parking improperly	8	<0.1%	10	<0.1%	12	0.1%	12	<0.1%	19	0.2%	**14**	**0.1%**
Lost control/Drive off road	324	3.0%	459	4.1%	421	3.6%	480	4.0%	439	3.5%	**403**	**3.2%**
Driverless vehicle ran out of control	2	<0.1%	6	<0.1%	1	<0.1%	11	<0.1%	16	0.1%	**19**	**0.2%**
Leave stop sign before safe to do so	202	1.9%	301	2.7%	490	4.2%	450	3.7%	441	3.5%	**436**	**3.4%**
Failed to signal	7	<0.1%	4	<0.1%	5	<0.1%	11	<0.1%	8	<0.1%	**14**	**0.1%**
Take avoiding action	67	0.6%	80	0.7%	92	0.8%	92	0.8%	111	0.9%	**133**	**1.1%**
Driver inexperience	56	0.5%	60	0.5%	46	0.4%	58	0.5%	62	0.5%	**87**	**0.7%**
Pedestrian error/confusion	25	0.2%	27	0.2%	25	0.2%	26	0.2%	34	0.3%	**41**	**0.3%**
NET Speed	543	5.1%	696	6.2%	881	7.5%	993	8.3%	977	7.7%	**1,092**	**8.6%**
Exceeding speed limit	15	0.1%	26	0.2%	19	0.2%	24	0.2%	54	0.4%	**19**	**0.2%**
Driving too fast for conditions	492	4.6%	646	5.8%	834	7.1%	953	7.9%	899	7.1%	**1,064**	**8.4%**
Unsafe operating speed (Too fast or too slow)	37	0.3%	29	0.3%	30	0.3%	24	0.2%	34	0.3%	**11**	**<0.1%**
NET Distracted driving	1,249	11.8%	1,759	15.7%	2,369	20.3%	3,101	25.8%	3,367	26.6%	**4,662**	**36.8%**
Careless Driving	1,111	10.5%	1,621	14.4%	2,173	18.6%	2,838	23.6%	3,142	24.8%	**4,490**	**35.5%**
Distraction/Inattention	164	1.5%	161	1.4%	270	2.3%	365	3.0%	350	2.8%	**404**	**3.2%**

(continued on next page)

(continued from previous page)

Contributing Factor	2012 Total Victims	% of 2012 Total Victims	2013 Total Victims	% of 2013 Total Victims	2014 Total Victims	% of 2014 Total Victims	2015 Total Victims	% of 2015 Total Victims	2016 Total Victims	% of 2016 Total Victims	**2017 Total Victims**	**% of 2017 Total Victims**
Human Condition - Apparently Normal	2,264	21.3%	1,123	10.0%	1,394	11.9%	2,217	18.4%	4,564	36.1%	**5,380**	**42.5%**
Any Human Condition	315	3.0%	353	3.1%	208	1.8%	226	1.9%	206	1.6%	**174**	**1.4%**
Loss of consciousness/Blackout prior to collision	20	0.2%	26	0.2%	36	0.3%	39	0.3%	24	0.2%	**34**	**0.3%**
Extreme fatigue/Fell asleep	26	0.2%	39	0.3%	26	0.2%	28	0.2%	27	0.2%	**24**	**0.2%**
Defective eyesight	5	<0.1%	0	-	9	<0.1%	4	<0.1%	1	<0.1%	**2**	**<0.1%**
Defective hearing	0	-	0	-	0	-	2	<0.1%	0	-	**0**	**-**
Medical disability	5	<0.1%	2	<0.1%	7	<0.1%	14	0.1%	10	<0.1%	**12**	**<0.1%**
Physical disability	0	-	4	<0.1%	0	-	4	<0.1%	1	<0.1%	**0**	**-**
Mental disability	3	<0.1%	4	<0.1%	10	<0.1%	4	<0.1%	2	<0.1%	**2**	**<0.1%**
Mental confusion/Inability to remember	7	<0.1%	12	0.1%	12	0.1%	27	0.2%	8	<0.1%	**13**	**0.1%**
Sudden illness	5	<0.1%	6	<0.1%	2	<0.1%	4	<0.1%	10	<0.1%	**4**	**<0.1%**
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	0	-	0	-	**0**	**-**
NET Impaired	106	1.0%	118	1.1%	116	1.0%	121	1.0%	139	1.1%	**104**	**0.8%**
Ability impaired alcohol	76	0.7%	87	0.8%	68	0.6%	97	0.8%	93	0.7%	**71**	**0.6%**
Ability impaired drugs	1	<0.1%	1	<0.1%	10	<0.1%	9	<0.1%	16	0.1%	**2**	**<0.1%**
Had been drinking/Suspected alcohol use	34	0.3%	44	0.4%	44	0.4%	27	0.2%	41	0.3%	**38**	**0.3%**
No Apparent (Vehicle) Defect	9,009	84.8%	9,011	80.2%	9,664	82.8%	10,488	87.3%	11,462	90.6%	**11,639**	**91.9%**
Any Vehicle Defect	23	0.2%	45	0.4%	44	0.4%	35	0.3%	59	0.5%	**52**	**0.4%**
Defective brakes	9	<0.1%	10	<0.1%	10	<0.1%	8	<0.1%	9	<0.1%	**18**	**0.1%**
Defective steering	0	-	1	<0.1%	7	<0.1%	2	<0.1%	0	-	**2**	**<0.1%**
Defective headlights	0	-	0	-	0	-	0	-	0	-	**1**	**<0.1%**
Defective brake lights	3	<0.1%	0	-	2	<0.1%	0	-	8	<0.1%	**0**	**-**
Defective lighting (unspecified)	0	-	4	<0.1%	1	<0.1%	0	-	4	<0.1%	**2**	**<0.1%**
Defective engine controls/drive train	0	-	2	<0.1%	2	<0.1%	2	<0.1%	1	<0.1%	**2**	**<0.1%**
Defective suspension/wheels	0	-	11	<0.1%	4	<0.1%	4	<0.1%	7	<0.1%	**3**	**<0.1%**
Defective tires	3	<0.1%	8	<0.1%	7	<0.1%	8	<0.1%	15	0.1%	**8**	**<0.1%**
Tow hitch/yoke defective	1	<0.1%	0	-	0	-	0	-	2	<0.1%	**6**	**<0.1%**
Defective exhaust system	3	<0.1%	0	-	0	-	0	-	0	-	**0**	**-**
Hood/tailgate/door/covering opened	0	-	0	-	0	-	1	<0.1%	4	<0.1%	**1**	**<0.1%**
Defective glazing (obscured windows)	2	<0.1%	0	-	2	<0.1%	0	-	2	<0.1%	**0**	**-**
Vehicle modifications	0	-	1	<0.1%	1	<0.1%	0	-	0	-	**0**	**-**
Fire	0	-	1	<0.1%	2	<0.1%	1	<0.1%	2	<0.1%	**2**	**<0.1%**

(continued on next page)

(continued from previous page)

Contributing Factor	2012 Total Victims	% of 2012 Total Victims	2013 Total Victims	% of 2013 Total Victims	2014 Total Victims	% of 2014 Total Victims	2015 Total Victims	% of 2015 Total Victims	2016 Total Victims	% of 2016 Total Victims	**2017 Total Victims**	**% of 2017 Total Victims**
Overloaded/oversized	0	-	0	-	0	-	1	<0.1%	0	-	**0**	**-**
Load shifted/spilled	1	<0.1%	3	<0.1%	3	<0.1%	2	<0.1%	2	<0.1%	**5**	**<0.1%**
Jack-knife/trailer swing	0	-	4	<0.1%	3	<0.1%	3	<0.1%	1	<0.1%	**2**	**<0.1%**
Hydroplaning tires	1	<0.1%	5	<0.1%	0	-	3	<0.1%	3	<0.1%	**0**	**-**
Any Environmental Condition	713	6.7%	911	8.1%	957	8.2%	764	6.4%	942	7.4%	**1,035**	**8.2%**
Animal action - Wild	274	2.6%	240	2.1%	219	1.9%	130	1.1%	100	0.8%	**131**	**1.0%**
Animal action - Domestic	1	<0.1%	7	<0.1%	9	<0.1%	12	<0.1%	14	0.1%	**18**	**0.1%**
Slippery road surface	290	2.7%	475	4.2%	495	4.2%	412	3.4%	560	4.4%	**602**	**4.8%**
Snow drift	1	<0.1%	16	0.1%	27	0.2%	6	<0.1%	24	0.2%	**13**	**0.1%**
Obstruction/debris on roadway	10	<0.1%	12	0.1%	14	0.1%	24	0.2%	25	0.2%	**36**	**0.3%**
View obstructed/limited	22	0.2%	44	0.4%	77	0.7%	75	0.6%	96	0.8%	**95**	**0.8%**
Glare/reflection	17	0.2%	13	0.1%	15	0.1%	15	0.1%	18	0.1%	**9**	**<0.1%**
Construction zone	9	<0.1%	9	<0.1%	6	<0.1%	5	<0.1%	7	<0.1%	**6**	**<0.1%**
Defective driving surface	16	0.2%	18	0.2%	15	0.1%	12	<0.1%	22	0.2%	**30**	**0.2%**
Shoulders defective	1	<0.1%	6	<0.1%	7	<0.1%	2	<0.1%	1	<0.1%	**1**	**<0.1%**
Lane markings inadequate	1	<0.1%	1	<0.1%	3	<0.1%	2	<0.1%	4	<0.1%	**0**	**-**
Defective/inoperative traffic control device	1	<0.1%	10	<0.1%	6	<0.1%	9	<0.1%	15	0.1%	**14**	**0.1%**
Weather	69	0.6%	74	0.7%	74	0.6%	81	0.7%	72	0.6%	**88**	**0.7%**
Pedestrian corridor in use	11	0.1%	3	<0.1%	9	<0.1%	6	<0.1%	7	<0.1%	**33**	**0.3%**
Uninvolved vehicle	3	<0.1%	7	<0.1%	5	<0.1%	11	<0.1%	13	0.1%	**8**	**<0.1%**
Uninvolved pedestrian	5	<0.1%	2	<0.1%	0	-	2	<0.1%	7	<0.1%	**7**	**<0.1%**
Presence of prior accident	0	-	4	<0.1%	2	<0.1%	1	<0.1%	5	<0.1%	**0**	**-**
No Contributing Factor(s) Identified	1,605	15.1%	1,386	12.3%	971	8.3%	650	5.4%	589	4.7%	**172**	**1.4%**
Not Stated	0	-	0	-	4	<0.1%	16	0.1%	18	0.1%	**18**	**0.1%**
Total	10,623	100%	11,234	100%	11,676	100%	12,017	100%	12,653	100%	**12,659**	**100%**

*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each year will add to more than the total victims for that year.

Table 9-8 Historical Summary of Contributing Factors Recorded for Drivers Involved in Collisions

Table 9-8
Summary of Contributing Factors for Drivers Involved in Collisions: 2012 to 2017

Contributing Factor	2012 Total Drivers	% of 2012 Total Drivers	2013 Total Drivers	% of 2013 Total Drivers	2014 Total Drivers	% of 2014 Total Drivers	2015 Total Drivers	% of 2015 Total Drivers	2016 Total Drivers	% of 2016 Total Drivers	**2017 Total Drivers**	**% of 2017 Total Drivers**
Driver Action - Driving Properly and Human Condition - Apparently Normal	29,010	49.3%	26,101	41.1%	25,040	40.9%	28,516	47.8%	32,598	51.1%	**34,281**	**50.1%**
Driver Action - Driving properly	843	1.4%	863	1.4%	790	1.3%	535	0.9%	429	0.7%	**211**	**0.3%**
Any Driver Action	20,397	34.6%	26,087	41.1%	26,978	44.0%	26,147	43.8%	27,122	42.5%	**29,307**	**42.8%**
Following too closely	5,269	8.9%	6,207	9.8%	6,607	10.8%	6,999	11.7%	6,776	10.6%	**6,292**	**9.2%**
Turning improperly	1,528	2.6%	2,053	3.2%	2,258	3.7%	2,577	4.3%	2,496	3.9%	**2,769**	**4.0%**
Passing improperly	129	0.2%	173	0.3%	150	0.2%	152	0.3%	165	0.3%	**158**	**0.2%**
Changing lanes improperly	1,363	2.3%	1,642	2.6%	1,794	2.9%	1,953	3.3%	2,121	3.3%	**2,224**	**3.2%**
Fail to yield right-of-way	1,370	2.3%	2,070	3.3%	2,188	3.6%	2,278	3.8%	2,368	3.7%	**2,603**	**3.8%**
Disobey traffic control device/officer	356	0.6%	442	0.7%	437	0.7%	499	0.8%	525	0.8%	**542**	**0.8%**
Drive wrong way on roadway	9	<0.1%	11	<0.1%	38	<0.1%	27	<0.1%	18	<0.1%	**24**	**<0.1%**
Passing a vehicle at pedestrian X-walk	2	<0.1%	0	-	0	-	0	-	0	-	**3**	**<0.1%**
Back unsafely	2,665	4.5%	2,827	4.5%	2,960	4.8%	3,083	5.2%	3,418	5.4%	**3,536**	**5.2%**
Parking improperly	101	0.2%	96	0.2%	147	0.2%	146	0.2%	172	0.3%	**200**	**0.3%**
Lost control/Drive off road	1,062	1.8%	1,597	2.5%	1,414	2.3%	1,587	2.7%	1,402	2.2%	**1,346**	**2.0%**
Driverless vehicle ran out of control	16	<0.1%	12	<0.1%	28	<0.1%	37	<0.1%	37	<0.1%	**45**	**<0.1%**
Leave stop sign before safe to do so	495	0.8%	750	1.2%	1,013	1.7%	849	1.4%	870	1.4%	**872**	**1.3%**
Failed to signal	16	<0.1%	8	<0.1%	17	<0.1%	21	<0.1%	17	<0.1%	**30**	**<0.1%**
Take avoiding action	353	0.6%	408	0.6%	458	0.7%	488	0.8%	521	0.8%	**528**	**0.8%**
Driver inexperience	161	0.3%	145	0.2%	122	0.2%	174	0.3%	176	0.3%	**235**	**0.3%**
Pedestrian error/confusion	26	<0.1%	17	<0.1%	28	<0.1%	45	<0.1%	41	<0.1%	**29**	**<0.1%**
NET Speed	1,890	3.2%	2,420	3.8%	3,081	5.0%	3,090	5.2%	2,959	4.6%	**3,687**	**5.4%**
Exceeding speed limit	16	<0.1%	15	<0.1%	26	<0.1%	48	<0.1%	38	<0.1%	**31**	**<0.1%**
Driving too fast for conditions	1,813	3.1%	2,363	3.7%	3,024	4.9%	3,005	5.0%	2,887	4.5%	**3,638**	**5.3%**
Unsafe operating speed (Too fast or too slow)	66	0.1%	45	<0.1%	34	<0.1%	46	<0.1%	41	<0.1%	**23**	**<0.1%**
NET Distracted driving	4,767	8.1%	6,702	10.6%	8,471	13.8%	9,462	15.8%	11,093	17.4%	**15,398**	**22.5%**
Careless Driving	4,461	7.6%	6,407	10.1%	8,140	13.3%	8,947	15.0%	10,573	16.6%	**15,025**	**22.0%**
Distraction/Inattention	372	0.6%	354	0.6%	460	0.8%	706	1.2%	776	1.2%	**1,054**	**1.5%**

(continued on next page)

(continued from previous page)

Contributing Factor	2012 Total Drivers	% of 2012 Total Drivers	2013 Total Drivers	% of 2013 Total Drivers	2014 Total Drivers	% of 2014 Total Drivers	2015 Total Drivers	% of 2015 Total Drivers	2016 Total Drivers	% of 2016 Total Drivers	**2017 Total Drivers**	**% of 2017 Total Drivers**
Human Condition - Apparently Normal	7,037	12.0%	3,048	4.8%	3,826	6.2%	7,594	12.7%	15,605	24.4%	**20,136**	**29.4%**
Any Human Condition	602	1.0%	592	0.9%	230	0.4%	291	0.5%	294	0.5%	**262**	**0.4%**
Loss of consciousness/Blackout prior to collision	33	<0.1%	34	<0.1%	36	<0.1%	43	<0.1%	41	<0.1%	**54**	**<0.1%**
Extreme fatigue/Fell asleep	63	0.1%	63	<0.1%	59	<0.1%	66	0.1%	79	0.1%	**70**	**0.1%**
Defective eyesight	12	<0.1%	2	<0.1%	4	<0.1%	5	<0.1%	4	<0.1%	**1**	**<0.1%**
Defective hearing	1	<0.1%	0	-	0	-	0	-	2	<0.1%	**0**	**-**
Medical disability	6	<0.1%	10	<0.1%	10	<0.1%	20	<0.1%	11	<0.1%	**14**	**<0.1%**
Physical disability	1	<0.1%	2	<0.1%	1	<0.1%	4	<0.1%	4	<0.1%	**1**	**<0.1%**
Mental disability	2	<0.1%	4	<0.1%	4	<0.1%	5	<0.1%	4	<0.1%	**3**	**<0.1%**
Mental confusion/Inability to remember	13	<0.1%	22	<0.1%	15	<0.1%	28	<0.1%	23	<0.1%	**18**	**<0.1%**
Sudden illness	10	<0.1%	8	<0.1%	5	<0.1%	8	<0.1%	12	<0.1%	**6**	**<0.1%**
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	0	-	0	-	**0**	**-**
NET Impaired	118	0.2%	117	0.2%	110	0.2%	135	0.2%	138	0.2%	**120**	**0.2%**
Ability impaired alcohol	93	0.2%	93	0.1%	72	0.1%	105	0.2%	104	0.2%	**100**	**0.1%**
Ability impaired drugs	1	<0.1%	3	<0.1%	7	<0.1%	7	<0.1%	7	<0.1%	**7**	**<0.1%**
Had been drinking/Suspected alcohol use	29	<0.1%	30	<0.1%	36	<0.1%	35	<0.1%	32	<0.1%	**20**	**<0.1%**
No Apparent (Vehicle) Defect	33,658	57.2%	26,885	42.3%	28,156	45.9%	36,356	60.9%	47,046	73.7%	**54,268**	**79.3%**
Any Vehicle Defect	163	0.3%	188	0.3%	282	0.5%	299	0.5%	276	0.4%	**337**	**0.5%**
Defective brakes	17	<0.1%	14	<0.1%	22	<0.1%	22	<0.1%	29	<0.1%	**29**	**<0.1%**
Defective steering	3	<0.1%	4	<0.1%	10	<0.1%	14	<0.1%	2	<0.1%	**4**	**<0.1%**
Defective headlights	0	-	0	-	0	-	0	-	0	-	**2**	**<0.1%**
Defective brake lights	1	<0.1%	3	<0.1%	6	<0.1%	5	<0.1%	10	<0.1%	**3**	**<0.1%**
Defective lighting (unspecified)	0	-	3	<0.1%	3	<0.1%	0	-	2	<0.1%	**4**	**<0.1%**
Defective engine controls/drive train	6	<0.1%	8	<0.1%	7	<0.1%	6	<0.1%	9	<0.1%	**7**	**<0.1%**
Defective suspension/wheels	25	<0.1%	31	<0.1%	40	<0.1%	49	<0.1%	52	<0.1%	**58**	**<0.1%**
Defective tires	27	<0.1%	35	<0.1%	80	0.1%	74	0.1%	70	0.1%	**100**	**0.1%**
Tow hitch/yoke defective	14	<0.1%	15	<0.1%	12	<0.1%	25	<0.1%	15	<0.1%	**15**	**<0.1%**
Defective exhaust system	1	<0.1%	0	-	0	-	0	-	0	-	**0**	**-**
Hood/tailgate/door/covering opened	4	<0.1%	3	<0.1%	4	<0.1%	4	<0.1%	13	<0.1%	**5**	**<0.1%**
Defective glazing (obscured windows)	3	<0.1%	2	<0.1%	3	<0.1%	3	<0.1%	2	<0.1%	**1**	**<0.1%**
Vehicle modifications	2	<0.1%	1	<0.1%	1	<0.1%	2	<0.1%	1	<0.1%	**1**	**<0.1%**
Fire	2	<0.1%	3	<0.1%	6	<0.1%	1	<0.1%	3	<0.1%	**1**	**<0.1%**

(continued on next page)

(continued from previous page)

Contributing Factor	2012 Total Drivers	% of 2012 Total Drivers	2013 Total Drivers	% of 2013 Total Drivers	2014 Total Drivers	% of 2014 Total Drivers	2015 Total Drivers	% of 2015 Total Drivers	2016 Total Drivers	% of 2016 Total Drivers	**2017 Total Drivers**	**% of 2017 Total Drivers**
Overloaded/oversized	2	<0.1%	0	-	1	<0.1%	4	<0.1%	3	<0.1%	**4**	**<0.1%**
Load shifted/spilled	15	<0.1%	16	<0.1%	21	<0.1%	23	<0.1%	16	<0.1%	**35**	**<0.1%**
Jack-knife/trailer swing	39	<0.1%	43	<0.1%	67	0.1%	63	0.1%	51	<0.1%	**71**	**0.1%**
Hydroplaning tires	4	<0.1%	10	<0.1%	3	<0.1%	12	<0.1%	6	<0.1%	**1**	**<0.1%**
Any Environmental Condition	6,630	11.3%	7,240	11.4%	6,829	11.1%	4,000	6.7%	4,535	7.1%	**6,460**	**9.4%**
Animal action - Wild	4,969	8.4%	4,757	7.5%	4,017	6.6%	1,891	3.2%	1,893	3.0%	**3,437**	**5.0%**
Animal action - Domestic	41	<0.1%	45	<0.1%	52	<0.1%	33	<0.1%	51	<0.1%	**67**	**<0.1%**
Slippery road surface	1,152	2.0%	1,740	2.7%	1,862	3.0%	1,361	2.3%	1,703	2.7%	**2,029**	**3.0%**
Snow drift	15	<0.1%	118	0.2%	164	0.3%	45	<0.1%	96	0.2%	**98**	**0.1%**
Obstruction/debris on roadway	116	0.2%	153	0.2%	202	0.3%	190	0.3%	254	0.4%	**278**	**0.4%**
View obstructed/limited	65	0.1%	104	0.2%	191	0.3%	155	0.3%	177	0.3%	**211**	**0.3%**
Glare/reflection	26	<0.1%	36	<0.1%	27	<0.1%	41	<0.1%	50	<0.1%	**30**	**<0.1%**
Construction zone	27	<0.1%	11	<0.1%	20	<0.1%	15	<0.1%	20	<0.1%	**17**	**<0.1%**
Defective driving surface	45	<0.1%	60	<0.1%	118	0.2%	82	0.1%	120	0.2%	**136**	**0.2%**
Shoulders defective	4	<0.1%	10	<0.1%	11	<0.1%	9	<0.1%	7	<0.1%	**3**	**<0.1%**
Lane markings inadequate	6	<0.1%	10	<0.1%	6	<0.1%	4	<0.1%	8	<0.1%	**4**	**<0.1%**
Defective/inoperative traffic control device	6	<0.1%	12	<0.1%	10	<0.1%	17	<0.1%	13	<0.1%	**15**	**<0.1%**
Weather	159	0.3%	215	0.3%	191	0.3%	204	0.3%	192	0.3%	**209**	**0.3%**
Pedestrian corridor in use	14	<0.1%	7	<0.1%	13	<0.1%	10	<0.1%	18	<0.1%	**14**	**<0.1%**
Uninvolved vehicle	13	<0.1%	20	<0.1%	18	<0.1%	27	<0.1%	27	<0.1%	**11**	**<0.1%**
Uninvolved pedestrian	7	<0.1%	7	<0.1%	2	<0.1%	3	<0.1%	3	<0.1%	**3**	**<0.1%**
Presence of prior accident	4	<0.1%	9	<0.1%	1	<0.1%	3	<0.1%	2	<0.1%	**0**	**-**
No Contributing Factor(s) Identified	3,304	5.6%	2,969	4.7%	1,953	3.2%	1,260	2.1%	1,196	1.9%	**305**	**0.4%**
Not Stated	0	-	0	-	13	<0.1%	68	0.1%	61	<0.1%	**44**	**<0.1%**
Total	58,877	100%	63,501	100%	61,294	100%	59,716	100%	63,839	100%	**68,447**	**100%**

*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each collision severity will add to more than the total collisions of that severity.

