

**PUB (MPI) Pre-Ask 6**

<b>Volume and Chapter:</b>	<b>PUB (MPI) 1-62(a)</b>	<b>Page No.:</b>	
<b>Topic:</b>			
<b>Sub Topic:</b>			
<b>Issue:</b>			

**Preamble to IR (If Any):****Question:**

Please file the 2016 Traffic Collision Statistics Report as an Exhibit to this proceeding.

**Rationale for Question:****RESPONSE:**

The 2016 Traffic Collision Statistics Report has been provided as Appendix 1 to this Pre-Ask, provided electronically.

2017

# Traffic Collision Statistics Report



**Manitoba  
Public Insurance**



## Executive Summary





## **2016 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 2016.

### **Licensed Drivers and Vehicle Registrations**

There are 895,880 licensed drivers in Manitoba in 2016, an increase of 1.7% compared to 2015.

Overall, there are 1,070,115 vehicles registered in Manitoba (commercial and non-commercial, combined) in 2016, a 2% increase from 2015.

### **Traffic Collisions**

In 2016, there are a total of 45,316 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:

- 96 involve a fatality (0.2% of all collisions);
- 9,582 involve an injury, but not a fatality (21% of all collisions); and,
- 35,638 involve property damage only (79% of all collisions).

Overall traffic collisions in Manitoba in 2016 increased compared to 2015 and to the previous five year (2011 to 2015) annual average. There are 45,316 collisions in 2016, up from 41,548 collisions in 2015 and from 39,463 on average in the five year period 2011 to 2015. The increase in the total number of collisions in 2016 compared to 2015 is attributable to increases in collisions by all severity types. There are 27 more fatal collisions, 455 more injury collisions, and 3,286 more PDO collisions reported in 2016 than in 2015 (representing proportional changes of 39%, 5%, and 10%, respectively).

### **People Killed and Injured in Collisions**

In 2016, there are 12,653 victims (or casualties) of traffic collisions. Of these:

- 107 are killed (22% more than in the previous five years);
- 478 are seriously injured (nearly 41% more than in the previous five years);
- 2,174 sustain minor injuries (down slightly from the previous five years);
- 9,710 sustain minimal injuries (25% more than in the previous five years); and,
- 184 sustain injuries that are undefined in terms of severity (down 53% from the previous five years).

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The victim involvement rate (per 100,000 people in the general population) in traffic collisions in 2016 (944.7) has increased by 4% compared to 2015 (910.1) and by 13% compared to the previous five years (2011 to 2015) annual average (835.5). Victim involvement rates in traffic collisions in 2016 where the person:

- Is killed (8.0 in 2016) is 35% higher than in 2015 and 17% higher than in the previous five years; and,
- Is injured, including all levels of severity (but excluding killed; 936.8 in 2016), is 4% higher than in 2015 and 13% 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 2016, 85% of all casualties result from traffic collisions in urban areas. Traffic collisions in rural locations, however, account for 65% of people killed and 41% of people seriously injured. In the previous five year (2011 to 2015) annual average, 85% of all victims are from traffic collisions in urban locations, while 69% of people killed and 45% of people seriously injured are from traffic collisions in rural locations.

Victims in 2016 appear to follow a fairly typical distribution compared to past years in terms of month of occurrence. The winter months (January, February, and December) stand out as the months accounting for a disproportionate number of traffic collision victims overall, both in 2016 (32% of all victims) and in the previous five year (2011 to 2015) annual average (32%). In 2016 (and very similar to the previous five years), the count of victims is lowest in the late spring and summer months (ranging from 6% to nearly 8% of all victims in each month from April to August) and is highest in late fall, winter and early spring (ranging from 8% to 11% of all victims in each month from October to March).

Considering people killed and seriously injured in Manitoba traffic collisions in 2016:

- Drivers account for the largest proportion of people killed (52%) and seriously injured (56%);
- Passengers account for 27% of people killed and 28% of people seriously injured;
- Pedestrians account for nearly 12% of people killed and 6% of people seriously injured;
- Bicyclists account for 4% of people killed and nearly 3% of people seriously injured; and,
- Motorcyclists (including motorcycle