Table 9-9 Summary of 'Speed', 'Distracted driving' and 'Impaired' as Contributing Factors

Table 9-9
Summary of 'Speed', 'Distracted driving' & 'Impaired' as Contributing Factors: 2012 to 2017

		2012	2013	2014	2015	2016	2012-2016 average	**2017**
NET Speed ('Exceeding speed limit', 'Driving too fast for conditions' and 'Unsafe operating speed (too fast or too slow)' combined)								
Collisions	All collisions	1,891	2,418	3,076	3,092	2,964	2,688	**3,692**
		4.9%	5.8%	7.6%	7.4%	6.5%	6.5%	**7.1%**
	Fatal collisions	17	10	11	13	26	15	**12**
		19.1%	14.5%	17.2%	18.8%	27.1%	19.9%	**18.5%**
	Injury collisions	393	499	683	745	722	608	**830**
		4.7%	5.7%	7.6%	8.2%	7.5%	6.8%	**8.6%**
Victims	All victims (killed or injured)	543	696	881	993	977	818	**1,092**
		5.1%	6.2%	7.5%	8.3%	7.7%	7.0%	**8.6%**
	People killed	19	14	12	13	33	18	**13**
		19.8%	16.5%	17.6%	16.7%	30.8%	21.0%	**17.8%**
	People seriously injured	35	38	36	60	73	48	**69**
		10.3%	12.4%	11.9%	14.5%	15.3%	13.1%	**15.6%**
Driver Involvement (/10,000 drivers)	All collisions	22.5	28.3	35.4	35.1	33.0	31.0	**40.7**
	Fatal collisions	0.2	0.1	0.1	0.1	0.3	0.2	**0.1**
	Injury collisions	4.7	5.8	7.9	8.4	8.0	7.0	**9.1**
NET Distracted driving ('Distraction/ inattention' and 'Careless driving' combined)								
Collisions	All collisions	4,780	6,709	8,468	9,463	11,086	8,101	**15,403**
		12.3%	16.0%	20.8%	22.8%	24.5%	19.4%	**29.7%**
	Fatal collisions	35	18	17	25	23	24	**26**
		39.3%	26.1%	26.6%	36.2%	24.0%	30.5%	**40.0%**
	Injury collisions	948	1,357	1,810	2,260	2,535	1,782	**3,495**
		11.4%	15.5%	20.1%	24.8%	26.5%	19.9%	**36.1%**
Victims	All victims (killed or injured)	1,249	1,759	2,369	3,101	3,367	2,369	**4,662**
		11.8%	15.7%	20.3%	25.8%	26.6%	20.4%	**36.8%**
	People killed	37	28	18	28	29	28	**30**
		38.5%	32.9%	26.5%	35.9%	27.1%	32.3%	**41.1%**
	People seriously injured	45	64	84	133	138	93	**184**
		13.3%	20.8%	27.7%	32.0%	28.9%	25.2%	**41.6%**
Driver Involvement (/10,000 drivers)	All collisions	56.9	78.3	97.5	107.4	123.8	93.3	**170.1**
	Fatal collisions	0.4	0.2	0.2	0.3	0.3	0.3	**0.3**
	Injury collisions	11.3	15.8	20.9	25.7	28.4	20.5	**38.5**
NET Impaired ('Impaired by alcohol', 'Impaired by drugs' and 'Had been drinking/Suspected alcohol use' combined)								
Collisions	All collisions	123	119	115	140	145	128	**133**
		0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	**0.3%**
	Fatal collisions	28	15	19	15	31	22	**21**
		31.5%	21.7%	29.7%	21.7%	32.3%	27.9%	**32.3%**
	Injury collisions	36	50	45	61	49	48	**42**
		0.4%	0.6%	0.5%	0.7%	0.5%	0.5%	**0.4%**
Victims	All victims (killed or injured)	106	118	116	121	139	120	**104**
		1.0%	1.1%	1.0%	1.0%	1.1%	1.0%	**0.8%**
	People killed	32	19	19	16	38	25	**23**
		33.3%	22.4%	27.9%	20.5%	35.5%	28.6%	**31.5%**
	People seriously injured	23	32	22	24	36	27	**27**
		6.8%	10.4%	7.3%	5.8%	7.5%	7.4%	**6.1%**
Driver Involvement (/10,000 drivers)	All collisions	1.4	1.4	1.3	1.5	1.5	1.4	**1.3**
	Fatal collisions	0.3	0.2	0.2	0.1	0.3	0.2	**0.2**
	Injury collisions	0.4	0.6	0.5	0.7	0.5	0.5	**0.4**

Note: Proportions provided for each contributing factor in a specific category are for the count of contributing factor as a portion of all collisions in the specific category. E.g., the proportion of fatal collisions where speed is a factor is derived from the count of fatal collisions in the specific year where speed is a factor divided by the total fatal collisions in that year.

SECTION 10 - National Safety Code Monitoring Report

Introduction

This section counts the number of commercial vehicles involved in collisions, the severity of those collisions and the victims killed and injured in those collisions. This section includes only commercial vehicles with a National Safety Code (NSC).

Key Highlights

In 2017, there are 2,181 commercial vehicles involved in traffic collisions. Of these:

- 17 are involved in fatal collisions;
- 447 are involved in injury collisions; and,
- 1,717 are involved in PDO collisions.

Traffic collisions where at least one commercial vehicle is involved resulted in a total of 563 victims in 2017, including:

- 15 people killed;
- 39 people seriously injured; and,
- 509 people where the injury is minor, minimal or unspecified.

Major Elements Examined

Counts of NSC commercial vehicles involved in collisions in Manitoba for 2017 and previous years are taken from Traffic Accident Reports (TARs) completed by Manitoba Public Insurance and law enforcement agencies, and compiled by Manitoba Public Insurance. These counts are presented for all reportable collisions, fatal collisions, injury collisions, and property damage only (PDO) collisions.

It is important to note that the number of collisions is not equal to the number of vehicles involved in those collisions, nor does it equal the number of victims in those collisions. All collisions reported involve at least one vehicle, but may involve more than one as well. Likewise, a single collision could involve no victims, or one or more victims.

The reader is cautioned that not all percentages and calculations in the following tables will add to 100% of the total noted. Rounding error will often produce a difference of one or two percentage points. Likewise, average calculations are presented for historical data from the years 2012 to 2016. Rounding error in these calculations will cause individual average counts not to add to total average counts in some cases.

Due to the small numbers of fatal collisions, fluctuations year-over-year could be dramatic; a small change in the total count of these types of collisions could have a significant effect on statistics such as percentage change to previous years and involvement rates. Therefore, the reader is strongly cautioned when interpreting results regarding fatal collisions.

The reader is cautioned that not all victims in a collision involving an NSC commercial vehicle will be a driver or passenger in the commercial vehicle. This section counts the number of total victims resulting from a collision where a commercial vehicle was involved, not just the victims in the commercial vehicle.

Terms and Definitions

“Collision Severity”

- A classification of a collision based on the most severe result of the collision, i.e., whether someone was killed (fatal), injured (injury) or property damage only (PDO) occurred.

“Fatal Collision”

- A motor vehicle collision in which at least one person is killed as a result of the collision. The death must have occurred within thirty days of the collision occurrence.

"Injury Collision"

- A motor vehicle collision in which at least one person has been recorded as sustaining some level of personal injury, but in which no one is fatally injured or killed. Levels of injury include: 'major' (admitted to hospital); 'minor' (treated and released from hospital); and, 'minimal' (no hospital treatment required).

"Property Damage Only (PDO) Collision"

- A motor vehicle collision in which no injury or fatality is sustained and only property damage is the result.

"Light Duty Vehicles"

- A classification of vehicle types including those defined in the Traffic Accident Report (TAR) as: passenger vehicles (automobile), mini/multi-purpose van, van under 4,500 kg and pick-up under 4,500 kg.

"NSC Commercial Vehicles"

- The National Safety Code (NSC) is a classification of vehicle types including those defined in the Traffic Accident Report (TAR) as: "Truck greater than 4,500 kilograms (unit chassis)", "Power Unit for Semi-Trailer", "Truck (Other)" (where the type and size of truck is unknown), "School Bus", "Transit Bus (Urban)", "Inter-City Bus", and "Bus (Other)". These vehicles bear a National Safety Code Number and are entered onto the National Safety Code Collision Monitoring Report.

"Truck greater than 4,500 kilograms (unit chassis)"

- A vehicle category that includes all straight trucks with a gross vehicle mass 4,500 kg and over on the vehicle registration. This does not include truck tractors with a fifth wheel assembly.

"Power Unit for Semi-Trailer"

- A vehicle category that includes truck tractors used for the moving of cargo in or on a trailer by means of a fifth wheel connection. This does not include pickups equipped with a fifth wheel.

"Truck (Other)"

- A vehicle category used if the type and size of truck is unknown.

"School Bus"

- A vehicle category that includes a bus authorized for the transportation of students to or from school and related school activities.

"Transit Bus (Urban)"

- A vehicle category that includes a bus used for commercial carrying of passengers within an urban area.

"Inter-City Bus"

- A vehicle category that includes a bus licensed for inter-city or provincial travel.

"Bus (Other)"

- A vehicle category that includes personal use of buses and bus type conversions, but does not include original equipment manufacturer type; for example, buses converted to motor homes.

"Contributing Factor"

- Those circumstances or factors recorded as having contributed to the collision or its severity. Factors can be selected from four categories: driver action, human condition, vehicle condition, or environmental condition. The TAR allows for up to three contributing factors to be recorded for each driver or vehicle involved in the collision.

"At-fault Contributing Factor"

- A contributing factor where some action or condition other than "driving properly" and "apparently normal" has been noted.

"Driver Action"

- A category of contributing factors attributed to actions taken or performed by a driver immediately prior to a collision.

"Human Condition"

- A category of contributing factors attributed to the physical or mental condition of a driver immediately prior to a collision, most often that limit the driver's ability to drive safely or properly.

"Vehicle Condition"

- A category of contributing factors attributed to the physical condition of a vehicle immediately prior to a collision.

"Environmental Condition"

- A category of contributing factors attributed to environmental conditions (i.e., weather, road surface and animal actions) immediately prior to a collision.

"Pre-collision activity"

- The action of a vehicle immediately prior to involvement in a collision. This is an indication of what the vehicle was doing prior to the accident or to the driver realizing that a collision may occur and does not include vehicle maneuver to avoid the collision.

Table 10-1 NSC Commercial Vehicles Involved in Traffic Collisions by Vehicle Type and Collision Severity

Table 10-1

NSC Commercial Vehicles Involved in Traffic Collisions by Vehicle Type and Collision Severity: 2017, 2012-2016 Average

Vehicle Category	2017 Collision Severity						**2017 Total**	% of 2017 Total	2012-2016 Average Count of Vehicles				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Truck >4,500 kgs Unit Chassis	6	35.3%	201	45.0%	948	55.2%	**1,155**	53.0%	5	187	856	1,047	56.8%
Power Unit (Semi-Trailer)	10	58.8%	122	27.3%	513	29.9%	**645**	29.6%	9	113	338	460	25.0%
Truck - Other	0	-	23	5.1%	71	4.1%	**94**	4.3%	1	24	64	90	4.9%
School Bus	0	-	8	1.8%	63	3.7%	**71**	3.3%	-	5	8	13	0.7%
Transit Bus - Urban	1	5.9%	82	18.3%	35	2.0%	**118**	5.4%	<1	40	62	103	5.6%
Para-Transit Bus	0	-	0	-	6	0.3%	**6**	0.3%	-	3	5	8	0.5%
Inter-City Bus	0	-	0	-	13	0.8%	**13**	0.6%	-	2	7	9	0.5%
Bus - Other	0	-	11	2.5%	68	4.0%	**79**	3.6%	<1	26	87	113	6.1%
Total	17	100%	447	100%	1,717	100%	**2,181**	100%	16	399	1,428	1,843	100%

Note: Counts of vehicles in the 2012-2016 average may not add to the total due to rounding.

In 2017, there are 2,181 commercial vehicles involved in traffic collisions. Of these:

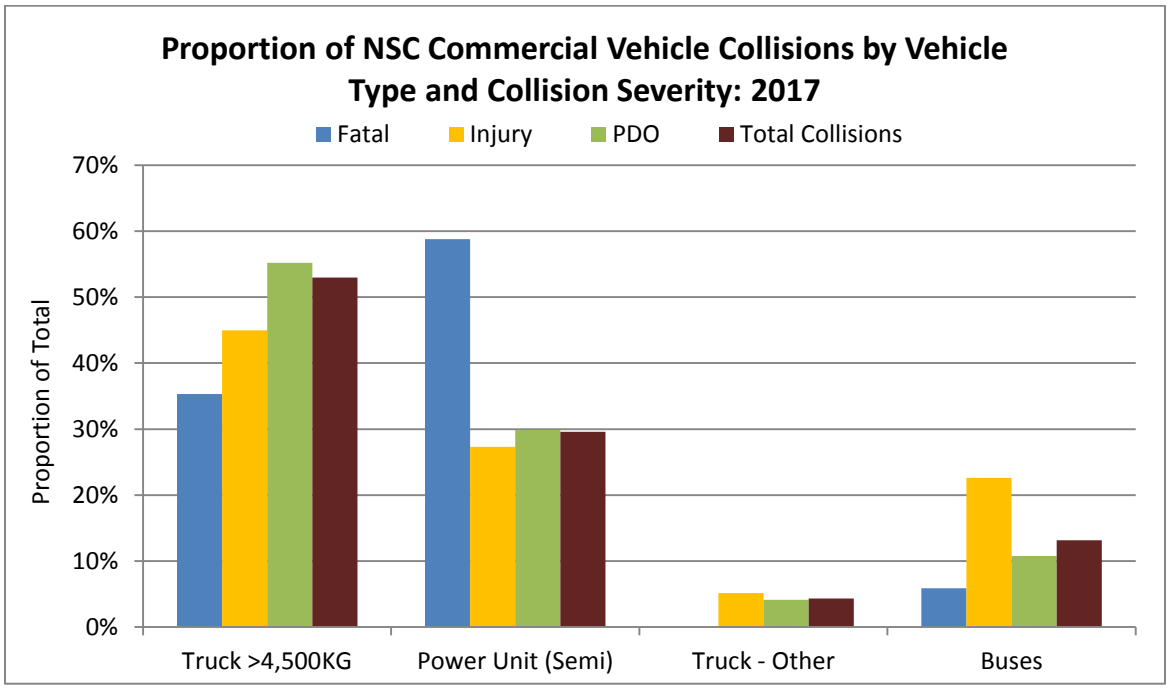
- 17 are involved in fatal collisions;
- 447 are involved in injury collisions; and,
- 1,717 are involved in PDO collisions.

The number of NSC commercial vehicles involved in collisions in 2017 has increased by 18% (a count of 338) compared to the previous five year (2012 to 2016) annual average. Compared to the previous five years, the number of NSC commercial vehicles in 2017 involved in:

- Fatal collisions increased by a count of 1;
- Injury collisions increased by 12% (a count of 48); and,
- PDO collisions increased by 20% (a count of 289).

NOTE: For a detailed historical count of NSC Commercial Vehicles involved in traffic collisions occurring in each year from 2012 to 2017, please refer to "*Table 10-5 Historical Summary of NSC Commercial Vehicles Involved in Traffic Collisions by Vehicle Type*" at the end of this section.

Figure 10-1 Proportion of NSC Commercial Vehicles by Vehicle Type and Collision Severity



In 2017, trucks with a unit chassis greater than 4,500 kilograms and power units for semi-trailers combined account for nearly 83% of the commercial vehicles involved in traffic collisions.

- Power units for semi-trailers account for 10 of the 17 commercial vehicles involved in fatal collisions; and,
- Trucks with unit chassis greater than 4,500 kilograms account for 6 of the 17 commercial vehicles involved in fatal collisions.

Table 10-2 Traffic Collision Victims by NSC Commercial Vehicle Type and Casualty Type

Table 10-2
Traffic Collision Victims by NSC Commercial Vehicle Type and Casualty Type: 2017

Vehicle Type	2017 Casualty Type												**2017 Total Victims**	% of 2017 Total Victims
	Killed	% of Total Killed	Serious Injury	% of Total Serious Injury	Minor Injury	% of Total Minor Injury	Minimal Injury	% of Total Minimal Injury	Other Injury	% of Total Other Injury	Total Injured	% of Total Injured		
Truck >4,500 kgs Unit Chassis	7	46.7%	18	46.2%	55	43.3%	166	44.3%	3	42.9%	242	44.2%	**249**	44.2%
Power Unit (Semi-Trailer)	7	46.7%	18	46.2%	53	41.7%	83	22.1%	1	14.3%	155	28.3%	**162**	28.8%
Truck - Other	0	-	2	5.1%	7	5.5%	15	4.0%	1	14.3%	25	4.6%	**25**	4.4%
School Bus	0	-	0	-	1	0.8%	12	3.2%	0	-	13	2.4%	**13**	2.3%
Transit Bus - Urban	1	6.7%	1	2.6%	8	6.3%	89	23.7%	1	14.3%	99	18.1%	**100**	17.8%
Para-Transit Bus	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
Inter-City Bus	0	-	0	-	0	-	0	-	0	-	0	-	**0**	-
Bus - Other	0	-	0	-	3	2.4%	10	2.7%	1	14.3%	14	2.6%	**14**	2.5%
Total	15	100%	39	100%	127	100%	375	100%	7	100%	548	100%	**563**	100%

Table 10-2a Traffic Collision Victims by NSC Commercial Vehicle Type and Casualty Type for Previous Five Years

Table 10-2a
Traffic Collision Victims by NSC Commercial Vehicle Type and Casualty Type: 2012-2016 Average

Vehicle Type	2012-2016 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Truck >4,500 kgs Unit Chassis	5	10	56	166	3	235	241	45.6%
Power Unit (Semi-Trailer)	10	14	51	76	4	144	154	29.2%
Truck - Other	1	3	8	19	2	32	34	6.4%
School Bus	-	<1	2	4	<1	8	8	1.5%
Transit Bus - Urban	<1	1	14	32	1	49	49	9.4%
Para-Transit Bus	-	<1	<1	3	-	4	4	0.7%
Inter-City Bus	-	-	1	2	-	3	3	0.5%
Bus - Other	<1	2	11	22	<1	36	36	6.8%
Total	17	31	145	324	11	511	528	100%

Note: Counts of victims in the 2012-2016 average may not add to the total due to rounding.

Traffic collisions where at least one commercial vehicle is involved resulted in a total of 563 victims in 2017, including:

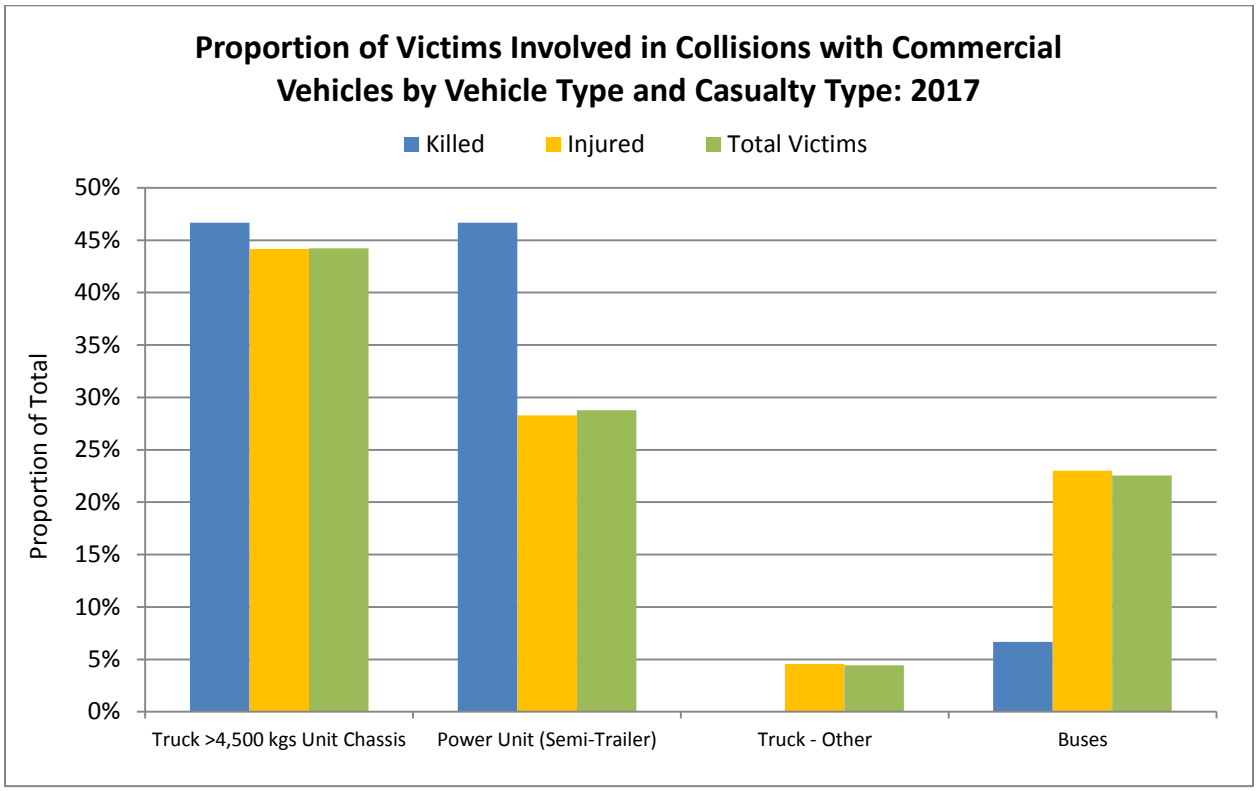
- 15 people killed;
- 39 people seriously injured; and,
- 509 people where the injury is minor, minimal or unspecified.

Collisions involving commercial vehicles in 2017 resulted in more people injured overall when compared to the previous five year (2012 to 2016) annual average. In 2017:

- The number of people killed decreased by a count of 2 compared to the previous five years;
- The number of people seriously injured increased by a count of 8 (a 27% increase) compared to the previous five years; and,
- The number of people injured overall increased by a count of 37 (a 7% increase) compared to the previous five years.

NOTE: For a detailed historical count of traffic collision victims where an NSC Commercial Vehicle was involved in each year from 2012 to 2017, please refer to "*Table 10-6 Historical Summary of Traffic Collision Victims where an NSC Commercial Vehicle is Involved by Vehicle Type*" at the end of this section.

Figure 10-2 Proportion of Victims Involved in Collisions with NSC Commercial Vehicles by Vehicle Type and Casualty Type



In 2017, collisions involving trucks with unit chassis greater than 4,500 kilograms along with power units for semi-trailers make up the largest proportions of NSC vehicles involved where someone is killed (14 of 15 people killed) or seriously injured (92%).

Table 10-3 Commercial Vehicle Involvement in Traffic Collisions by Pre-Collision Activity and Collision Severity

Table 10-3

NSC Commercial Vehicles Involved in Traffic Collisions by Pre-Collision Activity and Collision Severity: 2017, 2012-2016 Average

Pre-Collision Activity	2017 Collision Severity						**2017 Total**	**% of 2017 Total**	2012-2016 Average Count of Vehicles				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Going Straight Ahead	14	82.4%	218	48.8%	811	47.2%	**1,043**	47.8%	10	127	462	599	32.5%
Turning Left	2	11.8%	27	6.0%	112	6.5%	**141**	6.5%	1	17	56	75	4.1%
Turning Right	0	-	7	1.6%	66	3.8%	**73**	3.3%	<1	7	45	53	2.9%
Making U Turn	0	-	1	0.2%	6	0.3%	**7**	0.3%	-	<1	4	5	0.3%
Changing Lanes – Left	0	-	7	1.6%	25	1.5%	**32**	1.5%	<1	4	14	18	1.0%
Changing Lanes – Right	0	-	7	1.6%	23	1.3%	**30**	1.4%	-	6	15	21	1.1%
Merging	0	-	4	0.9%	9	0.5%	**13**	0.6%	<1	<1	3	3	0.2%
Reversing	0	-	5	1.1%	149	8.7%	**154**	7.1%	-	5	104	110	6.0%
Overtaking	0	-	0	-	3	0.2%	**3**	0.1%	-	-	2	2	<0.1%
Slowing/Stopping on Roadway	0	-	20	4.5%	47	2.7%	**67**	3.1%	<1	13	38	51	2.7%
Stopped in Traffic	0	-	20	4.5%	92	5.4%	**112**	5.1%	-	24	75	98	5.3%
Starting in Traffic	0	-	6	1.3%	12	0.7%	**18**	0.8%	<1	7	11	18	1.0%
Leave Parking Position/Roadside	0	-	2	0.4%	5	0.3%	**7**	0.3%	-	1	5	6	0.3%
Enter Parking Position/Roadside	0	-	0	-	8	0.5%	**8**	0.4%	-	1	8	9	0.5%
Parked Legally	0	-	1	0.2%	52	3.0%	**53**	2.4%	<1	<1	23	24	1.3%
Parked Illegally	0	-	0	-	0	-	**0**	-	-	<1	<1	<1	<0.1%
Swerving	0	-	5	1.1%	6	0.3%	**11**	0.5%	<1	2	6	9	0.5%
Other	0	-	11	2.5%	105	6.1%	**116**	5.3%	<1	5	25	30	1.6%
Not Applicable/Unknown	1	5.9%	106	23.7%	186	10.8%	**293**	13.4%	3	178	532	713	38.7%
Total	17	100%	447	100%	1,717	100%	**2,181**	100%	16	399	1,428	1,843	100%

Note: Counts of vehicles in the 2012-2016 average may not add to the total due to rounding.

In 2017, most NSC commercial vehicles involved in a collision were “going straight ahead” when the collision occurred (48% of NSC vehicles involved in collisions; 82% of NSC vehicles involved in fatal collisions; 49% of NSC vehicles involved in injury collisions; and 47% of NSC vehicles involved in PDO collisions). In the previous five year (2012 to 2016) annual average, “going straight ahead” was noted as the pre-collision action for nearly 33% of all commercial vehicles involved in a collision.

Other noteworthy pre-collision actions for commercial vehicles involved in collisions in 2017 include:

- Turning (“turning left” and “turning right” combined) – 10%;
- Stopped or stopping (“stopped in traffic” and “slowing/stopping on roadway” combined) – 8%; and,
- Reversing – 7% of all collisions.

Considering fatal collisions, there are very few pre-collision actions noted in 2017. “Going straight ahead” was noted for 14 of 17 NSC vehicles (82%) involved in a fatal collision. Turning (“turning left” and “turning right” combined) was noted for 2 of 17 NSC vehicles (12%) involved in a fatal crash.

Commercial vehicles involved in injury collisions in 2017 were noted most often as “going straight ahead” (49%). Other pre-collision actions of commercial vehicles involved in injury collisions include:

- Stopped or stopping (“stopped in traffic” and “slowing/stopping on roadway” combined) – 9%;
- Turning (“turning left” and “turning right” combined) – 8%; and,
- Changing lanes (left or right) – 3 %.

Table 10-4 NSC Commercial Vehicles Involved in Traffic Collisions by Contributing Factors and Collision Severity

Table 10-4

NSC Commercial Vehicles Involved in Traffic Collisions by Contributing Factors and Collision Severity: 2017

Contributing Factor	2017 Collision Severity						**2017 Total**	**% of 2017 Total**
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Driver Action - Driving Properly and Human Condition - Apparently Normal	9	52.9%	191	42.7%	741	43.2%	**941**	**43.1%**
Driver Action - Driving properly	1	5.9%	9	2.0%	28	1.6%	**38**	**1.7%**
Any Driver Action	6	35.3%	202	45.2%	670	39.0%	**878**	**40.3%**
Follow too closely	0	-	71	15.9%	68	4.0%	**139**	**6.4%**
Turning improperly	1	5.9%	22	4.9%	89	5.2%	**112**	**5.1%**
Passing improperly	0	-	1	0.2%	9	0.5%	**10**	**0.5%**
Changing lanes improperly	0	-	12	2.7%	76	4.4%	**88**	**4.0%**
Fail to yield right of way	1	5.9%	18	4.0%	29	1.7%	**48**	**2.2%**
Disobey traffic control device/officer	1	5.9%	8	1.8%	6	0.3%	**15**	**0.7%**
Drive wrong way on roadway	1	5.9%	0	-	1	<0.1%	**2**	**<0.1%**
Passing a vehicle at pedestrian X-walk	0	-	0	-	0	-	**0**	**-**
Back unsafely	0	-	6	1.3%	157	9.1%	**163**	**7.5%**
Parking improperly	0	-	0	-	5	0.3%	**5**	**0.2%**
Lost control/Drive off road	1	5.9%	4	0.9%	18	1.0%	**23**	**1.1%**
Driverless vehicle ran out of control	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Leave stop sign before safe to do so	1	5.9%	4	0.9%	10	0.6%	**15**	**0.7%**
Failed to signal	0	-	0	-	0	-	**0**	**-**
Take avoiding action	0	-	4	0.9%	7	0.4%	**11**	**0.5%**
Driver inexperience	0	-	1	0.2%	10	0.6%	**11**	**0.5%**
Pedestrian error/confusion	0	-	0	-	0	-	**0**	**-**
NET Speed	2	11.8%	22	4.9%	50	2.9%	**74**	**3.4%**
Exceeding speed limit	0	-	0	-	0	-	**0**	**-**
Driving too fast for conditions	2	11.8%	22	4.9%	50	2.9%	**74**	**3.4%**
Unsafe operating speed (Too fast or too slow)	0	-	0	-	0	-	**0**	**-**
NET Distracted driving	3	17.6%	67	15.0%	287	16.7%	**357**	**16.4%**
Careless Driving	2	11.8%	58	13.0%	261	15.2%	**321**	**14.7%**
Distraction/Inattention	1	5.9%	15	3.4%	37	2.2%	**53**	**2.4%**

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Collision Severity						2017 Total	% of 2017 Total
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Human Condition - Apparently Normal	0	-	120	26.8%	538	31.3%	**658**	**30.2%**
Any Human Condition	2	11.8%	1	0.2%	2	0.1%	**5**	**0.2%**
Loss of consciousness/Blackout prior to collision	0	-	0	-	2	0.1%	**2**	**<0.1%**
Extreme fatigue/Fell asleep	1	5.9%	0	-	0	-	**1**	**<0.1%**
Defective eyesight	0	-	0	-	0	-	**0**	**-**
Defective hearing	0	-	0	-	0	-	**0**	**-**
Medical disability	0	-	0	-	0	-	**0**	**-**
Physical disability	0	-	0	-	0	-	**0**	**-**
Mental disability	0	-	0	-	0	-	**0**	**-**
Mental confusion/Inability to remember	0	-	0	-	0	-	**0**	**-**
Sudden illness	0	-	0	-	0	-	**0**	**-**
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	**0**	**-**
NET Impaired	1	5.9%	1	0.2%	0	-	**2**	**<0.1%**
Ability impaired alcohol	1	5.9%	1	0.2%	0	-	**2**	**<0.1%**
Ability impaired drugs	0	-	0	-	0	-	**0**	**-**
Had been drinking/Suspected alcohol use	0	-	0	-	0	-	**0**	**-**
No apparent (vehicle) defect	0	-	290	64.9%	1,171	68.2%	**1,461**	**67.0%**
Any Vehicle Defect	0	-	4	0.9%	43	2.5%	**47**	**2.2%**
Defective brakes	0	-	1	0.2%	3	0.2%	**4**	**0.2%**
Defective steering	0	-	0	-	0	-	**0**	**-**
Defective headlights	0	-	0	-	0	-	**0**	**-**
Defective brakelights	0	-	0	-	0	-	**0**	**-**
Defective lighting (unspecified)	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Defective engine controls/drive train	0	-	0	-	0	-	**0**	**-**
Defective suspension/wheels	0	-	0	-	2	0.1%	**2**	**<0.1%**
Defective tires	0	-	0	-	8	0.5%	**8**	**0.4%**
Tow hitch/yoke defective	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Defective exhaust system	0	-	0	-	0	-	**0**	**-**
Hood/tailgate/door/covering opened	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Defective glazing (obscured windows)	0	-	0	-	0	-	**0**	**-**
Vehicle modifications	0	-	0	-	0	-	**0**	**-**
Fire	0	-	0	-	0	-	**0**	**-**
Overloaded/oversized	0	-	0	-	4	0.2%	**4**	**0.2%**

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Collision Severity						2017 Total	% of 2017 Total
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Load shifted/spilled	0	-	1	0.2%	12	0.7%	**13**	**0.6%**
Jack-knife/trailer swing	0	-	2	0.4%	11	0.6%	**13**	**0.6%**
Hydroplaning tires	0	-	0	-	0	-	**0**	**-**
Any Environmental Condition	0	-	21	4.7%	146	8.5%	**167**	**7.7%**
Animal action - Wild	0	-	1	0.2%	92	5.4%	**93**	**4.3%**
Animal action - Domestic	0	-	1	0.2%	4	0.2%	**5**	**0.2%**
Slippery road surface	0	-	11	2.5%	26	1.5%	**37**	**1.7%**
Snow drift	0	-	0	-	2	0.1%	**2**	**<0.1%**
Obstruction/debris on roadway	0	-	1	0.2%	5	0.3%	**6**	**0.3%**
View obstructed/limited	0	-	3	0.7%	7	0.4%	**10**	**0.5%**
Glare/reflection	0	-	0	-	0	-	**0**	**-**
Construction zone	0	-	1	0.2%	2	0.1%	**3**	**0.1%**
Defective driving surface	0	-	1	0.2%	5	0.3%	**6**	**0.3%**
Shoulders defective	0	-	0	-	0	-	**0**	**-**
Lane markings inadequate	0	-	0	-	0	-	**0**	**-**
Defective/inoperative traffic control device	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Weather	0	-	3	0.7%	3	0.2%	**6**	**0.3%**
Pedestrian corridor in use	0	-	0	-	0	-	**0**	**-**
Uninvolved vehicle	0	-	0	-	1	<0.1%	**1**	**<0.1%**
Uninvolved pedestrian	0	-	0	-	0	-	**0**	**-**
Presence of prior accident	0	-	0	-	0	-	**0**	**-**
No Contributing Factor(s) Identified	0	-	19	4.3%	40	2.3%	**59**	**2.7%**
Not Applicable/Not Stated	0	-	1	0.2%	6	0.3%	**7**	**0.3%**
Total	17	100.0%	447	100.0%	1,717	100%	**2,181**	**100.0%**

*Note: Each vehicle and/or driver involved in a collision can have up to three contributing factors noted. Because multiple factors can be noted, the counts and percentages under each collision severity will add to more than the total. An exception to this is the factors “Driver Action – Driving Properly and Human Condition – Apparently Normal”, "Driver Action – Driving Properly” and “Human Condition – Apparently Normal”, which are mutually exclusive and can be added to determine a “Driver not at-fault” total.

Table 10-4a NSC Commercial Vehicles Involved in Traffic Collisions by Contributing Factors and Collision Severity for the Previous Five Years

Table 10-4a
NSC Commercial Vehicles Involved in Traffic Collisions by Contributing Factors and Collision Severity: 2012-2016 Average

Contributing Factor	2012-2016 Average Count of Vehicles				
	Fatal	Injury	PDO	Total Vehicles	% of Total Vehicles
Driver Action - Driving Properly and Human Condition - Apparently Normal	8	172	625	806	43.7%
Driver Action - Driving properly	<1	5	23	29	1.6%
Any Driver Action	6	129	452	587	31.9%
Follow too closely	<1	44	70	115	6.2%
Turning improperly	<1	11	43	55	3.0%
Passing improperly	<1	2	4	6	0.3%
Changing lanes improperly	-	9	39	48	2.6%
Fail to yield right of way	<1	13	25	39	2.1%
Disobey traffic control device/officer	1	2	4	8	0.4%
Drive wrong way on roadway	<1	<1	<1	<1	<0.1%
Passing a vehicle at pedestrian X-walk	-	-	-	-	-
Back unsafely	-	5	109	115	6.2%
Parking improperly	-	-	4	4	0.2%
Lost control/Drive off road	1	7	19	27	1.5%
Driverless vehicle ran out of control	-	-	<1	<1	<0.1%
Leave stop sign before safe to do so	1	4	9	14	0.8%
Failed to signal	-	-	-	-	-
Take avoiding action	<1	2	6	8	0.4%
Driver inexperience	<1	<1	4	5	0.3%
Pedestrian error/confusion	<1	-	<1	1	<0.1%
NET Speed	<1	12	38	50	2.7%
Exceeding speed limit	-	<1	-	<1	<0.1%
Driving too fast for conditions	<1	10	36	47	2.6%
Unsafe operating speed (Too fast or too slow)	-	1	2	3	0.2%
NET Distracted driving	2	35	142	179	9.7%
Careless Driving	2	30	128	160	8.7%
Distraction/Inattention	<1	6	15	21	1.2%
Human Condition - Apparently Normal	3	48	189	239	13.0%
Any Human Condition	1	4	8	13	0.7%
Loss of consciousness/Blackout prior to collision	-	<1	<1	<1	<0.1%
Extreme fatigue/Fell asleep	-	1	1	2	0.1%
Defective eyesight	-	-	-	-	-
Defective hearing	-	-	-	-	-
Medical disability	-	-	-	-	-
Physical disability	-	-	-	-	-
Mental disability	<1	-	-	<1	<0.1%
Mental confusion/Inability to remember	-	<1	-	<1	<0.1%
Sudden illness	-	-	-	-	-
Exceed hours of service (commercial drivers only)	-	-	-	-	-
NET Impaired	<1	<1	1	2	0.1%
Ability impaired alcohol	<1	<1	<1	2	0.1%
Ability impaired drugs	-	-	<1	<1	<0.1%
Had been drinking/Suspected alcohol use	-	-	<1	<1	<0.1%

(continued on next page)

(continued from previous page)

Contributing Factor	2012-2016 Average Count of Vehicles				
	Fatal	Injury	PDO	Total Vehicles	% of Total Vehicles
No apparent (vehicle) defect	10	211	739	960	52.1%
Any Vehicle Defect	<1	3	27	31	1.7%
Defective brakes	<1	<1	1	1	<0.1%
Defective steering	-	<1	<1	<1	<0.1%
Defective headlights	-	-	-	-	-
Defective brake lights	<1	-	<1	<1	<0.1%
Defective lighting (unspecified)	<1	<1	-	<1	<0.1%
Defective engine controls/drive train	-	-	<1	<1	<0.1%
Defective suspension/wheels	-	-	2	2	0.1%
Defective tires	-	<1	6	6	0.3%
Tow hitch/yoke defective	-	-	2	2	<0.1%
Defective exhaust system	-	-	-	-	-
Hood/tailgate/door/covering opened	-	<1	<1	<1	<0.1%
Defective glazing (obscured windows)	-	-	<1	<1	<0.1%
Vehicle modifications	-	-	<1	<1	<0.1%
Fire	-	-	-	-	-
Overloaded/oversized	-	<1	<1	1	<0.1%
Load shifted/spilled	-	1	4	5	0.3%
Jack-knife/trailer swing	<1	<1	10	10	0.6%
Hydroplaning tires	-	<1	<1	<1	<0.1%
Any Environmental Condition	1	14	121	137	7.4%
Animal action - Wild	-	1	84	85	4.6%
Animal action - Domestic	-	-	<1	<1	<0.1%
Slippery road surface	<1	8	19	28	1.5%
Snow drift	-	<1	1	1	<0.1%
Obstruction/debris on roadway	-	-	6	6	0.3%
View obstructed/limited	<1	1	3	4	0.2%
Glare/reflection	-	<1	1	2	<0.1%
Construction zone	-	-	<1	<1	<0.1%
Defective driving surface	-	<1	2	2	0.1%
Shoulders defective	-	<1	<1	<1	<0.1%
Lane markings inadequate	-	-	<1	<1	<0.1%
Defective/inoperative traffic control device	<1	-	-	<1	<0.1%
Weather	<1	2	5	7	0.4%
Pedestrian corridor in use	-	<1	<1	<1	<0.1%
Uninvolved vehicle	-	<1	<1	1	<0.1%
Uninvolved pedestrian	-	-	-	-	-
Presence of prior accident	-	<1	-	<1	<0.1%
No Contributing Factor(s) Identified	-	70	148	218	11.8%
Not Applicable/Not Stated	-	<1	2	3	0.1%
Total	16	399	1,428	1,843	100%

Note: Counts of vehicles in the 2012-2016 average may not add to the total due to rounding.
*Note: Each vehicle and/or driver involved in a collision can have up to three contributing factors noted. Because multiple factors can be noted, the counts and percentages under each collision severity will add to more than the total. An exception to this is the factors “Driver Action – Driving Properly and Human Condition – Apparently Normal”, "Driver Action – Driving Properly” and “Human Condition – Apparently Normal”, which are mutually exclusive and can be added to determine a “Driver not at-fault” total.

In 2017, three in four drivers of NSC vehicles involved in a collision are noted as driving properly and being in a normal human condition, including 43% as both “driving properly” and “apparently normal”, 2% as “driving properly” and 30% as “apparently normal” human condition. Over the previous five year (2012 to 2016) annual average, six in ten (58%) of commercial drivers involved in collisions are noted as driving properly and being in a normal human condition.

A driver action is recorded for 40% of the drivers of NSC commercial vehicles involved in traffic collisions in 2017, an increase from the previous five year (2012 to 2016) annual average (32%). Specific driver actions noted most often as contributing factors for drivers of NSC commercial vehicles involved a traffic collision in 2017 include:

- Distracted driving (including "careless driving" and "distraction/inattention") – 16%;
- "Back unsafely" – nearly 8%;
- "Following too closely" – 6%;
- "Turning improperly" – 5%;
- "Change lanes improperly" – 4%;
- Speed (including "exceeding speed limit" "driving too fast for conditions" and "unsafe operating speed (too fast or too slow)") – 3%; and,
- "Fail to yield right of way" – 2%.

Human conditions are not often noted for commercial vehicle drivers. In 2017, two drivers are noted as being "impaired by alcohol", two are noted as experiencing "loss of consciousness/blackout prior to collision", and one is noted as having "extreme fatigue/fell asleep" as a contributing factors to a collision. This is fairly consistent with the human conditions recorded for commercial drivers in the previous five years.

Some vehicle defect is recorded as a contributing factor for 2% of the commercial vehicles involved in a traffic collision in 2017. This is consistent with the previous five year (2012 to 2016) annual average.

Environmental conditions are recorded as a contributing factor for 8% of the commercial vehicles involved in traffic collisions in 2017 (a slight increase from 2012 to 2016 annual average of 7%). The two most common environmental conditions recorded for commercial vehicles involved in a traffic collision in 2017 are "the action of a wild animal" (4%) and "slippery road surface" (2%).

Figure 10-3 Select At-fault Contributing Factors for Commercial Vehicles and Drivers by Collision Severity

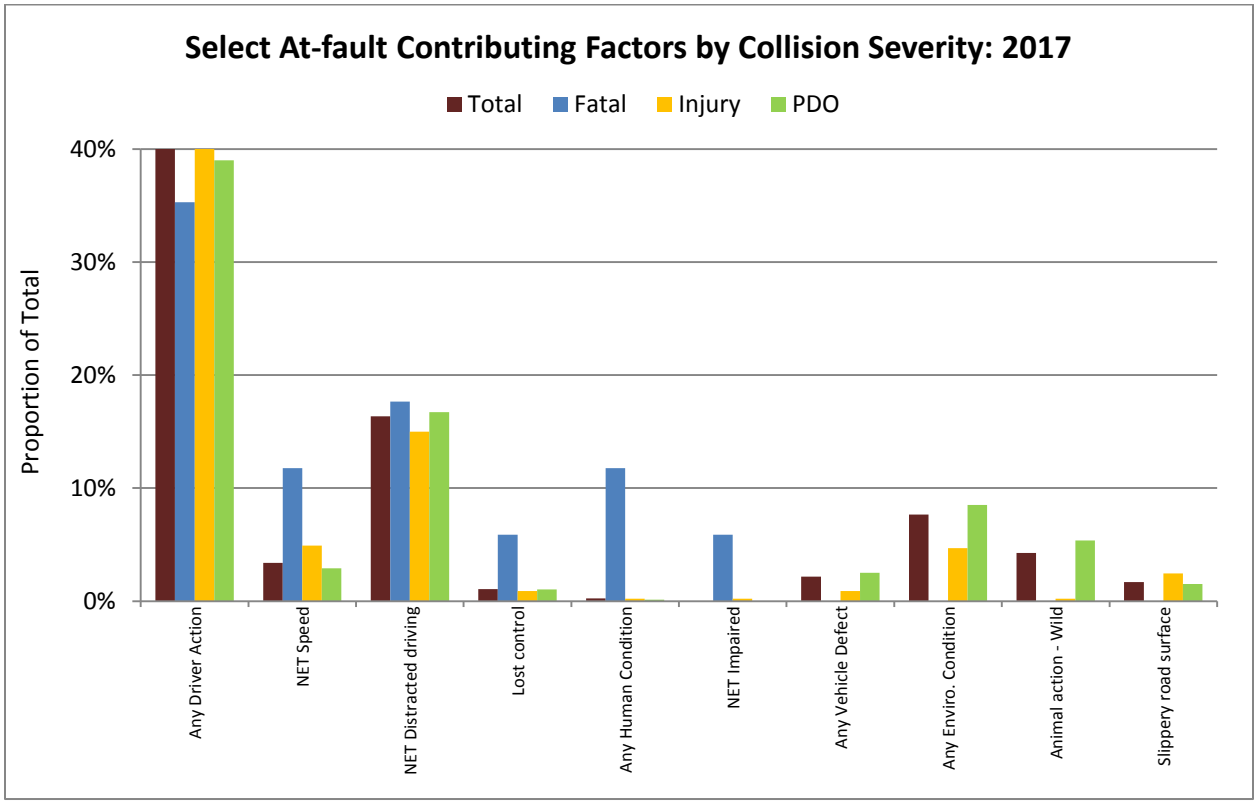


Table 10-5 Historical Summary of NSC Commercial Vehicles Involved in Traffic Collisions by Vehicle Type

Table 10-5

Historical Summary of NSC Commercial Vehicles Involved in Traffic Collisions by Vehicle Type: 2012 to 2017

Vehicle Category	2012 Total	% of 2012 Total	2013 Total	% of 2013 Total	2014 Total	% of 2014 Total	2015 Total	% of 2015 Total	2016 Total	% of 2016 Total	**2017 Total**	**% of 2017 Total**
Truck >4,500 kgs Unit Chassis	932	55.6%	1,097	57.4%	1,082	57.0%	1,026	57.7%	1,100	56.3%	**1,155**	**53.0%**
Power Unit (Semi-Trailer)	419	25.0%	471	24.7%	500	26.4%	415	23.4%	496	25.4%	**645**	**29.6%**
Truck - Other	88	5.3%	95	5.0%	80	4.2%	76	4.3%	112	5.7%	**94**	**4.3%**
School Bus	0	-	1	<0.1%	1	<0.1%	10	0.6%	52	2.7%	**71**	**3.3%**
Transit Bus - Urban	101	6.0%	102	5.3%	98	5.2%	110	6.2%	102	5.2%	**118**	**5.4%**
Para-Transit Bus	8	0.5%	6	0.3%	5	0.3%	13	0.7%	10	0.5%	**6**	**0.3%**
Inter-City Bus	8	0.5%	7	0.4%	10	0.5%	7	0.4%	12	0.6%	**13**	**0.6%**
Bus - Other	120	7.2%	131	6.9%	121	6.4%	120	6.8%	71	3.6%	**79**	**3.6%**
Total	1,676	100%	1,910	100%	1,897	100%	1,777	100%	1,955	100%	**2,181**	**100%**

Table 10-6 Historical Summary of Traffic Collision Victims by NSC Commercial Vehicle Type

Table 10-6

Historical Summary of Traffic Collision Victims (Killed and Injured, Combined) by NSC Commercial Vehicle Type: 2012 to 2017

Vehicle Category	2012 Total	% of 2012 Total	2013 Total	% of 2013 Total	2014 Total	% of 2014 Total	2015 Total	% of 2015 Total	2016 Total	% of 2016 Total	**2017 Total**	**% of 2017 Total**
Truck >4,500 kgs Unit Chassis	196	42.7%	265	49.4%	260	48.6%	232	41.7%	251	45.4%	**249**	**44.2%**
Power Unit (Semi-Trailer)	155	33.8%	143	26.7%	162	30.3%	148	26.6%	163	29.5%	**162**	**28.8%**
Truck - Other	22	4.8%	33	6.2%	35	6.5%	37	6.6%	42	7.6%	**25**	**4.4%**
School Bus	0	-	5	0.9%	1	0.2%	14	2.5%	19	3.4%	**13**	**2.3%**
Transit Bus - Urban	55	12.0%	46	8.6%	38	7.1%	58	10.4%	50	9.0%	**100**	**17.8%**
Para-Transit Bus	5	1.1%	2	0.4%	1	0.2%	4	0.7%	6	1.1%	**0**	**-**
Inter-City Bus	3	0.7%	2	0.4%	1	0.2%	4	0.7%	3	0.5%	**0**	**-**
Bus - Other	23	5.0%	40	7.5%	37	6.9%	60	10.8%	19	3.4%	**14**	**2.5%**
Total	459	100%	536	100%	535	100%	557	100%	553	100%	**563**	**100%**

Note: Information in Table 10-6 includes all victims of collisions where an NSC commercial vehicle is involved, not only victims from the NSC vehicle.

SECTION 11 – Off-Road Vehicle Collisions

Introduction

This section counts the number of off-road vehicle (ORV) collisions in Manitoba and provides detail for collisions of different severity: fatal, injury and property damage only (PDO). Information regarding the number of ORV collisions, victims, vehicles and drivers involved over the six year period 2012 to 2017 is presented. Details are provided for 2017 ORV collisions in terms of the month of occurrence, day of the week, time of day, weather and light conditions, location, and region of collision.

Data for ORV collisions are drawn from Traffic Accident Reports (TARs) generated by Manitoba Public Insurance as part of the claim process and from law enforcement agencies when they complete an accident report.

Key Highlights
In 2017, there are 168 off-road vehicle collisions, involving 43 victims, 182 vehicles and 177 drivers. Of these:

- 6 are fatal collisions, involving 7 vehicles and 7 drivers, resulting in 6 people killed and 2 people injured;
- 32 are injury collisions, involving 34 vehicles and 34 drivers, resulting in 35 people injured; and,
- 130 are PDO collisions, involving 141 vehicles and 136 drivers.

In 2017, ORV collisions occur most often:

- During the months of December, January and February, representing 72 of 168 collisions (43%).
- On weekends (Friday, Saturday and Sunday), representing 119 of 168 (71%) collisions.
- During daylight, representing 112 of 168 (67%) collisions.
- In the Eastern Region of Manitoba, representing 87 of 168 (52%) collisions.
- With drivers under the age of 45, 112 of 175 drivers (where age is known) involved in ORV collisions (64%).

Notwithstanding the overall collision trends, **fatal** ORV collisions in 2017 occur most often:

- On weekends (Friday, Saturday and Sunday), representing 3 of 6 fatal collisions (50%).
- Between noon and midnight, 5 of 6 fatal collisions (83%).
- On public roadway, accounting for 3 of 6 fatal collisions (50%).

Major Elements Examined
Counts of off-road vehicle (ORV) collisions in Manitoba for 2017 and previous years are taken from Traffic Accident Reports compiled by Manitoba Public Insurance. These counts are presented for all reportable ORV collisions, fatal collisions, injury collisions and property damage only (PDO) collisions. ORV collisions are maintained in a separate database from roadway collisions. As ORV collisions occur primarily outside of roadways and road rights-of-way, most of them are not valid for inclusion in the public roadway Traffic Accident Database. However, some ORV collisions are included in the Traffic Accident Database (if they occur on a public roadway and involve a vehicle that normally operates on public roadways); therefore, statistics between this and other sections of this report are not additive.

Collisions, victims, vehicles and drivers are presented separately at the beginning of this section with counts provided for the years 2012 through 2017. The remainder of this section explores ORV collisions occurring in 2017 and provides average counts of collisions for the time period of 2012 to 2016 as a comparison.

It is important to note that the number of fatal or injury collisions is not equal to the number of fatal or injured victims as each collision can result in multiple victims. Likewise, the number of vehicles involved is not necessarily equal to the number of drivers involved as a driverless vehicle could be involved in a collision.

No statistics are calculated for off-road vehicle involvement rates due to the fact that no reliable base population count of off-road vehicles is available. Similarly, it is difficult to establish a base count of actual riders/operators, making it difficult to calculate driver involvement rates.

"Drivers" in this section refers to the number of drivers of off-road vehicles involved in collisions. It excludes pedestrians and driverless vehicles (parked). In ORV collisions, there are few driverless vehicles involved, but still some.

The terms 'crash', 'collision' and 'accident' are used interchangeably in this report. The terms 'fatality' and 'killed' are used interchangeably in this report.

The reader is cautioned that not all percentages and calculations in the following tables will add to 100% of the total noted. Rounding error will often produce a difference of one or two percentage points. Likewise, average calculations are presented for historical data from the years 2012 to 2016. Rounding error in these calculations will cause individual average counts not to add to total average counts in some cases.

When reviewing the "Contributing Factors" for a traffic collision, the reader is cautioned to note that more than one contributing factor can be recorded for each collision. The total count of contributing factors noted will add to more than the number of collisions, vehicles or victims in those crashes.

Terms and Definitions

"Off-road Vehicle (ORV)"

- One of several vehicle types designed for off-road use. It includes snowmobiles, off-road motorcycles, all-terrain vehicles (ATVs), amphibious vehicles, dune/sport buggies, and 4-wheel drive vehicles operated off-road.

"Reportable ORV Collision"

- ORV collisions resulting in a fatality, injury or property damage in excess of $1,000 are required by law to be reported to a law enforcement agency. Subsequently, the law enforcement agency completes a Traffic Accident Report (TAR) for the collision. This report deals with these reportable ORV collisions and the TARs arising from them.

"ATV"

- All Terrain Vehicle; includes vehicles with 3, 4 and 6 wheels.

"Collision Severity"

- A classification of a collision based on the most severe result of the collision, i.e., whether someone was killed (fatal), injured (injury) or property damage only (PDO) occurred.

"Fatal Collision"

- A motor vehicle collision in which at least one person is killed as a result of the collision. The death must have occurred within thirty days of the collision occurrence.

"Injury Collision"

- A motor vehicle collision in which at least one person has been recorded as sustaining some level of personal injury, but in which no one is fatally injured or killed.

"Property Damage Only (PDO) Collision"

- A motor vehicle collision in which no injury or fatality is sustained and only property damage is the result.

"Casualty Type"

- A classification of the severity of the injury sustained by a victim in a traffic collision, i.e., whether someone was killed or injured. This classification also includes a designation for the severity of each non-fatal (i.e., people injured but not killed) injury sustained.

"Killed"

- The casualty type "killed" indicates where the victim involved in the traffic collision died as a result of their injuries within thirty days of the collision occurrence.

"Injured"

- The casualty type "injured" indicates where the victim sustained some level of personal injury, but in which they were not killed. Levels of injury include: 'serious' or 'major' (admitted to hospital); 'minor' (treated and released from hospital); and, 'minimal' (no hospital treatment required). 'Other' injury is noted when the severity of the victim's injuries is not known or recorded in the TAR.

"Collision Type"

- Refers to the object struck by a motor vehicle during a collision (including: a pedestrian, another motor vehicle, a train, a motorcycle, a bicycle, an animal, and fixed objects) or to what happened to the vehicle in a single-vehicle collision (including: overturned on roadway and ran off roadway).

"Light Condition"

- Describes the light conditions at the scene of the accident, including:
    - Day – the light conditions which normally occur between one half hour after sunrise and one half hour before sunset;
    - Dawn – the light conditions which normally occur between one half hour before sunrise and one half hour after sunrise;
    - Dusk – the light conditions which normally occur between one half hour before sunset and one half hour after sunset;
    - Dark – the light conditions which normally occur between one half hour after sunset and one half hour before sunrise; and,
    - Artificial lighting – artificial illumination devices were functioning at the accident site under light conditions which normally occur between one half hour after sunset and one half hour before sunrise.

"Weather Condition"

- Describes the weather conditions prevalent at the time of the accident, including:
    - Clear – bright conditions, without precipitation or airborne matter, are recorded as clear;
    - Cloudy – dull, overcast conditions, without precipitation or airborne matter, are recorded as cloudy;
    - Raining;
    - Snowing;
    - Fog or Mist – airborne matter, of natural origin, which obscures visibility;
    - Smoke or Dust – airborne matter, of a natural or artificial origin, which obscures visibility;
    - Freezing Rain / Sleet / Hail – freezing rain, sleet or hail (self explanatory);
    - Drifting Snow – snow drifting on or above roadway, which obscures visibility of the roadway, road markings, traffic devices or roadway fixtures; and,
    - Strong Winds – used if wind was a contributing factor in the accident.

"Region"

- Manitoba Infrastructure and Transportation is served by five regional office locations, each responsible for a geographic region (for boundaries, see Map 1-1). "Regions" are used to indicate the region in which a collision occurred.

"Contributing Factor"

- Those circumstances or factors recorded as having contributed to the collision or its severity. Factors can be selected from four categories: driver action, human condition, vehicle condition, or environmental condition. The TAR allows for up to three contributing factors to be recorded for each driver or vehicle involved in the collision.

"At-fault Contributing Factor"

- A contributing factor where some action or condition other than "driving properly" and "apparently normal" has been noted.

Table 11-1 Historical Summary of Off-Road Vehicle Collisions

Table 11-1
Historical Summary of Off-Road Vehicle Collisions: 2012 to 2017

	2012	2013	2014	2015	2016	**2017**	2012-2016 Average
Total Collisions	409	391	295	269	268	**168**	326
Fatal	9	13	11	7	18	**6**	12
Injury	87	59	49	53	66	**32**	63
PDO	313	319	235	209	184	**130**	252
Total Victims	108	76	69	67	94	**43**	83
Killed	10	13	14	7	20	**6**	13
Injured	98	63	55	60	74	**37**	70
Total Vehicles Involved	439	424	327	303	297	**182**	358
Fatal	10	14	16	8	19	**7**	13
Injury	91	63	57	63	77	**34**	70
PDO	338	347	254	232	201	**141**	274
Total Drivers Involved	439	422	325	300	295	**177**	356
Fatal	10	14	16	8	19	**7**	13
Injury	91	63	57	63	76	**34**	70
PDO	338	345	252	229	200	**136**	273

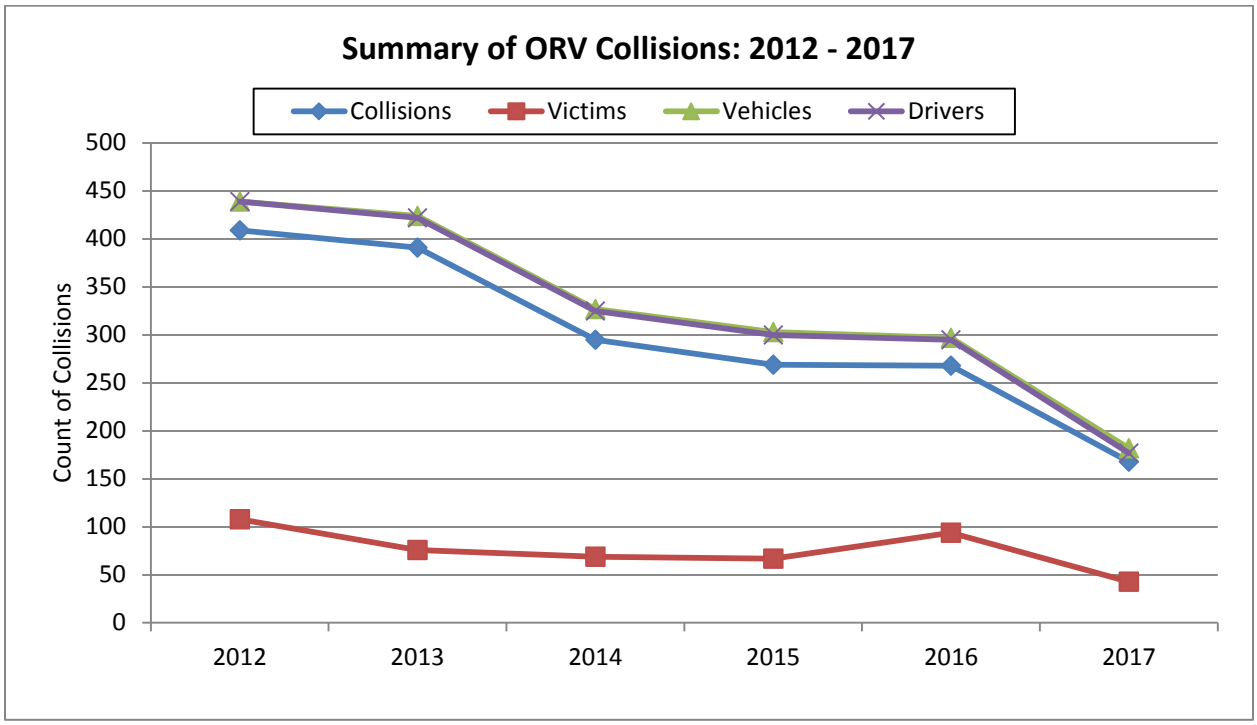
In 2017, there are 168 off-road vehicle collisions, involving 43 victims, 182 vehicles and 177 drivers. Of these:

- 6 are fatal collisions, involving 7 vehicles and 7 drivers, resulting in 6 people killed and 2 injured;
- 32 are injury collisions, involving 34 vehicles and 34 drivers, resulting in 35 people injured; and,
- 130 are PDO collisions, involving 141 vehicles and 136 drivers.

Total ORV collisions in 2017 are 37% lower than 2016 and nearly 49% lower than the average number of collisions in the previous five year (2012 to 2016) period. Compared to the previous five years, in 2017:

- ORV collision victims decreased by 48%;
- The number of people killed decreased by 53%;
- The number of vehicles involved decreased by 49%; and,
- The number of drivers involved decreased by 50%.

Figure 11-1 Historical Summary of ORV Collisions



The number of ORV collisions, the number of victims, and the number of vehicles and drivers involved in those collisions have all decreased in 2017.

Table 11-2 Victims, Vehicles and Drivers Involved in Off-Road Vehicle Collisions by ORV Type

Table 11-2
Victims, Vehicles and Drivers Involved in Off-Road Vehicle Collisions by ORV Type: 2017, 2012-2016 Average

	2017					2012-2016 Average					% Change 2017 to 2012-2016 Average				
	Snowmobile	ATV	Motorcycle	Other*	**Total**	Snowmobile	ATV	Motorcycle	Other*	Total	Snowmobile	ATV	Motorcycle	Other*	Total
Total Victims	15	25	0	3	**43**	35	41	2	5	83	-57.6%	-38.7%	-100.0%	-34.8%	-48.1%
Killed	0	6	0	0	**6**	5	7	<1	<1	13	-100.0%	-16.7%	-100.0%	-100.0%	-53.1%
Injured	15	19	0	3	**37**	31	34	2	4	70	-51.0%	-43.5%	-100.0%	-28.6%	-47.1%
Total Vehicles Involved	88	62	2	30	**182**	169	147	2	40	358	-47.9%	-57.8%	0.0%	-25.0%	-49.2%
Fatal	0	6	0	1	**7**	5	7	<1	1	13	-100.0%	-14.3%	-100.0%	-16.7%	-47.8%
Injury	16	15	0	3	**34**	31	31	1	7	70	-48.4%	-51.0%	-100.0%	-58.3%	-51.6%
PDO	72	41	2	26	**141**	133	109	<1	32	274	-45.9%	-62.5%	900.0%	-17.7%	-48.6%
Total Drivers Involved	87	62	2	26	**177**	169	146	2	39	356	-48.5%	-57.5%	0.0%	-34.0%	-50.3%
Fatal	0	6	0	1	**7**	5	7	<1	1	13	-100.0%	-14.3%	-100.0%	-16.7%	-47.8%
Injury	16	15	0	3	**34**	31	30	1	7	70	-48.4%	-50.7%	-100.0%	-58.3%	-51.4%
PDO	71	41	2	22	**136**	133	109	<1	31	273	-46.6%	-62.2%	900.0%	-29.0%	-50.1%

* 'Other' includes: vehicles not registered as an off-road vehicle, dune/sport buggy, 4 wheel drive motor vehicle (operated off-road), amphibious vehicle, pedestrians and those listed under “not stated” category.

In 2017, a total of 182 vehicles were involved in off-road collisions, including:

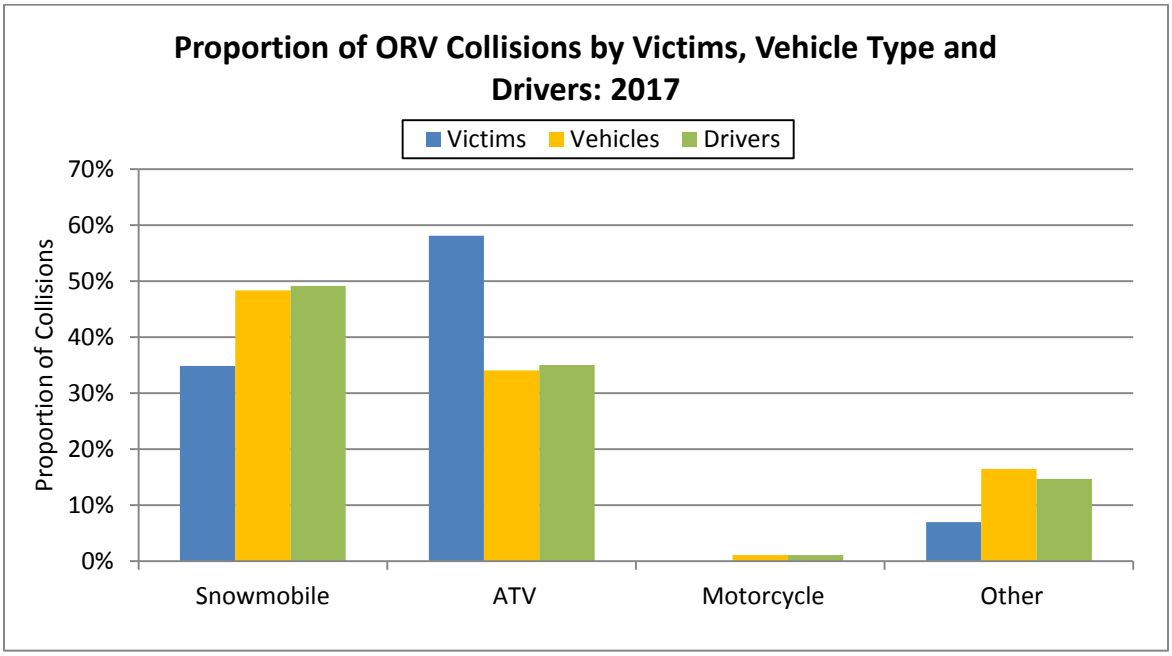
- 88 snowmobiles and 87 snowmobile drivers, resulting in 15 victims and no one killed;
- 62 ATVs and ATV drivers, resulting in 25 victims including 6 people killed;
- 2 motorcycles and motorcycle drivers, with no one killed and injured; and,
- 30 'Other' vehicles and 26 drivers of those vehicles, resulting in 3 victims and no one killed.

Compared to the previous five year (2012 to 2016) annual average, in 2017:

- Total vehicles and total drivers involved in snowmobile collisions are both down by 48%. Victim counts are down by 58%; the number of people killed in snowmobile collisions has decreased from a count of 5 to 0.
- Total vehicles and total drivers involved in ATV collisions are both down by 58%. Victim counts are down by 39%; the number of people killed and injured in ATV collisions decreased by 17% and nearly 44%, respectively.
- Total vehicles and total drivers involved in motorcycle collisions stay the same (a count of 2 for both). Victim counts are down from a count of 2 to 0; no one is killed or injured.
- Total vehicles and total drivers involved in 'other' vehicle collisions and victim counts have all decreased compared to the previous five year annual average.

Note: Due to low annual counts of people killed and injured in ORV collisions, relatively small changes in these counts year-over-year can produce dramatic changes in percentage terms. Please use caution when interpreting these results.

Figure 11-2 Proportion of ORV Collisions by Victims, Vehicle Type and Drivers



In 2017, ATVs account for the largest proportion of victims, while snowmobiles account for the largest proportion of drivers and vehicles involved in ORV collisions.

Table 11-3 Off-Road Vehicle Collisions by Month of Occurrence and Collision Severity

Table 11-3
ORV Collisions by Month of Occurrence and Collision Severity: 2017, 2012-2016 Average

Month	2017 Collision Severity						**2017 Total**	**% of 2017 Total**	2012-2016 Average	% Change 2017 to 2012-2016 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
January	0	-	6	18.8%	28	21.5%	**34**	**20.2%**	44	-22.7%
February	0	-	4	12.5%	22	16.9%	**26**	**15.5%**	50	-47.8%
March	0	-	1	3.1%	10	7.7%	**11**	**6.5%**	48	-77.0%
April	2	33.3%	1	3.1%	13	10.0%	**16**	**9.5%**	23	-30.4%
May	0	-	2	6.3%	10	7.7%	**12**	**7.1%**	21	-42.9%
June	0	-	1	3.1%	12	9.2%	**13**	**7.7%**	17	-25.3%
July	1	16.7%	3	9.4%	8	6.2%	**12**	**7.1%**	21	-42.3%
August	1	16.7%	3	9.4%	2	1.5%	**6**	**3.6%**	18	-66.7%
September	1	16.7%	3	9.4%	4	3.1%	**8**	**4.8%**	20	-60.8%
October	1	16.7%	4	12.5%	7	5.4%	**12**	**7.1%**	15	-21.1%
November	0	-	1	3.1%	5	3.8%	**6**	**3.6%**	17	-63.9%
December	0	-	3	9.4%	9	6.9%	**12**	**7.1%**	32	-63.0%
Total	6	100%	32	100%	130	100%	**168**	**100%**	326	-48.5%

The ORV collisions in 2017 occur more often in winter months (December, January and February). When combined, these three months account for 43% of ORV collisions.

The 2017 proportional distribution of ORV collisions by month is similar to the previous five year (2012 to 2016) annual average.

- Winter (December/January/February) – 43% in 2017; 39% in the previous five years.
- Spring (March/April/May) – 23% in 2017; 28% in the previous five years.
- Summer (June/July/August) – nearly 19% in 2017; 17% in the previous five years.
- Fall (September/October/November) – nearly 16% in 2017; 16% in the previous five years.

In 2017, 2 fatal ORV collisions occurred in April, another 4 occurred between July and October.

Injury ORV collisions fluctuate throughout the year in 2017.

NOTE: For a detailed count of ORV collisions by month of occurrence in each year from 2012 to 2017, please refer to "*Table 11-16 Historical Summary of ORV Collisions by Month of Occurrence*" at the end of this section.

Table 11-4 Off-Road Vehicle Collisions by Day of Occurrence and Collision Severity

Table 11-4
ORV Collisions by Day of Occurrence and Collision Severity: 2017, 2012-2016 Average

Day	2017 Collision Severity						**2017 Total**	**% of 2017 Total**	2012-2016 Average	% Change 2017 to 2012-2016 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
Sunday	0	-	9	28.1%	28	21.5%	**37**	**22.0%**	72	-48.8%
Monday	1	16.7%	3	9.4%	9	6.9%	**13**	**7.7%**	26	-50.4%
Tuesday	1	16.7%	2	6.3%	6	4.6%	**9**	**5.4%**	23	-61.5%
Wednesday	1	16.7%	2	6.3%	8	6.2%	**11**	**6.5%**	23	-51.3%
Thursday	0	-	5	15.6%	11	8.5%	**16**	**9.5%**	24	-32.2%
Friday	1	16.7%	1	3.1%	25	19.2%	**27**	**16.1%**	37	-27.4%
Saturday	2	33.3%	10	31.3%	43	33.1%	**55**	**32.7%**	121	-54.6%
Total	6	100%	32	100%	130	100%	**168**	**100%**	326	-48.5%

The majority of ORV collisions happen on weekends (Friday, Saturday and Sunday). In 2017, 71% of ORV collisions occurred on Friday (16%), Saturday (33%) and Sunday (22%). Monday through Thursday account for 29% of ORV collisions.

In 2017, 3 of 6 fatal ORV collisions (50%) occur on weekends (Friday, Saturday and Sunday combined).

Figure 11-3 Proportion of ORV Collisions by Collision Severity and Day of Occurrence

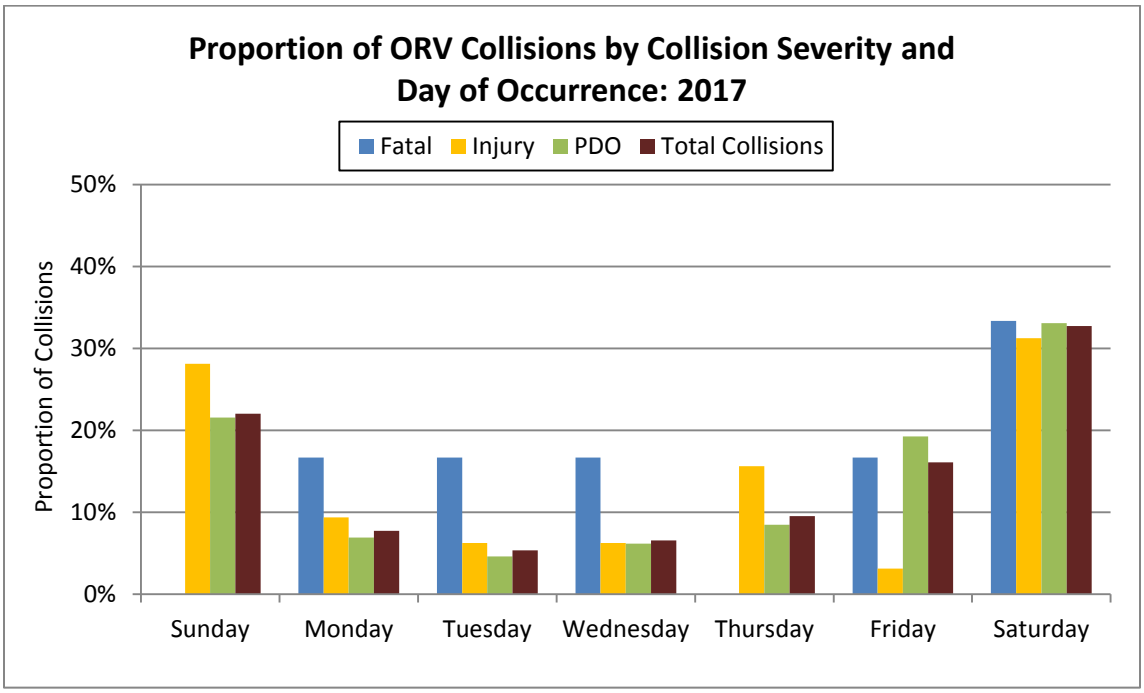


Table 11-5 Off-Road Vehicle Collisions by Time of Occurrence and Collision Severity

Table 11-5
ORV Collisions by Time of Occurrence and Collision Severity: 2017, 2012-2016 Average

Time	2017 Collision Severity						**2017 Total**	**% of 2017 Total**	2012-2016 Average	% Change 2017 to 2012-2016 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
00:00 - 02:59	0	-	2	6.3%	2	1.5%	**4**	**2.4%**	7	-42.9%
03:00 - 05:59	0	-	0	-	0	-	**0**	**-**	2	-100.0%
06:00 - 08:59	0	-	1	3.1%	0	-	**1**	**0.6%**	4	-73.3%
09:00 - 11:59	1	16.7%	0	-	15	11.5%	**16**	**9.5%**	34	-55.2%
12:00 - 14:59	1	16.7%	9	28.1%	37	28.5%	**47**	**28.0%**	96	-53.0%
15:00 - 17:59	0	-	13	40.6%	40	30.8%	**53**	**31.5%**	94	-45.6%
18:00 - 20:59	3	50.0%	7	21.9%	26	20.0%	**36**	**21.4%**	61	-44.2%
21:00 - 23:59	1	16.7%	0	-	10	7.7%	**11**	**6.5%**	27	-62.4%
Not Stated	0	-	0	-	0	-	**0**	**-**	1	-100.0%
Total	6	100%	32	100%	130	100%	**168**	**100%**	326	-50.7%

The majority of off-road collisions occur in the afternoon and evening. In 2017, nearly 88% of all ORV vehicle collisions occurred between noon and midnight (12:00 to 14:59 – 28%; 15:00 to 17:59 – nearly 32%; 18:00 to 20:59 – 21%; 21:00 to 23:59 – nearly 7%).

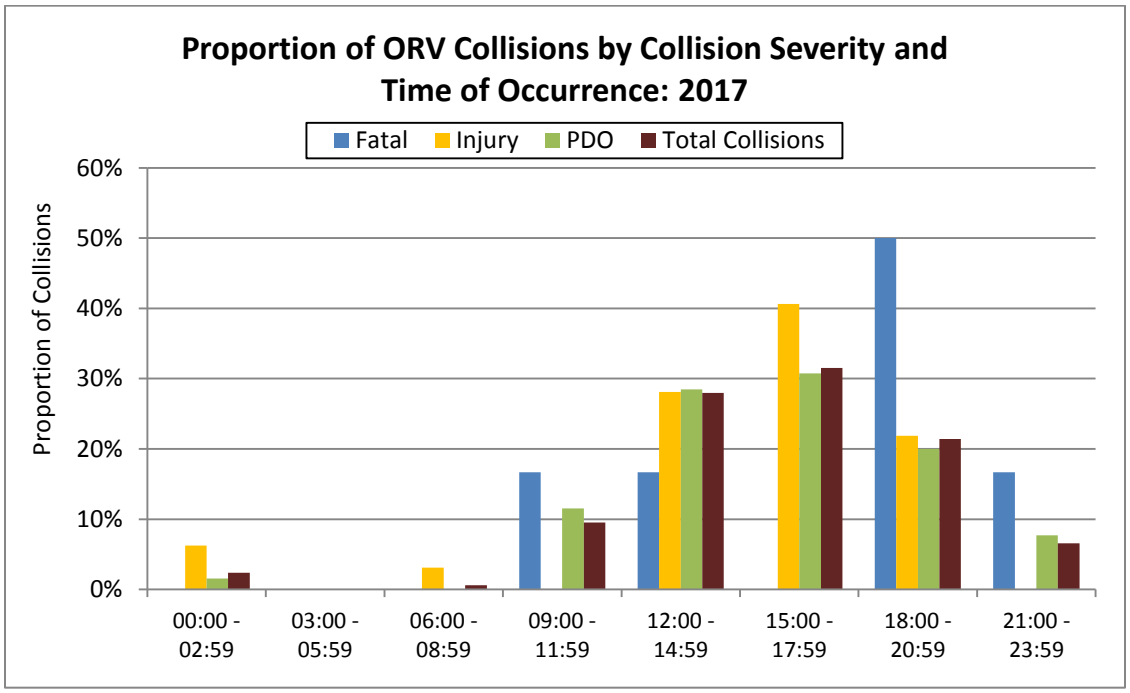
The proportional distribution of ORV collisions by time of day in 2017 is similar to the previous five year (2012 to 2016) annual average.

- Morning (06:00 to 11:59) – 10% in 2017; 12% in the previous five years.
- Afternoon (12:00 to 17:59) – nearly 60% in 2017; 58% in the previous five years.
- Evening (18:00 to 20:59) – 21% in 2017; 19% in the previous five years.
- Overnight (21:00 to 05:59) – 9% in 2017; 11% in the previous five years.

In 2017, the majority of fatal ORV collisions occurred between noon and midnight (5 of 6 fatal collisions).

In 2017, 22 of 32 injury ORV collisions occurred between noon and 6 p.m. and 7 of 32 injury ORV collisions occurred between 6 p.m. and midnight.

Figure 11-4 Proportion of Total ORV Collisions by Collision Severity and Time of Occurrence



In 2017, the majority of all ORV collisions occurred between noon and midnight (nearly 88%), while nearly 10% occurred between 9 a.m. and noon.

Table 11-6 Off-Road Vehicle Collisions by Light Condition and Collision Severity

Table 11-6
ORV Collisions by Light Condition and Collision Severity: 2017, 2012-2016 Average

Light Condition	2017 Collision Severity						**2017 Total**	**% of 2017 Total**	2012-2016 Average	% Change 2017 to 2012-2016 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
Day	4	66.7%	23	71.9%	85	65.4%	**112**	**66.7%**	204	-47.8%
Dawn	0	-	0	-	1	0.8%	**1**	**0.6%**	2	-50.0%
Dusk	1	16.7%	2	6.3%	9	6.9%	**12**	**7.1%**	18	-29.4%
Dark	1	16.7%	6	18.8%	23	17.7%	**30**	**17.9%**	46	-38.8%
Artificial Light	0	-	0	-	0	-	**0**	**-**	2	-100.0%
Not Stated	0	-	1	3.1%	12	9.2%	**13**	**7.7%**	55	-77.1%
Total	6	100%	32	100%	130	100%	**168**	**100%**	326	-50.7%

The majority of ORV collisions occur during daylight conditions, from a half hour after sunrise to a half hour before sunset. In 2017, daylight conditions account for 67% of ORV collisions. An additional 18% occurred during darkness.

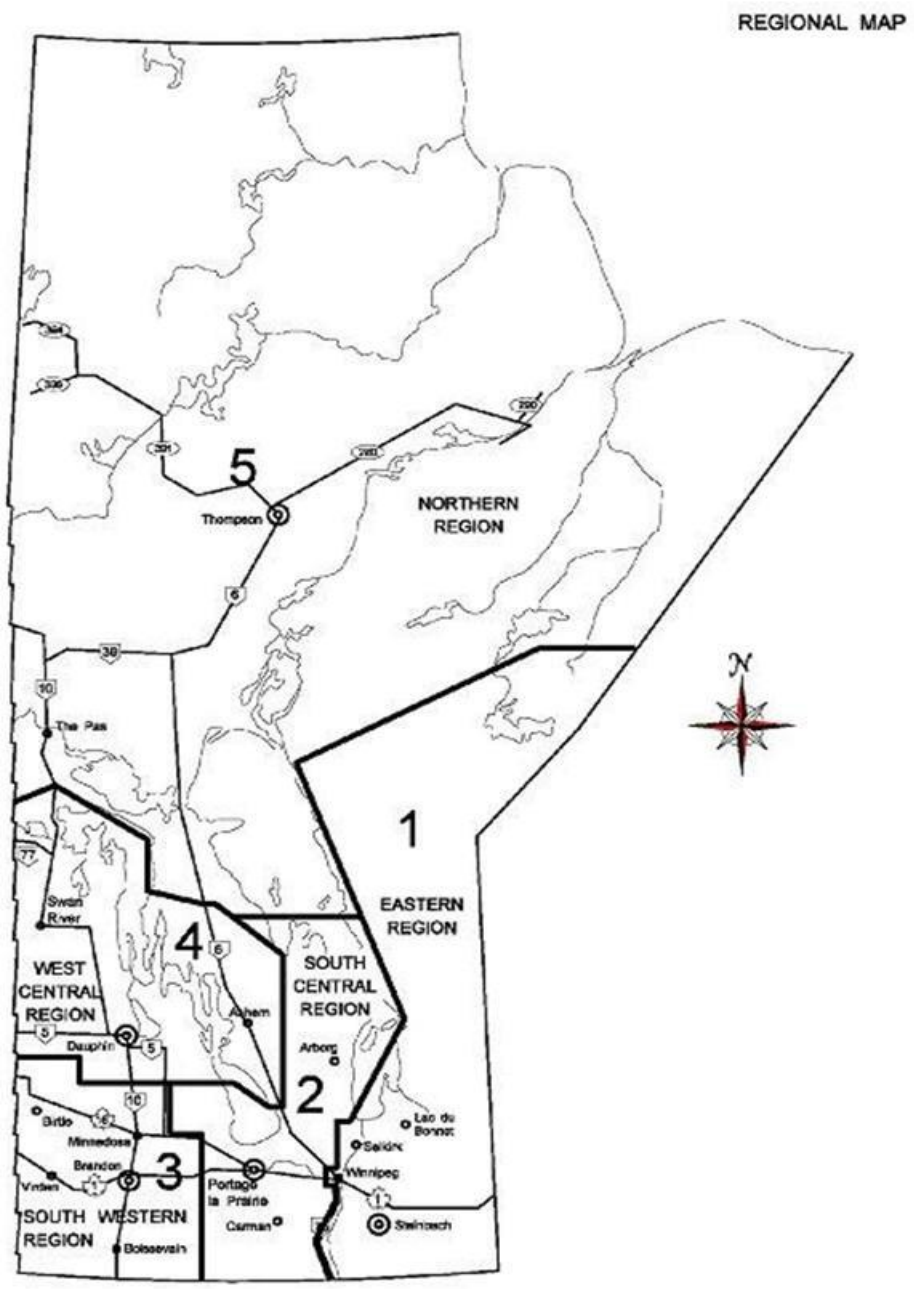
Table 11-7 ORV Collisions by Weather Condition and Collision Severity

Table 11-7
ORV Collisions by Weather Condition and Collision Severity: 2017, 2012-2016 Average

Weather Condition	2017 Collision Severity						**2017 Total**	**% of 2017 Total**	2012-2016 Average	% Change 2017 to 2012-2016 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
Clear	6	100.0%	25	78.1%	82	63.1%	**113**	**67.3%**	196	-45.4%
Cloudy	0	-	3	9.4%	19	14.6%	**22**	**13.1%**	35	-37.1%
Raining	0	-	0	-	3	2.3%	**3**	**1.8%**	5	-42.9%
Snowing	0	-	0	-	1	0.8%	**1**	**0.6%**	12	-92.0%
Fog/Mist	0	-	0	-	2	1.5%	**2**	**1.2%**	3	-38.5%
Smoke/Dust	0	-	0	-	0	-	**0**	**-**	<1	-100.0%
Freezing Rain/Sleet/Hail	0	-	0	-	1	0.8%	**1**	**0.6%**	<1	300.0%
Drifting Snow	0	-	1	3.1%	1	0.8%	**2**	**1.2%**	5	-60.0%
Strong Winds	0	-	0	-	0	-	**0**	**-**	2	-100.0%
Not Stated	0	-	3	9.4%	21	16.2%	**24**	**14.3%**	67	-65.5%
Total	6	100%	32	100%	130	100%	**168**	**100%**	326	-50.7%

The majority of ORV collisions occur when weather conditions are clear. In 2017, 67% of ORV collisions occurred in clear weather conditions. Another 13% occurred in cloudy weather.

Map 1-1 Manitoba Infrastructure and Transportation (MIT) Regions



Source: Manitoba Infrastructure and Transportation, Traffic Engineering

This map shows the boundaries of Manitoba Infrastructure and Transportation (MIT) regions and regional office locations. Regional Offices are responsible for service delivery and management of MIT programs, as indicated in the department's annual report.[3] Off-road vehicle collisions are reported by location within these regions.

[3] 2016/2017 Annual Report for Manitoba Infrastructure and Transportation: http://www.gov.mb.ca/mit/reports/annual/2016_2017_annual.pdf

Table 11-8 ORV Collisions by MIT Regions and Collision Severity

Table 11-8
ORV Collisions by MIT Regions and Collision Severity: 2017, 2012-2016 Average

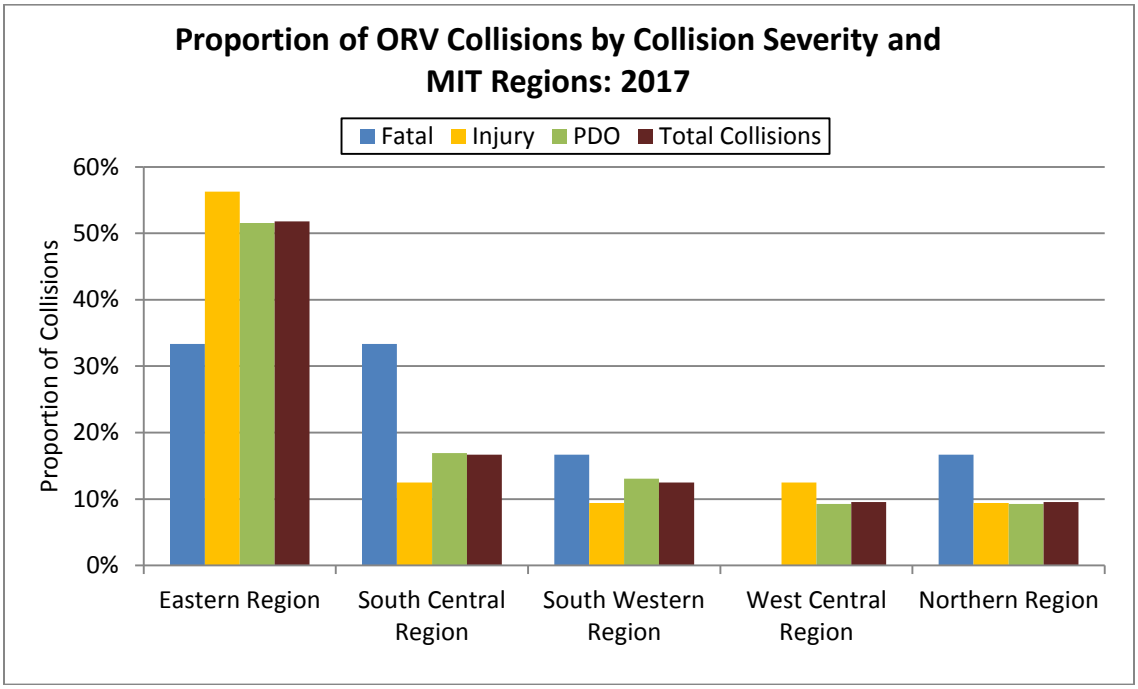
Region	2017 Collision Severity						**2017 Total**	**% of 2017 Total**	2012-2016 Average	% Change 2017 to 2012-2016 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
Eastern Region	2	33.3%	18	56.3%	67	51.5%	**87**	**51.8%**	166	-49.5%
South Central Region	2	33.3%	4	12.5%	22	16.9%	**28**	**16.7%**	65	-60.1%
South Western Region	1	16.7%	3	9.4%	17	13.1%	**21**	**12.5%**	44	-53.1%
West Central Region	0	-	4	12.5%	12	9.2%	**16**	**9.5%**	30	-50.8%
Northern Region	1	16.7%	3	9.4%	12	9.2%	**16**	**9.5%**	21	-24.7%
Total	6	100%	32	100%	130	100%	**168**	**100%**	326	-50.7%

The Eastern Region of Manitoba historically accounts for a large share of off-road vehicle accidents. In 2017, 52% of ORV collisions occurred in the Eastern Region. The South Central Region follows with 17%, while the South Western Region accounts for nearly 13% of the total collisions.

While the overall count of ORV collisions in 2017 is down across all regions in Manitoba (compared to the 2012 to 2016 annual average), the proportional distribution of collisions by region in 2017 is similar to the previous five year annual average.

- Eastern Region – 52% of ORV collisions in 2017; 51% in previous five years.
- South Central Region – 17% of ORV collisions in 2017; 20% in previous five years.
- South Western Region – nearly 13% of ORV collisions in 2017; 14% in previous five years.
- West Central Region – nearly 10% of ORV collisions in 2017; 9% in previous five years.
- Northern Region – nearly 10% of ORV collisions in 2017; 6% in previous five years.

Figure 11-5 Proportion of ORV Collisions by Collision Severity and MIT Regions



Fatal ORV collisions in 2017 occur most often in the Eastern and South Central Regions of Manitoba (2 of 6 fatal collisions, each).

Table 11-9 Off-Road Vehicle Collisions by Location and Collision Severity

Table 11-9

ORV Collisions by Location and Collision Severity: 2017, 2012-2016 Average

Location	2017 Collision Severity						**2017 Total**	**% of 2017 Total**	2012-2016 Average	% Change 2017 to 2012-2016 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
Public Roadway	3	50.0%	4	12.5%	7	5.4%	**14**	**8.3%**	55	-75.5%
Ditches	0	-	3	9.4%	11	8.5%	**14**	**8.3%**	28	-50.9%
River/Lake	0	-	3	9.4%	16	12.3%	**19**	**11.3%**	29	-41.1%
Field	1	16.7%	1	3.1%	14	10.8%	**16**	**9.5%**	16	8.5%
Farm Yard/Private Property	0	-	4	12.5%	15	11.5%	**19**	**11.3%**	42	-58.9%
Parking Lot	0	-	0	-	1	0.8%	**1**	**0.6%**	2	-42.9%
Embankment	0	-	0	-	3	2.3%	**3**	**1.8%**	2	71.4%
Gravel Road	0	-	1	3.1%	2	1.5%	**3**	**1.8%**	6	-53.8%
Trail*	2	33.3%	12	37.5%	32	24.6%	**46**	**27.4%**	80	-43.4%
Other**	0	-	4	12.5%	29	22.3%	**33**	**19.6%**	60	-49.0%
Not Stated	0	-	0	-	0	-	**0**	**-**	6	-100.0%
Total	6	100%	32	100%	130	100%	**168**	**100%**	326	-50.7%

*Includes marked groomed trail, bush trail/winter road, and snowmobile trail.

**Includes park, forest, bush, camp site, mountain, valley, hill, railroad and floodway/diversion.

Note: Historical averages are rounded off to the nearest integer. Computations of percentage changes from the historical trend to the current year are based on actual averages and not on the rounded numbers presented in the table.

In 2017, “trail” was the most common location for ORV collisions (27% of total) followed by “other” locations (20%).

The proportion of ORV collisions happening at specific locations in 2017 is similar to the previous five year (2012 to 2016) annual average.

- “Trail” – 27% in 2017; 25% in the previous five years.
- “Other” – 20% in 2017; 18% in the previous five years.
- “Farm Yard/Private Property” – 11% in 2017; 13% in the previous five years.
- “River/Lake” – 11% in 2017; 9% in the previous five years.

NOTE: For a detailed count of ORV collisions by location in each year from 2012 to 2017, please refer to “*Table 11-17 Historical Summary of ORV Collisions by Location*” at the end of this section.

Table 11-10 ORV Collision Victims by Age Group and Casualty Type

Table 11-10
ORV Collision Victims by Age Group and Casualty Type: 2017, 2012-2016 Average

Age Group	2017 Casualty Type				**2017 Total Victims**	**% of 2017 Total Victims**	2012-2016 Average			
	Killed	% of Total Killed	Injured	% of Total Injured			Killed	Injured	Total Victims	% of Total Victims
0-4	1	16.7%	0	-	**1**	**2.3%**	0	<1	<1	0.2%
5-9	0	-	1	2.7%	**1**	**2.3%**	0	<1	<1	0.5%
10-14	0	-	0	-	**0**	**-**	1	<1	2	1.9%
15-19	0	-	1	2.7%	**1**	**2.3%**	<1	6	7	8.5%
20-24	0	-	4	10.8%	**4**	**9.3%**	1	8	9	10.9%
25-34	3	50.0%	8	21.6%	**11**	**25.6%**	3	13	16	19.1%
35-44	0	-	6	16.2%	**6**	**14.0%**	1	17	18	21.5%
45-54	0	-	6	16.2%	**6**	**14.0%**	3	12	15	17.6%
55-64	1	16.7%	8	21.6%	**9**	**20.9%**	2	6	8	9.4%
65+	1	16.7%	0	-	**1**	**2.3%**	<1	2	3	3.1%
Not Stated	0	-	3	8.1%	**3**	**7.0%**	<1	5	6	7.2%
Total	6	100%	37	100%	**43**	**100%**	13	70	83	100%

The majority of ORV collision victims are under the age of 45 (56% of all victims). In 2017, 7 of 43 ORV collision victims (16%) are under the age of 25 while 26% are aged 25-34, and 14% are aged 35-44. Sixteen of 43 victims (37%) are 45 years old and older (14% aged 45 to 54; 21% aged 55 to 64; 2% aged 65 and older).

ORV collision victims in 2017 are, for the most part, consistent in terms of overall age demographic when compared with the previous five year (2012 to 2016) annual average. In the previous five years:

- Persons under the age of 15 account for nearly 3% of all victims in ORV collisions, compared to 5% in 2017;
- Persons aged 15 to 44 account for 60% of all victims in ORV collisions, compared to 51% in 2017;
- Persons aged 45 and above account for 30% of all victims in ORV collisions, compared to 37% in 2017.

NOTE: The classification of victims is different from that of drivers (see Table 11-14) as victims may be of any age. Therefore, they are classified by a 5-year age cohort up to age 24. While drivers of off-road vehicles may not be required to be licensed, driver statistics are recorded consistent with other sections, and identified as under 16, 16 to 19, and then using the same classifications for victims.

NOTE: For a detailed count of ORV collision victims by age group in each year from 2012 to 2017, please refer to "*Table 11-18 Historical Summary of ORV Collision Victims by Age Group*" at the end of this section.

Table 11-11 ORV Collision Victims by Gender and Casualty Type

Table 11-11
ORV Collision Victims by Gender and Casualty Type: 2017, 2012-2016 Average

Gender	2017 Casualty Type				**2017 Total Victims**	**% of 2017 Total Victims**	2012-2016 Average			
	Killed	% of Total Killed	Injured	% of Total Injured			Killed	Injured	Total Victims	% of Total Victims
Male	5	83.3%	26	76.5%	**31**	**77.5%**	11	52	63	82.7%
Female	1	16.7%	8	23.5%	**9**	**22.5%**	1	12	13	17.3%
Total	6	100%	34	100%	**40**	**100%**	12	64	76	100%

Note: Some victims do not have gender recorded and are therefore missing from the table above.

The majority of people killed and injured in ORV collisions in 2017 are male. Males account for 31 of 40 ORV collision victims (nearly 78%). This is similar to the previous five year (2012 to 2016) annual average (83%).

Table 11-12 ORV Collision Victims by Safety Equipment Use and Casualty Type

Table 11-12
ORV Collision Victims by Safety Equipment Use and Casualty Type: 2017, 2012-2016 Average

Safety Equipment	2017 Casualty Type				**2017 Total Victims**	**% of 2017 Total Victims**	2012-2016 Average				% Change 2017 to 2012-2016 Average
	Killed	% of Total Killed	Injured	% of Total Injured			Killed	Injured	Total Victims	% of Total Victims	
Safety Helmet Worn	3	50.0%	19	51.4%	**22**	**51.2%**	3	46	49	59.2%	-55.1%
Safety Helmet Not Worn	1	16.7%	2	5.4%	**3**	**7.0%**	4	6	11	12.8%	-71.7%
Seat Belt Assembly Used	0	-	5	13.5%	**5**	**11.6%**	<1	7	8	9.2%	-34.2%
Seat Belt Assembly Not Used	0	-	0	-	**0**	**-**	<1	2	3	3.1%	-100.0%
Not Stated	1	16.7%	3	8.1%	**4**	**9.3%**	3	2	5	6.0%	-20.0%
Not Applicable*	1	16.7%	8	21.6%	**9**	**20.9%**	1	7	8	9.7%	12.5%
Total	6	100%	37	100%	**43**	**100%**	13	70	83	100%	-48.1%

* Victims who were not operators/passengers of off-road vehicles; therefore do not require a helmet.

In 2017, 22 victims (51%) in ORV collisions were wearing a safety helmet; 3 were not. This includes 3 people killed while wearing a helmet and 1 person killed while not wearing a helmet. The proportion of victims who were wearing a helmet in 2017 (51%) has decreased compared to the previous five year annual average (2012 to 2016; 59%).

Table 11-13 ORV Victims Killed vs. Injured for Helmeted and Non-helmeted ORV Occupants

Table 11-13

ORV Victims Killed vs. Injured for Helmeted and Non-helmeted ORV Occupants (2012-2017)

	Helmet worn		Helmet not worn		Hemet Effectiveness
	Number	Percent	Number	Percent	(Ratio of % helmet not worn to % helmet worn)
Killed	19	7.1%	23	41.1%	5.77
Injured	248	92.9%	33	58.9%	0.63
Total	267	100%	56	100%	-

Note: Data have been presented in aggregate for the years 2012-2017.

As the number of victims wearing helmets exceeds those not wearing helmets, one could conclude that helmets contribute to fatalities and injuries in ORV collisions. However, it is likely that with a large majority of drivers and passengers wearing helmets, they have a high representation among collision victims.

Table 11-13 compares the proportion of people killed and injured for those wearing and not wearing helmets. Among people wearing helmets when they sustain an injury from an ORV collision, 7% are killed. Among people not wearing helmets when they sustain an injury from an ORV collision, 41% are killed. This indicates that an ORV collision victim is almost six times more likely to be killed if they are not wearing a helmet at the time of a collision.

Table 11-14 Drivers Involved in ORV Collisions by Age Group and Collision Severity

Table 11-14

Drivers Involved in ORV Collisions by Age Group and Collision Severity: 2017, 2012-2016 Average

Age Group	2017 Collision Severity						**2017 Total**	**% of 2017 Total**	2012-2016 Average	% Change 2017 to 2012-2016 Average
	Fatal	% of Total Fatal*	Injury	% of Total Injury*	PDO	% of Total PDO*				
<16	0	-	0	-	3	2.2%	**3**	**1.7%**	8	-63.4%
16-19	0	-	1	3.0%	7	5.2%	**8**	**4.6%**	24	-66.4%
20-24	0	-	4	12.1%	16	11.9%	**20**	**11.4%**	50	-60.2%
25-34	5	71.4%	7	21.2%	35	25.9%	**47**	**26.9%**	86	-45.2%
35-44	0	-	6	18.2%	28	20.7%	**34**	**19.4%**	68	-50.0%
45-54	0	-	5	15.2%	29	21.5%	**34**	**19.4%**	64	-46.7%
55-64	1	14.3%	9	27.3%	13	9.6%	**23**	**13.1%**	27	-13.5%
65+	1	14.3%	1	3.0%	4	3.0%	**6**	**3.4%**	7	-18.9%
Not Stated	0	-	1	-	1	-	**2**	**-**	22	-
Total	7	100%	34	100%	136	100%	**177**	**100%**	356	-50.3%

*Percentage of the total does not include the "not stated" category.

In 2017, drivers under the age of 45 account for 64% of drivers involved in ORV collisions (<16 – 2%; 16 to 19 – 5%; 20 to 24 – 11%; 25 to 34 – 27%; 35 to 44 – 19%), while drivers aged 45 and older account for 36% (45 to 54 – 19%; 55 to 64 – 13%; 65 and older – 3%).

Table 11-15 ORV Collisions by Contributing Factors and Collision Severity

Table 11-15

Drivers Involved in ORV Collisions by Contributing Factors and Collision Severity: 2017

Contributing Factor	2017 Collision Severity						**2017 Total Drivers**	**% of 2017 Total Drivers**
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Driver Action - Driving Properly and Human Condition - Apparently Normal	1	14.3%	3	8.8%	7	5.1%	**11**	**6.2%**
Driver Action - Driving properly	0	-	0	-	0	-	**0**	**-**
Any At-fault Driver Action	5	71.4%	28	82.4%	115	84.6%	**148**	**83.6%**
Following too closely	0	-	0	-	5	3.7%	**5**	**2.8%**
Turning improperly	0	-	1	2.9%	2	1.5%	**3**	**1.7%**
Passing improperly	0	-	0	-	0	-	**0**	**-**
Changing lanes improperly	0	-	0	-	0	-	**0**	**-**
Fail to yield right-of-way	1	14.3%	0	-	1	0.7%	**2**	**1.1%**
Disobey traffic control device/officer	0	-	0	-	0	-	**0**	**-**
Drive wrong way on roadway	0	-	0	-	0	-	**0**	**-**
Passing a vehicle at pedestrian X-walk	0	-	0	-	0	-	**0**	**-**
Back unsafely	0	-	0	-	3	2.2%	**3**	**1.7%**
Parking improperly	0	-	0	-	0	-	**0**	**-**
Lost control/Drive off road	2	28.6%	6	17.6%	22	16.2%	**30**	**16.9%**
Driverless vehicle ran out of control	0	-	0	-	0	-	**0**	**-**
Leave stop sign before safe to do so	0	-	0	-	0	-	**0**	**-**
Failed to signal	0	-	0	-	0	-	**0**	**-**
Take avoiding action	0	-	1	2.9%	2	1.5%	**3**	**1.7%**
Driver inexperience	0	-	2	5.9%	11	8.1%	**13**	**7.3%**
Pedestrian error/confusion	0	-	0	-	0	-	**0**	**-**
NET Speed	2	28.6%	15	44.1%	47	34.6%	**64**	**36.2%**
Exceeding speed limit	0	-	0	-	0	-	**0**	**-**
Driving too fast for conditions	1	14.3%	15	44.1%	47	34.6%	**63**	**35.6%**
Unsafe operating speed (Too fast or too slow)	1	14.3%	0	-	0	-	**1**	**0.6%**
NET Distracted driving	0	-	7	20.6%	50	36.8%	**57**	**32.2%**
Careless Driving	0	-	5	14.7%	46	33.8%	**51**	**28.8%**
Distraction/Inattention	0	-	3	8.8%	11	8.1%	**14**	**7.9%**

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Collision Severity						2017 Total Drivers	% of 2017 Total Drivers
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Human Condition - Apparently Normal	3	42.9%	20	58.8%	72	52.9%	**95**	**53.7%**
Any At-fault Human Condition	1	14.3%	1	2.9%	1	0.7%	**3**	**1.7%**
Loss of consciousness/Blackout prior to collision	0	-	0	-	0	-	**0**	**-**
Extreme fatigue/Fell asleep	0	-	0	-	0	-	**0**	**-**
Defective eyesight	0	-	0	-	0	-	**0**	**-**
Defective hearing	0	-	0	-	0	-	**0**	**-**
Medical disability	0	-	0	-	0	-	**0**	**-**
Physical disability	0	-	0	-	0	-	**0**	**-**
Mental disability	0	-	0	-	0	-	**0**	**-**
Mental confusion/Inability to remember	0	-	0	-	0	-	**0**	**-**
Sudden illness	0	-	0	-	0	-	**0**	**-**
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	**0**	**-**
NET Impaired	1	14.3%	1	2.9%	1	0.7%	**3**	**1.7%**
Ability impaired alcohol	1	14.3%	1	2.9%	1	0.7%	**3**	**1.7%**
Ability impaired drugs	0	-	0	-	0	-	**0**	**-**
Had been drinking/Suspected alcohol use	0	-	0	-	0	-	**0**	**-**
No Apparent (Vehicle) Defect	5	71.4%	22	64.7%	92	67.6%	**119**	**67.2%**
Any At-fault Vehicle Defect	0	-	0	-	0	-	**0**	**-**
Defective brakes	0	-	0	-	0	-	**0**	**-**
Defective steering	0	-	0	-	0	-	**0**	**-**
Defective headlights	0	-	0	-	0	-	**0**	**-**
Defective brake lights	0	-	0	-	0	-	**0**	**-**
Defective lighting (unspecified)	0	-	0	-	0	-	**0**	**-**
Defective engine controls/drive train	0	-	0	-	0	-	**0**	**-**
Defective suspension/wheels	0	-	0	-	0	-	**0**	**-**
Defective tires	0	-	0	-	0	-	**0**	**-**
Tow hitch/yoke defective	0	-	0	-	0	-	**0**	**-**
Defective exhaust system	0	-	0	-	0	-	**0**	**-**
Hood/tailgate/door/covering opened	0	-	0	-	0	-	**0**	**-**
Defective glazing (obscured windows)	0	-	0	-	0	-	**0**	**-**
Vehicle modifications	0	-	0	-	0	-	**0**	**-**
Fire	0	-	0	-	0	-	**0**	**-**
Overloaded/oversized	0	-	0	-	0	-	**0**	**-**
Load shifted/spilled	0	-	0	-	0	-	**0**	**-**
Jack-knife/trailer swing	0	-	0	-	0	-	**0**	**-**
Hydroplaning tires	0	-	0	-	0	-	**0**	**-**

(continued on next page)

(continued from previous page)

Contributing Factor	2017 Collision Severity						2017 Total Drivers	% of 2017 Total Drivers
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Any At-fault Environmental Condition	1	14.3%	4	11.8%	28	20.6%	**33**	**18.6%**
Animal action - Wild	0	-	0	-	3	2.2%	**3**	**1.7%**
Animal action - Domestic	0	-	0	-	1	0.7%	**1**	**0.6%**
Slippery road surface	0	-	0	-	4	2.9%	**4**	**2.3%**
Snow drift	0	-	1	2.9%	4	2.9%	**5**	**2.8%**
Obstruction/debris on roadway	0	-	2	5.9%	14	10.3%	**16**	**9.0%**
View obstructed/limited	0	-	1	2.9%	0	-	**1**	**0.6%**
Glare/reflection	0	-	0	-	0	-	**0**	**-**
Construction zone	0	-	0	-	0	-	**0**	**-**
Defective driving surface	1	14.3%	0	-	3	2.2%	**4**	**2.3%**
Shoulders defective	0	-	0	-	0	-	**0**	**-**
Lane markings inadequate	0	-	0	-	0	-	**0**	**-**
Defective/inoperative traffic control device	0	-	0	-	0	-	**0**	**-**
Weather	0	-	0	-	0	-	**0**	**-**
Pedestrian corridor in use	0	-	0	-	0	-	**0**	**-**
Uninvolved vehicle	0	-	0	-	0	-	**0**	**-**
Uninvolved pedestrian	0	-	0	-	0	-	**0**	**-**
Presence of prior accident	0	-	0	-	0	-	**0**	**-**
No Contributing Factor(s) Identified	0	-	0	-	0	-	**0**	**-**
Not Stated	0	-	1	2.9%	4	2.9%	**5**	**2.8%**
Total	7	100%	34	100%	136	100%	**177**	**100%**

*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each collision severity will add to more than the total collisions of that severity.

In 2017, at least one at-fault driver action is recorded for 148 of the 177 drivers involved in ORV collisions (84%), including:

- 5 of 7 drivers involved in fatal collisions;
- 28 of 34 drivers involved in injury collisions; and,
- 115 of 136 drivers involved in PDO collisions.

The most prevalent at-fault driver actions include:

- Speed (including "exceeding speed limit", "driving too fast for conditions" and "unsafe operating speed") – 36% of the drivers involved;
- Distracted driving (including "careless driving" and "distraction/inattention") – 32% of the drivers involved; and,
- "Loss of control/drive off road" – 17% of the drivers involved.

Impaired driving (including "ability impaired by alcohol", "ability impaired by drugs" and "had been drinking/suspected alcohol use") is the only at-fault human condition recorded in 2017 for drivers involved in ORV collisions. Impaired driving is a contributing factor for 2% of the drivers involved.

Environmental conditions are recorded as contributing for 19% of the drivers involved in ORV collisions, with the most prevalent being "obstruction/debris on roadway" (9% of the drivers involved).

No drivers involved in ORV collisions had a vehicle defect recorded as a contributing factor.

In the previous five year (2012 to 2016) annual average of the drivers involved in ORV collisions:

- 45% had an at-fault driver action recorded, with 30% being distracted ("careless driving" and "distraction/inattention"), 9% speed, and 6% "lost control/drive off road";
- 2% had an at-fault 'human condition' recorded, with the most common being impaired (2%);
- 12% had an environmental condition recorded, with the most common being "obstruction/debris on roadway" (6%) and "defective driving surface" (2%); and,
- Only 2 drivers had a vehicle defect recorded as a contributing factor.

In 2017, 5 of 7 drivers involved in fatal collisions had an at-fault driver action and 1 of 7 had an at-fault human condition. The most common at-fault contributing factors recorded for drivers involved in fatal ORV collisions in 2017 include:

- Speed (including "exceeding speed limit", "driving too fast for conditions" and "unsafe operating speed") – 2 of 7 drivers;
- "Loss of control/drive off road" – 2 of 7 drivers;
- Impaired (including "ability impaired by alcohol", "ability impaired by drugs" and "had been drinking/suspected alcohol use") – 1 of 7 drivers;
- "Failed to yield right-of-way" – 1 of 7 drivers; and,
- "Defective driving surface" – 1 of 7 drivers.

NOTE: For a detailed count of drivers involved in ORV collisions by the contributing factors recorded in each year from 2012 to 2017, please refer to "*Table 11-19 Historical Summary of Drivers Involved in ORV Collisions by Contributing Factors*" at the end of this section.

Table 11-16 Historical Summary of ORV Collisions by Month of Occurrence

Table 11-16
Summary of ORV Collisions by Month of Occurrence: 2012 to 2017

Month	2012 Total	% of 2012 Total	2013 Total	% of 2013 Total	2014 Total	% of 2014 Total	2015 Total	% of 2015 Total	2016 Total	% of 2016 Total	**2017 Total**	**% of 2017 Total**
January	52	12.7%	53	13.6%	40	13.6%	35	13.0%	40	14.9%	**34**	**20.2%**
February	67	16.4%	61	15.6%	44	14.9%	36	13.4%	41	15.3%	**26**	**15.5%**
March	60	14.7%	67	17.1%	41	13.9%	39	14.5%	32	11.9%	**11**	**6.5%**
April	24	5.9%	28	7.2%	30	10.2%	24	8.9%	9	3.4%	**16**	**9.5%**
May	20	4.9%	23	5.9%	27	9.2%	15	5.6%	20	7.5%	**12**	**7.1%**
June	20	4.9%	25	6.4%	13	4.4%	19	7.1%	10	3.7%	**13**	**7.7%**
July	18	4.4%	23	5.9%	20	6.8%	20	7.4%	23	8.6%	**12**	**7.1%**
August	18	4.4%	20	5.1%	20	6.8%	16	5.9%	16	6.0%	**6**	**3.6%**
September	23	5.6%	17	4.3%	16	5.4%	22	8.2%	24	9.0%	**8**	**4.8%**
October	16	3.9%	20	5.1%	16	5.4%	16	5.9%	8	3.0%	**12**	**7.1%**
November	29	7.1%	25	6.4%	14	4.7%	7	2.6%	8	3.0%	**6**	**3.6%**
December	62	15.2%	29	7.4%	14	4.7%	20	7.4%	37	13.8%	**12**	**7.1%**
Total	409	100%	391	100%	295	100%	269	100%	268	100%	**168**	**100%**

Table 11-17 Historical Summary of ORV Collisions by Location

Table 11-17
Summary of ORV Collisions by Location: 2012 to 2017

Location	2012 Total	% of 2012 Total	2013 Total	% of 2013 Total	2014 Total	% of 2014 Total	2015 Total	% of 2015 Total	2016 Total	% of 2016 Total	**2017 Total**	**% of 2017 Total**
Public Roadway	62	15.2%	68	17.4%	45	15.3%	54	20.1%	48	17.9%	**14**	**8.3%**
Ditches	36	8.8%	35	9.0%	16	5.4%	27	10.0%	25	9.3%	**14**	**8.3%**
River/Lake	45	11.0%	42	10.7%	20	6.8%	22	8.2%	18	6.7%	**19**	**11.3%**
Field	16	3.9%	17	4.3%	9	3.1%	17	6.3%	20	7.5%	**16**	**9.5%**
Farm Yard/Private Property	50	12.2%	46	11.8%	46	15.6%	43	16.0%	25	9.3%	**19**	**11.3%**
Parking Lot	2	0.5%	1	0.3%	2	0.7%	2	0.7%	1	0.4%	**1**	**0.6%**
Embankment	2	0.5%	2	0.5%	2	0.7%	1	0.4%	5	1.9%	**3**	**1.8%**
Gravel Road	4	1.0%	12	3.1%	5	1.7%	5	1.9%	5	1.9%	**3**	**1.8%**
Trail*	112	27.4%	88	22.5%	77	26.1%	48	17.8%	76	28.4%	**46**	**27.4%**
Other**	72	17.6%	74	18.9%	66	22.4%	47	17.5%	41	15.3%	**33**	**19.6%**
Not Stated	8	2.0%	6	1.5%	7	2.4%	3	1.1%	4	1.5%	**0**	**-**
Total	409	100%	391	100%	295	100%	269	100%	268	100%	**168**	**100%**

*Includes marked groomed trail, bush trail/winter road, and snowmobile trail.

**Includes park, forest, bush, camp site, mountain, valley, hill, railroad and floodway/diversion.

Table 11-18 Historical Summary of ORV Collision Victims by Age Group

Table 11-18

Historical Summary of ORV Collision Victims by Age Group: 2012 to 2017

Age Group	2012 Total	% of 2012 Total	2013 Total	% of 2013 Total	2014 Total	% of 2014 Total	2015 Total	% of 2015 Total	2016 Total	% of 2016 Total	**2017 Total**	**% of 2017 Total**
0-4	0	-	0	-	0	-	1	1.5%	0	-	**1**	**2.3%**
5-9	0	-	0	-	0	-	1	1.5%	1	1.1%	**1**	**2.3%**
10-14	3	2.8%	1	1.3%	1	1.4%	1	1.5%	2	2.1%	**0**	**-**
15-19	10	9.3%	6	7.9%	8	11.6%	5	7.5%	6	6.4%	**1**	**2.3%**
20-24	12	11.1%	13	17.1%	7	10.1%	9	13.4%	4	4.3%	**4**	**9.3%**
25-34	15	13.9%	16	21.1%	17	24.6%	11	16.4%	20	21.3%	**11**	**25.6%**
35-44	29	26.9%	10	13.2%	12	17.4%	16	23.9%	22	23.4%	**6**	**14.0%**
45-54	22	20.4%	14	18.4%	8	11.6%	10	14.9%	19	20.2%	**6**	**14.0%**
55-64	7	6.5%	7	9.2%	8	11.6%	7	10.4%	10	10.6%	**9**	**20.9%**
65+	4	3.7%	2	2.6%	0	-	2	3.0%	5	5.3%	**1**	**2.3%**
Not Stated	6	5.6%	7	9.2%	8	11.6%	4	6.0%	5	5.3%	**3**	**7.0%**
Total	108	100%	76	100%	69	100%	67	100%	94	100%	**43**	**100%**

Table 11-19 Historical Summary of ORV Collisions by Contributing Factors

Table 11-19

Historical Summary of ORV Collisions by Contributing Factors: 2012 to 2017

Contributing Factor	2012 Total Drivers	% of 2012 Total Drivers	2013 Total Drivers	% of 2013 Total Drivers	2014 Total Drivers	% of 2014 Total Drivers	2015 Total Drivers	% of 2015 Total Drivers	2016 Total Drivers	% of 2016 Total Drivers	**2017 Total Drivers**	**% of 2017 Total Drivers**
Driver Action - Driving Properly and Human Condition - Apparently Normal	75	17.1%	25	5.9%	18	5.5%	34	11.3%	36	12.2%	**11**	**6.2%**
Driver Action - Driving properly	7	1.6%	1	0.2%	0	-	3	1.0%	2	0.7%	**0**	**-**
Any At-fault Driver Action	154	35.1%	176	41.7%	157	48.3%	139	46.3%	170	57.6%	**148**	**83.6%**
Following too closely	4	0.9%	1	0.2%	8	2.5%	7	2.3%	3	1.0%	**5**	**2.8%**
Turning improperly	0	-	2	0.5%	6	1.8%	4	1.3%	4	1.4%	**3**	**1.7%**
Passing improperly	0	-	0	-	0	-	0	-	1	0.3%	**0**	**-**
Changing lanes improperly	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Fail to yield right-of-way	2	0.5%	0	-	1	0.3%	2	0.7%	0	-	**2**	**1.1%**
Disobey traffic control device/officer	0	-	0	-	0	-	1	0.3%	0	-	**0**	**-**
Drive wrong way on roadway	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Passing a vehicle at pedestrian X-walk	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Back unsafely	3	0.7%	1	0.2%	1	0.3%	5	1.7%	1	0.3%	**3**	**1.7%**
Parking improperly	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Lost control/Drive off road	18	4.1%	23	5.5%	13	4.0%	22	7.3%	24	8.1%	**30**	**16.9%**
Driverless vehicle ran out of control	0	-	2	0.5%	0	-	0	-	0	-	**0**	**-**
Leave stop sign before safe to do so	1	0.2%	0	-	0	-	0	-	1	0.3%	**0**	**-**
Failed to signal	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Take avoiding action	2	0.5%	3	0.7%	3	0.9%	2	0.7%	5	1.7%	**3**	**1.7%**
Driver inexperience	4	0.9%	3	0.7%	1	0.3%	3	1.0%	8	2.7%	**13**	**7.3%**
Pedestrian error/confusion	0	-	0	-	0	-	0	-	0	-	**0**	**-**
NET Speed	26	5.9%	33	7.8%	35	10.8%	19	6.3%	42	14.2%	**64**	**36.2%**
Exceeding speed limit	1	0.2%	1	0.2%	0	-	0	-	2	0.7%	**0**	**-**
Driving too fast for conditions	22	5.0%	29	6.9%	31	9.5%	18	6.0%	34	11.5%	**63**	**35.6%**
Unsafe operating speed (Too fast or too slow)	4	0.9%	3	0.7%	4	1.2%	1	0.3%	6	2.0%	**1**	**0.6%**
NET Distracted driving	99	22.6%	111	26.3%	109	33.5%	97	32.3%	120	40.7%	**57**	**32.2%**
Careless Driving	96	21.9%	110	26.1%	109	33.5%	93	31.0%	114	38.6%	**51**	**28.8%**
Distraction/Inattention	4	0.9%	2	0.5%	2	0.6%	6	2.0%	11	3.7%	**14**	**7.9%**

(continued on next page)

(continued from previous page)

Contributing Factor	2012 Total Drivers	% of 2012 Total Drivers	2013 Total Drivers	% of 2013 Total Drivers	2014 Total Drivers	% of 2014 Total Drivers	2015 Total Drivers	% of 2015 Total Drivers	2016 Total Drivers	% of 2016 Total Drivers	**2017 Total Drivers**	**% of 2017 Total Drivers**
Human Condition - Apparently Normal	71	16.2%	34	8.1%	29	8.9%	38	12.7%	77	26.1%	**95**	**53.7%**
Any At-fault Human Condition	6	1.4%	6	1.4%	5	1.5%	5	1.7%	11	3.7%	**3**	**1.7%**
Loss of consciousness/Blackout prior to collision	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Extreme fatigue/Fell asleep	0	-	0	-	0	-	1	0.3%	0	-	**0**	**-**
Defective eyesight	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Defective hearing	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Medical disability	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Physical disability	0	-	1	0.2%	0	-	0	-	0	-	**0**	**-**
Mental disability	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Mental confusion/Inability to remember	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Sudden illness	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	0	-	0	-	**0**	**-**
NET Impaired	6	1.4%	5	1.2%	5	1.5%	4	1.3%	11	3.7%	**3**	**1.7%**
Ability impaired alcohol	6	1.4%	2	0.5%	2	0.6%	3	1.0%	6	2.0%	**3**	**1.7%**
Ability impaired drugs	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Had been drinking/Suspected alcohol use	0	-	3	0.7%	3	0.9%	1	0.3%	5	1.7%	**0**	**-**
No Apparent (Vehicle) Defect	139	31.7%	50	11.8%	39	12.0%	64	21.3%	132	44.7%	**119**	**67.2%**
Any At-fault Vehicle Defect	0	-	2	0.5%	3	0.9%	1	0.3%	4	1.4%	**0**	**-**
Defective brakes	0	-	1	0.2%	1	0.3%	0	-	0	-	**0**	**-**
Defective steering	0	-	0	-	0	-	1	0.3%	1	0.3%	**0**	**-**
Defective headlights	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Defective brake lights	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Defective lighting (unspecified)	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Defective engine controls/drive train	0	-	0	-	0	-	0	-	2	0.7%	**0**	**-**
Defective suspension/wheels	0	-	0	-	2	0.6%	0	-	1	0.3%	**0**	**-**
Defective tires	0	-	0	-	0	-	0	-	1	0.3%	**0**	**-**
Tow hitch/yoke defective	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Defective exhaust system	0	-	0	-	0	-	0	-	1	0.3%	**0**	**-**
Hood/tailgate/door/covering opened	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Defective glazing (obscured windows)	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Vehicle modifications	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Fire	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Overloaded/oversized	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Load shifted/spilled	0	-	1	0.2%	0	-	0	-	0	-	**0**	**-**
Jack-knife/trailer swing	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Hydroplaning tires	0	-	0	-	0	-	0	-	0	-	**0**	**-**

(continued on next page)

(continued from previous page)

Contributing Factor	2012 Total Drivers	% of 2012 Total Drivers	2013 Total Drivers	% of 2013 Total Drivers	2014 Total Drivers	% of 2014 Total Drivers	2015 Total Drivers	% of 2015 Total Drivers	2016 Total Drivers	% of 2016 Total Drivers	**2017 Total Drivers**	**% of 2017 Total Drivers**
Any At-fault Environmental Condition	47	10.7%	52	12.3%	29	8.9%	25	8.3%	63	21.4%	**33**	**18.6%**
Animal action - Wild	4	0.9%	10	2.4%	5	1.5%	1	0.3%	0	-	**3**	**1.7%**
Animal action - Domestic	1	0.2%	0	-	3	0.9%	1	0.3%	0	-	**1**	**0.6%**
Slippery road surface	3	0.7%	7	1.7%	3	0.9%	2	0.7%	6	2.0%	**4**	**2.3%**
Snow drift	4	0.9%	7	1.7%	2	0.6%	1	0.3%	8	2.7%	**5**	**2.8%**
Obstruction/debris on roadway	20	4.6%	18	4.3%	13	4.0%	15	5.0%	33	11.2%	**16**	**9.0%**
View obstructed/limited	3	0.7%	1	0.2%	2	0.6%	2	0.7%	8	2.7%	**1**	**0.6%**
Glare/reflection	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Construction zone	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Defective driving surface	10	2.3%	7	1.7%	2	0.6%	2	0.7%	13	4.4%	**4**	**2.3%**
Shoulders defective	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Lane markings inadequate	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Defective/inoperative traffic control device	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Weather	2	0.5%	2	0.5%	1	0.3%	2	0.7%	3	1.0%	**0**	**-**
Pedestrian corridor in use	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Uninvolved vehicle	0	-	1	0.2%	0	-	0	-	0	-	**0**	**-**
Uninvolved pedestrian	0	-	0	-	0	-	0	-	0	-	**0**	**-**
Presence of prior accident	0	-	0	-	0	-	0	-	0	-	**0**	**-**
No Contributing Factor(s) Identified	0	-	0	-	1	0.3%	0	-	0	-	**0**	**-**
Not Stated	154	35.1%	158	37.4%	107	32.9%	105	35.0%	60	20.3%	**5**	**2.8%**
Total	439	100%	422	100%	325	100%	300	100%	295	100%	**177**	**100%**

*Note: For each vehicle and/or driver involved in a collision, up to three contributing factors can be recorded. Because multiple factors can be noted, the counts and percentages under each collision severity will add to more than the total collisions of that severity.

SECTION 12 - Alcohol-Related Criminal Code Convictions

Introduction

This section counts the number of drivers convicted of alcohol-related Criminal Code offences for the year 2016 by age at the time of the offence and includes historical statistics for the period 1997 to 2015. There is a one-year lag in the statistics reported to allow for court processing time. Therefore, 2016 is the most current year for which these statistics are available. Details are provided for "first", "second" and "third and subsequent" (i.e., third, fourth, fifth, etc. combined) offences and whether or not a youth was present in the vehicle at the time of the offence.

Key Highlights
In 2016, there are a total of 1,862 alcohol-related Criminal Code offence convictions, including:

- 1,060 convictions for driving with a blood alcohol concentration (BAC) over .08[4];
- 698 convictions for impaired driving[5]; and,
- 104 convictions for refusing to provide a breath or blood sample[6].

In 2016, the count of drivers convicted of alcohol-related Criminal Code offences (1,862) decreased by a count of 2 compared to 2015 (1,864), the count decreased by nearly 5% compared to the previous five year (2011 to 2015) annual average (1,950). Comparing 2016 to the previous five year (2011 to 2015) annual average:

- Convictions for "alcohol content over .08" decreased by 9%;
- Convictions for "impaired driving" increased by 2%; and,
- Convictions for "refuse sample" increased by 2%.

Licensed drivers up to the age of 44 are overrepresented in alcohol-related Criminal Code convictions.

- Drivers under age 25 represented 14% of the licensed drivers in 2016, but accounted for 25% of convictions.
- Drivers aged 25 to 44 represented 34% of the licensed drivers in 2016, but accounted for 53% of convictions.

Over the past 10 years, from 2006 to 2016, there was a 19% decrease in the rate of first offences. Rates of recidivism, indicated by second, and third and subsequent offences, decreased at a rate of 10% in second alcohol-related Criminal Code offences in 2016, but increased at a rate of 11% in third and subsequent offences in 2016 compared to 2006.

Major Elements Examined
This section reports the number of drivers convicted of alcohol-related Criminal Code offences.

Convictions have been broken down by whether or not a passenger under the age of 16 was in the vehicle at the time the offence occurred (under columns designated by a trailing "C" in the statute number). In 2005, Manitoba added increased consequences to Criminal Code offences 253A, 253B and 254-5 when these offences are committed while a youth was in the vehicle; 2007 represents the first year where these conviction categories are available for reporting.

Beginning in 2007, convictions of Manitoba drivers for impaired driving offences originating in other provinces and the United States have been added to the counts reported here. Prior to that time, these "out-of-province" offences were not included in the annual counts.

"Relative involvement rates" in this section of the report are calculated as a rate per 1,000 licensed drivers to ensure consistency with other jurisdictions.

In years past, the severity of the sanctions imposed by the courts in Manitoba took into account whether or not the offence involved a traffic collision. Until 2004, Driver Records noted whether the conviction was associated with a crash; that procedure has been discontinued and this report no longer includes a separate count for convictions occurring with or without a collision.

[4] Includes s.253B and s.253BC
[5] Includes s.253A, s.253AC, s.255-2 and s.255-3
[6] Includes s.254-5 and s.254-5C

Terms and Definitions

"Blood alcohol concentration (BAC)"

- A measure of the concentration of alcohol in a person's blood. A measure of ".08 BAC" is equivalent of 80 milligrams of alcohol per 1,000 milligrams of blood, or 0.08%.

"Criminal Code 253A" and "Criminal Code 253B"[7]: Impaired driving

- Everyone commits an offence who operates a motor vehicle or vessel or operates or assists in the operation of an aircraft or of railway equipment or has the care or control of a motor vehicle, vessel, aircraft or railway equipment, whether it is in motion or not,
  - (*a*) while the person's ability to operate the vehicle, vessel, aircraft or railway equipment is impaired by alcohol or a drug; or
  - (*b*) having consumed alcohol in such a quantity that the concentration in the person's blood exceeds eighty milligrams of alcohol in one hundred millilitres of blood.
- For greater certainty, the reference to impairment by alcohol or a drug in paragraph (*a*) includes impairment by a combination of alcohol and a drug.
- "253AC" and "253BC" indicate a conviction when there was a youth in the vehicle.

"Criminal Code Statute 254-5": Refusing to comply with a request for sample

- If a peace officer has reasonable grounds to suspect that a person has alcohol or a drug in their body and that the person has, within the preceding three hours, operated a motor vehicle or vessel, operated or assisted in the operation of an aircraft or railway equipment or had the care or control of a motor vehicle, a vessel, an aircraft or railway equipment, whether it was in motion or not, the peace officer may, by demand, require the person to comply with paragraph (*a*), in the case of a drug, or with either or both of paragraphs (*a*) and (*b*), in the case of alcohol:
  - (*a*) to perform forthwith physical coordination tests … and, if necessary, to accompany the peace officer for that purpose; and
  - (*b*) to provide forthwith a sample of breath that, in the peace officer's opinion, will enable a proper analysis to be made by means of an approved screening device and, if necessary, to accompany the peace officer for that purpose.
- Everyone commits an offence who, without reasonable excuse, fails or refuses to comply with a demand made under this section.
- "254-5C" indicates a conviction while a youth was in the vehicle.

"Criminal Code Statute 255-2": Impaired driving/refusing to provide sample causing injury

- Everyone who commits an offence under paragraph 253(*a*) and causes bodily harm to another person as a result is guilty of an indictable offence and liable to imprisonment for a term of not more than 10 years.
- Everyone who, while committing an offence under paragraph 253(*b*), causes an accident resulting in bodily harm to another person is guilty of an indictable offence and liable to imprisonment for a term of not more than 10 years.
- Everyone who commits an offence under subsection 254(5) and, at the time of committing the offence, knows or ought to know that their operation of the motor vehicle, vessel, aircraft or railway equipment, their assistance in the operation of the aircraft or railway equipment or their care or control of the motor vehicle, vessel, aircraft or railway equipment caused an accident resulting in bodily harm to another person is guilty of an indictable offence and liable to imprisonment for a term of not more than 10 years.

[7] Definitions for Criminal Code Statute 253, 254 and 255 are taken directly from the **Criminal Code (R.S., 1985, c. C-46)** of Canada, as posted on the Department of Justice website. (http://lois-laws.justice.gc.ca/eng/)

“Criminal Code Statute 255-3”: Impaired driving/refusing to provide sample causing death

- Everyone who commits an offence under paragraph 253(*a*) and causes the death of another person as a result is guilty of an indictable offence and liable to imprisonment for life.
- Everyone who, while committing an offence under paragraph 253(*b*), causes an accident resulting in the death of another person is guilty of an indictable offence and liable to imprisonment for life.
- Everyone who commits an offence under subsection 254(5) and, at the time of committing the offence, knows or ought to know that their operation of the motor vehicle, vessel, aircraft or railway equipment, their assistance in the operation of the aircraft or railway equipment or their care or control of the motor vehicle, vessel, aircraft or railway equipment caused an accident resulting in the death of another person, or in bodily harm to another person whose death ensues, is guilty of an indictable offence and liable to imprisonment for life.

Table 12-1: Total Alcohol-Related Criminal Code Convictions

Table 12-1
Total Alcohol-Related Criminal Code Convictions: 1997 to 2016*

Year	Alcohol Content Over .08		Impaired Driving		Impaired Driving Causing Injury/Death		Refuse Sample		Total
	253B	253BC	253A	253AC	255-2	255-3	254-5	254-5C	
1997	2,519	N/A	366	N/A	37	3	277	N/A	3,202
1998	2,487	N/A	404	N/A	36	1	291	N/A	3,219
1999	2,460	N/A	441	N/A	29	3	320	N/A	3,253
2000	1,959	N/A	493	N/A	34	4	245	N/A	2,735
2001	1,783	N/A	574	N/A	35	2	186	N/A	2,580
2002	1,655	N/A	611	N/A	20	4	143	N/A	2,433
2003	1,464	N/A	567	N/A	19	3	144	N/A	2,197
2004	1,316	N/A	486	N/A	19	4	97	N/A	1,922
2005	1,089	N/A	474	N/A	16	4	98	N/A	1,681
2006	1,270	N/A	478	N/A	12	4	67	N/A	1,831
2007	1,301	3	618	1	14	2	80	0	2,019
2008	1,324	5	593	5	15	3	89	0	2,034
2009	1,344	4	657	3	23	0	84	1	2,116
2010	1,424	3	663	6	23	2	90	0	2,211
2011	1,252	8	577	0	19	5	94	1	1,956
2012	1,177	3	661	6	19	7	106	0	1,979
2013	1,127	5	661	8	16	4	100	1	1,922
2014	1,164	15	700	1	23	3	121	1	2,028
2015	1,049	11	686	7	19	5	84	3	1,864
2016	**1,045**	**15**	**670**	**5**	**14**	**9**	**103**	**1**	**1,862**
2011-15 Average	1,154	8	657	4	19	5	101	1	1,950
% Change 2015 to 2016	-0.4%	36.4%	-2.3%	-28.6%	-26.3%	80.0%	22.6%	-66.7%	-0.1%
% Change 2011-15 Average to 2016	-9.4%	78.6%	2.0%	13.6%	-27.1%	87.5%	2.0%	-16.7%	-4.5%
% Change 1997 to 2016	-58.5%	N/A	83.1%	N/A	-62.2%	200.0%	-62.8%	N/A	-41.8%

*There is a one-year lag in the statistics reported to allow for court processing time. Therefore, 2016 is the most current year for which these statistics are available.

Note: In 2005, Manitoba added increased consequences for Criminal Code offences 253A, 253B and 254-5 committed with a youth under the age of 16 in the vehicle. These convictions are denoted by a trailing "C" in the statute number.

NOTE: Counts and percentage change statistics that cannot be calculated due to the fact that the specific conviction code or type did not exist in historical data are noted in the table as “N/A”. Changes to the previous year and to the previous five-year trend for convictions committed with a youth in the vehicle should be interpreted with caution due to small counts.

CAUTION: Beginning in 2007, convictions for impaired driving offences originating in other provinces and the United States have been added to the counts reported here. Prior to that time, these “out-of-province” offences were not included in the annual counts. The difference in convictions noted in 2008 compared to years prior to 2007 is affected by this change.

In 2016, the count of drivers convicted of alcohol-related Criminal Code offences (1,862) decreased by a count of 2 compared to 2015 (1,864); the count decreased by nearly 5% compared to the previous five year (2011 to 2015) annual average (1,950).

Comparing 2016 to the previous five year (2011 to 2015) annual average:

- Convictions for “alcohol content over .08” decreased by 9%;
- Convictions for “impaired driving” increased by 2%; and,
- Convictions for “refuse sample” increased by 2%.

In 2016, there were 15 convictions for driving with a blood alcohol concentration (BAC) over .08 while a youth (under age 16) was in the vehicle, 5 for impaired driving while a youth was in the vehicle, and 1 for refusing to provide a breath or blood sample while a youth was in the vehicle. Counts of these convictions over the ten year period have fluctuated dramatically due to their overall low frequency in any given year.

In the 20-year period from 1997 to 2016, total alcohol-related Criminal Code convictions decreased by 42%, from 3,202 in 1997 to 1,862 in 2016.

- Convictions for “alcohol content over .08” decreased by 58% (2,519 in 1997 to 1,060 in 2016).
- Convictions for “impaired driving” increased by 72% (406 in 1997 to 698 in 2016).
- Convictions for “refuse sample” decreased by nearly 63% (277 in 1997 to 104 in 2016).

Table 12-2: Total Alcohol-Related Criminal Code Convictions by Age Group

Table 12-2
Total Alcohol-Related Criminal Code Convictions by Age Group: 1997 to 2016

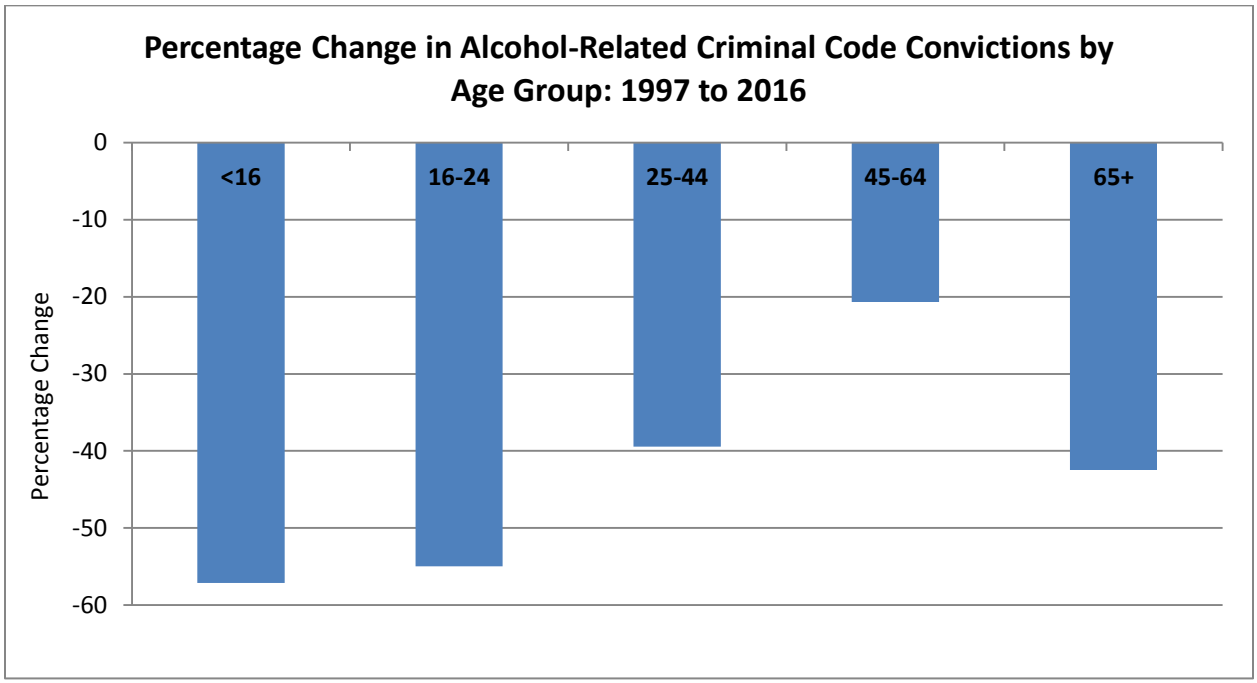
	<16	16-17	18-20	21-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
1997	7	105	430	495	451	440	440	302	201	130	78	50	44	18	11	3,202
1998	7	109	349	448	495	459	455	306	227	163	82	49	39	25	6	3,219
1999	13	81	412	504	484	445	429	330	248	151	56	46	28	15	11	3,253
2000	12	75	345	430	396	368	354	298	198	102	66	42	23	14	12	2,735
2001	11	91	357	379	384	334	322	259	177	128	54	44	22	15	3	2,580
2002	11	85	333	338	359	309	277	282	175	102	78	39	24	10	11	2,433
2003	7	65	300	308	317	269	237	233	178	109	81	44	26	14	9	2,197
2004	5	55	282	273	251	235	209	232	150	83	63	46	21	13	4	1,922
2005	6	46	210	272	243	204	178	158	139	91	51	45	24	5	9	1,681
2006	8	58	259	298	264	222	173	178	168	82	60	35	16	5	5	1,831
2007	7	50	274	289	306	248	244	200	151	110	67	35	19	9	10	2,019
2008	4	59	234	320	312	245	196	201	197	117	74	43	21	8	3	2,034
2009	2	37	255	341	358	268	222	213	176	120	57	37	19	8	3	2,116
2010	8	43	286	356	353	241	250	198	169	133	76	55	33	7	3	2,211
2011	5	36	235	333	334	220	200	166	157	122	88	36	15	7	2	1,956
2012	7	33	211	318	334	251	239	179	148	128	67	37	18	7	2	1,979
2013	4	29	179	292	302	278	237	179	148	118	72	45	26	12	1	1,922
2014	8	16	186	303	338	290	226	192	150	141	80	47	37	9	5	2,028
2015	6	16	169	277	351	275	197	150	167	109	78	38	23	4	4	1,864
2016	**3**	**17**	**159**	**288**	**345**	**250**	**223**	**171**	**148**	**107**	**72**	**37**	**25**	**7**	**10**	**1,862**
2011-15 Average	6	26	196	305	332	263	220	173	154	124	77	41	24	8	3	1,950
% Change 2015 to 2016	-50.0%	6.3%	-5.9%	4.0%	-1.7%	-9.1%	13.2%	14.0%	-11.4%	-1.8%	-7.7%	-2.6%	8.7%	75.0%	150.0%	-0.1%
% Change 2011-15 Average to 2016	-50.0%	-34.6%	-18.9%	-5.4%	4.0%	-4.9%	1.5%	-1.3%	-3.9%	-13.4%	-6.5%	-8.9%	5.0%	-10.3%	257.1%	-4.5%
% Change 1997 to 2016	-57.1%	-83.8%	-63.0%	-41.8%	-23.5%	-43.2%	-49.3%	-43.4%	-26.4%	-17.7%	-7.7%	-26.0%	-43.2%	-61.1%	-9.1%	-41.8%

Caution: The count of convictions shown does not take into account the number of licensed drivers by age group.

Comparing 2016 to the previous five year (2011 to 2015) annual average:

- There are nearly 5% less convictions in total (a difference of 88);
- Convictions among the youngest age group (under age 16) decreased by a count of 3;
- Convictions among 16 to 24 year olds decreased by 12% (a count of 63);
- Convictions among 25 to 44 year olds increased by a count of 1;
- Convictions among 45 to 64 year olds decreased by 8% (a count of 31); and,
- Convictions among those aged 65 and older increased by 22% (a count of 8).

Figure 12-1: Percentage Change in Alcohol-Related Criminal Code Convictions by Age Group



During the 20-year period 1997 to 2016, alcohol-related Criminal Code convictions have decreased by 42% in Manitoba. Convictions among drivers aged:

- Under 16 decreased by a count of 4;
- 16 to 24 decreased by 55%;
- 25 to 44 decreased by 39%;
- 45 to 64 decreased by 21%; and,
- 65 and older decreased by nearly 43%.

Table 12-3: Total Alcohol-Related Criminal Code Offences by Age Group and Conviction Type

Table 12-3
Total Alcohol-Related Criminal Code Offences by Age Group and Conviction Type: 2016

Age Group	Alcohol Content Over .08		Impaired Driving		Impaired Driving Causing Injury/Death		Refuse Sample		Total
	253B	253BC	253A	253AC	Injury	Death	254-5	254-5C	
<16	1	0	2	0	0	0	0	0	3
16-17	8	1	7	0	0	1	0	0	17
18-20	107	0	42	0	2	1	7	0	159
21-24	161	2	108	1	3	3	10	0	288
25-29	201	2	109	1	4	4	23	1	345
30-34	134	2	93	0	3	0	18	0	250
35-39	123	3	76	2	1	0	18	0	223
40-44	94	1	61	0	0	0	15	0	171
45-49	81	1	61	0	1	0	4	0	148
50-54	46	2	55	1	0	0	3	0	107
55-59	43	0	27	0	0	0	2	0	72
60-64	20	1	15	0	0	0	1	0	37
65-69	15	0	10	0	0	0	0	0	25
70-74	6	0	1	0	0	0	0	0	7
75+	5	0	3	0	0	0	2	0	10
Total	**1,045**	**15**	**670**	**5**	**14**	**9**	**103**	**1**	**1,862**

Caution: The count of convictions shown does not take into account population demographics by age group or the number of licensed drivers by age group.

Table 12-4: Alcohol-Related Criminal Code Convictions by Active Licensed Drivers and Age Group

Table 12-4
Alcohol-Related Criminal Code Convictions by Active Licensed Drivers and Age Group: 2006, 2011 and 2016

Age Group	2006			2011			2016		
	# Alcohol Convictions	% Total Alcohol Convictions	% Licensed Drivers	# Alcohol Convictions	% Total Alcohol Convictions	% Licensed Drivers	# Alcohol Convictions	% Total Alcohol Convictions	% Licensed Drivers
<16-24*	623	34.0%	14.4%	609	31.1%	14.3%	467	25.1%	13.6%
25-44	837	45.7%	35.1%	920	47.0%	33.4%	989	53.1%	34.1%
45-64	345	18.8%	35.3%	403	20.6%	36.2%	364	19.5%	34.0%
65+	26	1.4%	15.2%	24	1.2%	16.0%	42	2.3%	18.3%
Total	**1,831**	**100%**	**100%**	**1,956**	**100%**	**100%**	**1,862**	**100%**	**100%**

* Includes statistics for individuals under the age of 16 convicted of an alcohol-related Criminal Code offence, but who may not have been licensed at the time of offence.

Alcohol-related convictions increased by 2% from 2006 (count of 1,831) to 2016 (count of 1,862).

<16 to 24 Age Group
Drivers up to the age of 24 continue to be overrepresented in alcohol-related Criminal Code convictions. Drivers up to the age of 24 accounted for 14% of all licensed drivers in 2006 and 2011, but for 34% of alcohol offence convictions in 2006 and 31% in 2011. In 2016, these drivers represent 14% of the licensed drivers, but accounted for 25% of convictions.

25 to 44 Age Group
Drivers aged 25 to 44 continue to be overrepresented in alcohol-related Criminal Code convictions. In the years 2006, 2011, and 2016, drivers in this group made up 35%, 33%, and 34% of licensed drivers, respectively. However, these drivers accounted for 46% in 2006, 47% in 2011, and 53% in 2016 of all alcohol-related Criminal Code convictions.

45 to 64 Age Group
Drivers aged 45 to 64 are underrepresented in alcohol-related Criminal Code convictions. In the years 2006, 2011, and 2016, drivers in this group made up 35%, 36%, and 34%, respectively, of licensed drivers. At the same time, these drivers accounted for 19% in 2006, 21% in 2011, and nearly 20% in 2016 of all alcohol-related Criminal Code convictions.

65 and Older Age Group
Older drivers are underrepresented in alcohol-related Criminal Code convictions. In the years 2006, 2011, and 2016, drivers 65 years of age and older made up 15%, 16%, and 18% of licensed drivers, respectively, but accounted for only 1% in 2006 and 2011, and 2% in 2016 of alcohol-related Criminal Code convictions each of those years.

Table 12-5: Driver Involvement in "First", "Second", and "Third and Subsequent" Alcohol-Related Criminal Code Convictions by Age Group

Table 12-5
Driver Involvement in 'First', 'Second', and 'Third and Subsequent' Alcohol-Related Criminal Code Convictions by Age Group: 2006, 2011 and 2016

Age Group	2006			2011			2016		
	Alcohol* Convictions	Licensed Drivers	Rate /1,000	Alcohol Convictions	Licensed Drivers	Rate /1,000	Alcohol Convictions	Licensed Drivers	Rate /1,000
Total Alcohol-Related Criminal Code Convictions									
<16-24	624	104,452	6.0	609	116,463	5.2	467	122,097	3.8
25-44	838	254,445	3.3	920	271,832	3.4	989	305,572	3.2
45-64	344	255,534	1.3	403	294,885	1.4	364	304,590	1.2
65+	25	109,899	0.2	24	130,511	0.2	42	163,620	0.3
Total	**1,831**	**724,330**	**2.5**	**1,956**	**813,691**	**2.4**	**1,862**	**895,880**	**2.1**
First Occurrence									
<16-24	576	104,452	5.5	553	116,463	4.7	427	122,097	3.5
25-44	732	254,445	2.9	812	271,832	3.0	848	305,572	2.8
45-64	312	255,534	1.2	359	294,885	1.2	328	304,590	1.1
65+	22	109,899	0.2	23	130,511	0.2	40	163,620	0.2
Total	**1,642**	**724,330**	**2.3**	**1,747**	**813,691**	**2.1**	**1,643**	**895,880**	**1.8**
Second Occurrence									
<16-24	43	104,452	0.4	51	116,463	0.4	32	122,097	0.3
25-44	83	254,445	0.3	84	271,832	0.3	107	305,572	0.4
45-64	25	255,534	0.1	34	294,885	0.1	30	304,590	0.1
65+	3	109,899	<0.1	0	130,511	<0.1	2	163,620	<0.1
Total	**154**	**724,330**	**0.2**	**169**	**813,691**	**0.2**	**171**	**895,880**	**0.2**
Third and Subsequent Occurrence									
<16-24	5	104,452	<0.1	5	116,463	<0.1	8	122,097	0.1
25-44	23	254,445	0.1	24	271,832	0.1	34	305,572	0.1
45-64	7	255,534	<0.1	10	294,885	<0.1	6	304,590	<0.1
65+	0	109,899	<0.1	1	130,511	<0.1	0	163,620	<0.1
Total	**35**	**724,330**	**<0.1**	**40**	**813,691**	**<0.1**	**48**	**895,880**	**0.1**

* For comparative purposes, the report assumes each alcohol-related Criminal Code conviction is for a single licensed driver although a single driver may obtain more than one alcohol-related Criminal Code conviction in any given year or specific incident.

Compared to ten years ago, the involvement rate of drivers in alcohol-related Criminal Code convictions has decreased by 18% (2.5 per 1,000 licensed drivers in 2006; 2.1 per 1,000 licensed drivers in 2016).[8]

[8] Please note that due to the inclusion of only one decimal place in the figures displayed in Table 12-5 that some of the percentage changes in involvement rate noted will be different than those calculated using the figures from the table. The reported percentage change uses multiple decimal points in its calculation while the displayed figures have been rounded to one decimal.

<16 to 24 Age Group
For every 1,000 licensed drivers in this age group, there were 6.0, 5.2 and 3.8 alcohol-related Criminal Code convictions in 2006, 2011 and 2016, respectively. The 2016 rate for this age group is 36% lower than the 2006 rate.

25 to 44 Age Group
The relative involvement rate of drivers aged 25 to 44 in alcohol-related Criminal Code convictions (per 1,000 licensed drivers) was 3.3 in 2006, 3.4 in 2011, and 3.2 in 2016. The 2016 rate for this age group is 2% lower than the 2006 rate.

45 to 64 Age Group
The relative involvement rate of drivers aged 45 to 64 in alcohol-related Criminal Code convictions (per 1,000 licensed drivers) was 1.3 in 2006, 1.4 in 2011, and 1.2 in 2016. The 2016 rate for this age group is 11% lower than the 2006 rate.

65 and Older Age Group
The relative involvement rate of drivers aged 65 and older in alcohol-related Criminal Code convictions (per 1,000 licensed drivers) was 0.2 in 2006, 0.2 in 2011, and 0.3 in 2016. The 2016 rate for this age group is 13% higher than the 2006 rate.

First Occurrence
In 2016, the number of drivers convicted of an alcohol-related Criminal Code offence for the **first** time is relatively unchanged compared to ten years ago (1,642 in 2006; 1,643 in 2016).

Comparing the involvement rates (per 1,000 licensed drivers) for 2006 and 2016, first occurrence Criminal Code convictions decreased by 19% overall.

- Age 24 and under – a 37% decrease in 2016 compared to 2006
- Age 25 to 44 – a nearly 4% decrease in 2016 compared to 2006
- Age 45 to 64 – a 12% decrease in 2016 compared to 2006
- Age 65 and older – a 22% increase in 2016 compared to 2006

Second Occurrence
In 2016, the number of drivers convicted of an alcohol-related Criminal Code offence for the **second** time has increased by 11% compared to ten years ago (154 in 2006; 171 in 2016).

Comparing the involvement rates (per 1,000 licensed drivers) for 2006 and 2016, second occurrence Criminal Code convictions decreased by 10% overall.

- Age 24 and under – a 36% decrease in 2016 compared to 2006
- Age 25 to 44 – a 7% increase in 2016 compared to 2006
- Age 45 to 64 – a 1% increase in 2016 compared to 2006
- Age 65 and older – a 55% decrease in 2016 compared to 2006; a count of 2 in 2016 compared to 3 in 2006

Third and Subsequent Occurrence
In 2016, the number of drivers convicted of an alcohol-related Criminal Code offence for the **third and subsequent** time has increased by 37% compared to ten years ago (35 in 2006; 48 in 2016).

Comparing the involvement rates (per 1,000 licensed drivers) for 2006 and 2016, third and subsequent occurrence Criminal Code convictions increased by 11% overall.

- Age 24 and under – a count of 8 in 2016 compared to 5 in 2006; a 37% increase in the rate
- Age 25 to 44 – a count of 34 in 2016 compared to 23 in 2006; a 23% increase in the rate
- Age 45 to 64 – a count of 6 in 2016 compared to 7 in 2006; a 28% decrease in the rate
- Age 65 and older – none in 2016 and in 2006

CAUTION: Please interpret numbers of convictions for “second” and “third and subsequent” offences with caution. Due to the small numbers of these convictions overall, small shifts in the counts can produce relatively large percentage change differences.

GLOSSARY – Terms & Definitions

Terms and Definitions

"Accident Configuration"

- Briefly describes the action taken by a vehicle immediately prior to or at the start of the collision, including such events as rear-ending another vehicle, side-swiping another vehicle, turning into (the path of) another vehicle, parking, meeting another vehicle at an intersection and/or leaving the roadway.
- "Other" in terms of accident configuration includes, primarily, collisions involving more than one configuration or sequence of events.

"Active Drivers"

- Drivers holding an active Manitoba Driver's Licence of any specific Licence Class

"At-fault Contributing Factor"

- A contributing factor where some action or condition other than "driving properly" and "apparently normal" has been noted.

"ATV"

- All Terrain Vehicle; includes vehicles with 3, 4 and 6 wheels.

"Blood alcohol concentration (BAC)"

- A measure of the concentration of alcohol in a person's blood. A measure of ".08 BAC" is equivalent of 80 milligrams of alcohol per 1,000 milligrams of blood, or 0.08%.

"Casualty Type"

- A classification of the severity of the injury sustained by a victim in a traffic collision, i.e., whether someone was killed or injured. This classification also includes a designation for the severity of each non-fatal injury sustained (i.e., victims sustaining a serious/major, minor or minimal injury).

"Collision Severity"

- A classification of a collision based on the most severe result of the collision, i.e., whether someone was killed (fatal), injured (injury) or property damage only (PDO) occurred.

"Collision Type"

- Refers to the object struck by a motor vehicle during a collision (including: a pedestrian, another motor vehicle, a train, a motorcycle, a bicycle, an animal, and fixed objects) or to what happened to the vehicle in a single-vehicle collision (including: overturned on roadway and ran off roadway).

"Contributing Factor"

- Those circumstances or factors recorded as having contributed to the collision or its severity. Factors can be selected from four categories: driver action, human condition, vehicle condition, or environmental condition. The TAR allows for up to three contributing factors to be recorded for each driver or vehicle involved in the collision.

"Criminal Code 253A" and "Criminal Code 253B"[9]: Impaired driving

- Every one commits an offence who operates a motor vehicle or vessel or operates or assists in the operation of an aircraft or of railway equipment or has the care or control of a motor vehicle, vessel, aircraft or railway equipment, whether it is in motion or not,
  - (*a*) while the person's ability to operate the vehicle, vessel, aircraft or railway equipment is impaired by alcohol or a drug; or
  - (*b*) having consumed alcohol in such a quantity that the concentration in the person's blood exceeds eighty milligrams of alcohol in one hundred millilitres of blood.
- For greater certainty, the reference to impairment by alcohol or a drug in paragraph (*a*) includes impairment by a combination of alcohol and a drug.
- "253AC" and "253BC" indicate a conviction while a youth was in the vehicle.

[9] Definitions for Criminal Code Statute 253, 254 and 255 are taken directly from the **Criminal Code (R.S., 1985, c. C-46)** of Canada, as posted on the Department of Justice website. (http://laws.justice.gc.ca/en/)

"Criminal Code Statute 254-5": Refusing to comply with a request for sample

- If a peace officer has reasonable grounds to suspect that a person has alcohol or a drug in their body and that the person has, within the preceding three hours, operated a motor vehicle or vessel, operated or assisted in the operation of an aircraft or railway equipment or had the care or control of a motor vehicle, a vessel, an aircraft or railway equipment, whether it was in motion or not, the peace officer may, by demand, require the person to comply with paragraph (*a*), in the case of a drug, or with either or both of paragraphs (*a*) and (*b*), in the case of alcohol:
    - (*a*) to perform forthwith physical coordination tests … and, if necessary, to accompany the peace officer for that purpose; and
    - (*b*) to provide forthwith a sample of breath that, in the peace officer's opinion, will enable a proper analysis to be made by means of an approved screening device and, if necessary, to accompany the peace officer for that purpose.
- Everyone commits an offence who, without reasonable excuse, fails or refuses to comply with a demand made under this section.
- "254-5C" indicates a conviction while a youth was in the vehicle.

"Criminal Code Statute 255-2": Impaired driving/refusing to provide sample causing injury

- Everyone who commits an offence under paragraph 253(*a*) and causes bodily harm to another person as a result is guilty of an indictable offence and liable to imprisonment for a term of not more than 10 years.
- Everyone who, while committing an offence under paragraph 253(*b*), causes an accident resulting in bodily harm to another person is guilty of an indictable offence and liable to imprisonment for a term of not more than 10 years.
- Everyone who commits an offence under subsection 254(5) and, at the time of committing the offence, knows or ought to know that their operation of the motor vehicle, vessel, aircraft or railway equipment, their assistance in the operation of the aircraft or railway equipment or their care or control of the motor vehicle, vessel, aircraft or railway equipment caused an accident resulting in bodily harm to another person is guilty of an indictable offence and liable to imprisonment for a term of not more than 10 years.

"Criminal Code Statute 255-3": Impaired driving/refusing to provide sample causing death

- Everyone who commits an offence under paragraph 253(*a*) and causes the death of another person as a result is guilty of an indictable offence and liable to imprisonment for life.
- Everyone who, while committing an offence under paragraph 253(*b*), causes an accident resulting in the death of another person is guilty of an indictable offence and liable to imprisonment for life.
- Everyone who commits an offence under subsection 254(5) and, at the time of committing the offence, knows or ought to know that their operation of the motor vehicle, vessel, aircraft or railway equipment, their assistance in the operation of the aircraft or railway equipment or their care or control of the motor vehicle, vessel, aircraft or railway equipment caused an accident resulting in the death of another person, or in bodily harm to another person whose death ensues, is guilty of an indictable offence and liable to imprisonment for life.

"Driver Action"

- A category of contributing factors attributed to actions taken or performed by a driver immediately prior to a collision.

"Driver Involvement Rate"

- A calculation of the number of drivers involved in traffic collisions for every 10,000 drivers licensed in Manitoba. The total number of drivers licensed to drive includes both active and suspended drivers. This involvement rate does not take into account the number of vehicle kilometres driven by each driver group.

"Environmental Condition"

- A category of contributing factors attributed to environmental conditions (i.e., weather, road surface and animal actions) immediately prior to a collision.

"Fatal Collision"

- A motor vehicle collision in which at least one person is killed as a result of the collision. The death must have occurred within thirty days of the collision occurrence.

"Graduated Driver Licensing (GDL)"

- A three-stage program designed to help new drivers, regardless of age, acquire the knowledge and skill needed to safely operate a motor vehicle. Each licence stage has specific rules and restrictions governing when and under what circumstances the holder is allowed to operate a motor vehicle, enabling novice drivers to gain more experience under a greater variety of driving conditions. Both Class 5 and Class 6 licences have a GDL stage associated with them.
- Three stages of GDL: Learner (5/L or 6/L); Intermediate (5/I or 6/I); and, Full (5/F or 6/F).
- To view a full discussion of the GDL program in Manitoba, please visit:
  - https://www.mpi.mb.ca/en/DL/DL/GDL/Pages/gdl-program.aspx; ou en Français,
  - https://www.mpi.mb.ca/fr/DL/DL/GDL/Pages/fr-gdl-program.aspx

"Human Condition"

- A category of contributing factors attributed to the physical or mental condition of a driver immediately prior to a collision, most often that limit the driver's ability to drive safely or properly.

"Injured"

- The casualty type "injured" indicates the victim sustained some level of personal injury, but in which they were not killed. Levels of injury include: 'serious' or 'major' (admitted to hospital); 'minor' (treated and released from hospital); and, 'minimal' (no hospital treatment required). 'Other' injury is noted when the severity of the victim's injuries is not known or recorded in the TAR.

"Injury Collision"

- A motor vehicle collision in which at least one person has been recorded as sustaining some level of personal injury, but in which no one is fatally injured or killed.

"Involvement"

- A calculation of the number of collisions per specific unit of licensed drivers or registered vehicles. For the purposes of this report, involvement is calculated per 10,000 licensed drivers or registered vehicles.

"Killed"

- The casualty type "killed" indicates the victim involved in the traffic collision died as a result of their injuries within thirty (30) days of the collision occurrence.

"Licence Class"

- A Manitoba Driver's Licence of a specific level which permits the holder to operate vehicles within a specific Vehicle Class

"Licensed Drivers"

- A count of all Manitobans aged 16 and older who hold a valid licence within the licensing year including active and suspended drivers. (See *Section 2 Licensed Drivers* for more information)

"Light Condition"

- Describes the light conditions at the scene of the accident, including:
  - Day – the light conditions which normally occur between one half hour after sunrise and one half hour before sunset;
  - Dawn – the light conditions which normally occur between one half hour before sunrise and one half hour after sunrise;
  - Dusk – the light conditions which normally occur between one half hour before sunset and one half hour after sunset;
  - Dark – the light conditions which normally occur between one half hour after sunset and one half hour before sunrise; and,
  - Artificial lighting – artificial illumination devices were functioning at the accident site under light conditions which normally occur between one half hour after sunset and one half hour before sunrise.

"Light Duty Vehicles"

- A classification of vehicle types including those defined in the Traffic Accident Report (TAR) as: passenger vehicles (automobile), mini/multi-purpose van, van under 4,500 kg and pick-up under 4,500 kg.

"NSC Commercial Vehicles"

- The National Safety Code (NSC) classification of vehicles is a classification of vehicle types including those defined in the Traffic Accident Report (TAR) as: "Truck greater than 4,500 kilograms (unit chassis)", "Power Unit for Semi-Trailer", "Truck (Other)" (where the type and size of truck is unknown), "School Bus", "Transit Bus (Urban)", "Inter-City Bus", and "Bus (Other)". These vehicles bear a National Safety Code Number and are entered onto the National Safety Code Collision Monitoring Report.

"Off-road Vehicle (ORV)"

- One of several vehicle types designed for off-road use. It includes snowmobiles, off-road motorcycles, all-terrain vehicles (ATVs), amphibious vehicles, dune/sport buggies, and 4-wheel drive vehicles operated off-road.

"Pedestrian Action"

- Refers to the actions taken by a pedestrian immediately prior to a collision (including: crossing at an intersection with or without the right-of-way, crossing between intersections, running into the roadway, walking on the roadway, lying on the roadway, playing on the roadway, etc.).

"Pedestrian Involvement Rate"

- A calculation of the number of pedestrians involved in traffic collisions for every 100,000 people in the general population in Manitoba. Population statistics are taken from the Provincial government and can be found at the following web address: http://www.gov.mb.ca/health/annstats/index.html

"Pre-collision activity"

- The action of a vehicle immediately prior to involvement in a collision. This is an indication of what the vehicle was doing prior to the accident or to the driver realizing that a collision may occur and does not include vehicle manoeuver to avoid the collision.

"Property Damage Only (PDO) Collision"

- A motor vehicle collision in which no injury or fatality is sustained and only property damage is the result.

"PSV Vehicles"

- Also known as 'public service vehicles', a classification of vehicle types including those defined in the Traffic Accident Report (TAR) as: "Other school vehicle", and "Emergency vehicles", including ambulance, fire and police vehicles.

"Public Roadway"

- A public roadway in Manitoba is considered to be any provincial road (PR), provincial trunk highway (PTH) or municipal road, including the entrances to and exits from these roadways. This excludes all off-road areas, parking lots, private property and First Nation Reserve roads (unless the road is a PR or PTH running through, across or on Reserve lands).

"Region"

- Manitoba Infrastructure and Transportation is served by 5 regional office locations, each responsible for a geographic region (for boundaries, see Map 11-1). "Regions" are used to indicate the region in which a collision occurred.

"Reportable Collision"

- Prior to a change in the Highway Traffic Account (which took effect in October of 2011), motor vehicle collisions resulting in a fatality, injury or property damage in excess of $1,000 were required by law to be reported to a law enforcement agency. Subsequently, the law enforcement agency completed a Traffic Accident Report for the collision.
- Amendments to the Highway Traffic Act (which received Royal Ascent in June 2011 and took effect in October of 2011) changed the definition of a reportable collision to require a police report be made if the driver is aware, has reason to believe, or is later made aware, that a collision involves: a fatality; an injury requiring admittance to hospital for observation or treatment; another driver not having a valid driver's licence; another vehicle not validly registered; the driver of another vehicle not providing the required particulars; the driver of another vehicle not stopping at the scene of the accident; or, alcohol or another intoxicating substance as a factor in the accident.

- As of October 2011, all accidents occurring on a public roadway where the above conditions are not met are reported through the claim registration process with Manitoba Public Insurance.
- As of 2012 and consistent with other jurisdictions in Canada, it is a requirement that a minimum of $2,000 damage (all vehicles combined) is necessary for property damage only (PDO) collisions to be included in this report.
- This report deals with these reportable collisions and the TARs arising from them, regardless of whether the TAR is generated by law enforcement agencies or by Manitoba Public Insurance.

"Reportable ORV Collision"

- ORV collisions resulting in a fatality, injury or property damage in excess of $1,000 are required by law to be reported to a law enforcement agency. Subsequently, the law enforcement agency completes a Traffic Accident Report (TAR) for the collision. This report deals with these reportable ORV collisions and the TARs arising from them.

"Road User Class"

- A classification based on how a person involved in a collision was using the road at the time of the collision. It includes: Drivers (of motor vehicles), Passengers (in motor vehicles), those Riding/Hanging On (to a motor vehicle), Motorcyclist (drivers and passengers), Moped (drivers and passengers), Bicyclist (drivers and passengers), and Pedestrians.

"Rural Location"

- Collisions occurring on primary highways, secondary highways and local roadways, including the Trans Canada Highway and excluding those that occur within the municipal boundaries of an urban area.

"Suspended drivers"

- Drivers holding a Manitoba Driver's Licence of any specific Licence Class who have been disqualified from driving for some reason. Although the list is extensive, some possible suspensions could be for driving violations, medical conditions, administrative suspensions and criminal code convictions.

"Urban Location"

- Collisions occurring within the municipal boundaries of urban areas, including Winnipeg, Brandon, Portage la Prairie, Flin Flon, Dauphin, Thompson, The Pas, Selkirk and others.

"Vehicle Class"

- Category of vehicles meeting specific designations and specifications
- Non-commercial vehicle classes are vehicles registered for private use and include:
    - Passenger - A motor vehicle classified by the manufacturer as a passenger car or which is designed, constructed or adapted for the principle purpose of transporting passengers and includes a delivery car, but does not include a motorcycle, moped or motor vehicle which is designed, constructed or adapted for the purpose of carrying goods or commodities.
    - Antique - A car, truck or motorcycle that is more than thirty years old at the time of application for registration. A motor vehicle registered as an antique car, truck or motorcycle can be driven only when: taking it to be repaired or serviced; displaying it to the public in a parade or procession and driving it to or from such a parade or procession; driving it to an antique car, truck or motorcycle rally as authorized by the Registrar of Motor Vehicles.
    - Motorcycle - A vehicle that has a steering handlebar completely constrained from rotating in relation to the axle of one wheel in contact with the ground, is designed to travel on not more than three wheels in contact with the ground, has a minimum unladen seat height of 650 millimetres, has a minimum wheel rim diameter of 250 millimetres, has a minimum wheelbase of 1,016 millimetres, and, has a maximum speed capability of more than 50 km/h but does not include a moped, power-assisted bicycle or tractor.
    - Moped - A motor vehicle which has 2 tandem wheels or 3 wheels, each of which is more than 250 millimetres in diameter, has a seat or saddle having a minimum unladen height of 650 millimetres, when measured from the ground level to the top of the forward most part of the saddle, is capable of being driven at all times by pedals only if so equipped, by motor only or by both pedals and motor, and, the motor has a piston displacement of not more than 50 cubic centimetres, or is an electric motor neither of which is capable of enabling the moped to attain a speed greater than 50 km/h.

- Truck – see “Passenger”.
- Farm Truck - A motor vehicle classified as a “truck” at time of registration and is owned by a person engaged in farming.
- Snow Vehicle A vehicle that has a gross vehicle weight in exceeding 454 kilograms and is not equipped with wheels, but in place thereof is equipped with tractor treads alone or with tractor treads and skis, or with skis and a propeller, or is a toboggan equipped with tractor treads or a propeller, is designed primarily for operating over snow or ice, and is used primarily for that purpose, and is designed to be self-propelled.
- Trailer - A vehicle designed for carrying persons or chattels, and for being towed by a motor vehicle, and includes a farm trailer but does not include an implement of husbandry that is temporarily towed, propelled, or moved upon a highway.
- Tractor - A self-propelled vehicle that is designed primarily for traction purposes, and that is not itself constructed to carry a load other than the driver, and includes a farm tractor but does not include a truck tractor or a special mobile machine.

- Commercial vehicle classes are those involving vehicles registered to or for the use of a business and include:
  - Truck - A truck (or trailer) used to transport the registered owner’s (or lessee’s) own business goods: beyond a radius of 20 kilometres of the City of Winnipeg, where the registered owner’s business address is in the City of Winnipeg, beyond a radius of 30 kilometres of a city, town or village other than the City of Winnipeg, where the registered owner’s address is not in the City of Winnipeg.
  - Public Service Vehicles (PSV) - A motor vehicle or trailer operated by or on behalf of any person, for transportation for gain or compensation of persons or property upon a highway, and includes a semi-trailer truck; but does not include the passenger-carrying-motor vehicles of an electric, or steam railway or motor bus company operating on the streets of a city, or school buses, ambulances or hearses or motor vehicle operated for gain or compensation under *The Taxicab Act* or a municipal by-law in cities, towns, and villages.
  - Dealer - A person who carries on the business as principal or agent, or who holds himself or herself out as carrying on the business as principal or agent, (a) of buying motor vehicles or trailers; (b) of selling motor vehicles or trailers, whether or not in combination with leasing them; or (c) of buying and selling motor vehicles or trailers, whether or not in combination with leasing them.
  - Repairer - A person who maintains a garage for the purpose of rendering services therein upon motor vehicles and/or trailers, at a charge, price or consideration; or who owns and operates a fleet of five or more motor vehicles or trailers; or both, and maintains a facility for their repair, is permitted under The Highway Traffic Act to obtain “Repairer” licence plates to be used to transport motor vehicles for repair from place of origin to the repair facility and return, and the testing of the motor vehicle after the repair work has been completed.
  - Taxi - A motor vehicle had, kept, used, intended for use, or operated, for the transportation of persons for compensation, and includes such vehicles when garaged or under repair; but does not include a public service vehicle, a trolley bus or passenger-carrying motor vehicle or a public transportation system operating on the streets of a city, a school bus, an ambulance, a hearse, or a motor vehicle, or vehicle of a class of motor vehicles, that The Taxicab Board established under The Taxicab Act excludes from the definition of a taxicab under that Act.
  - Livery - A vehicle licenced under *The Highway Traffic Act* for the transportation of persons for compensation and is licensed to operate in the Province according to terms issued by the Motor Transport Board.
  - Trailers – see previous definition.

"Vehicle Condition"

- A category of contributing factors attributed to the physical condition of a vehicle immediately prior to a collision.

"Vehicle Occupant"

- All those in the "Road User Class" of "Drivers" and "Passengers". It excludes "Motorcyclist", "Bicyclist", "Moped", those "Riding/Hanging On" to a vehicle and "Pedestrians".

"Vehicle Involvement Rate"

- A calculation of the number of vehicles involved in traffic collisions for every 10,000 vehicles registered in Manitoba. The total number of vehicles registered is based on a point-in-time observation of the number of vehicles registered in specific vehicle classes. More detail regarding the methodology used to count registered vehicles can be found in "*Section 3 Vehicle Registrations*" of this report.

"Victim Involvement Rate"

- A calculation of the number of victims or casualties involved in traffic collisions for every 100,000 people in the general population in Manitoba. Population statistics are taken from the Provincial government and can be found at the following web address: http://www.gov.mb.ca/health/annstats/index.html

"Weather Condition"

- Describes the weather conditions prevalent at the time of the accident, including:
    - Clear – bright conditions, without precipitation or airborne matter, are recorded as clear;
    - Cloudy – dull, overcast conditions, without precipitation or airborne matter, are recorded as cloudy;
    - Raining – raining (self explanatory);
    - Snowing – snowing (self explanatory);
    - Fog or Mist – airborne matter, of natural origin, which obscures visibility;
    - Smoke or Dust – airborne matter, of a natural or artificial origin, which obscures visibility;
    - Freezing Rain / Sleet / Hail – freezing rain, sleet or hail (self explanatory);
    - Drifting Snow – snow drifting on or above roadway, which obscures visibility of the roadway, road markings, traffic devices or roadway fixtures; and,
    - Strong Winds – used if wind was a contributing factor in the accident.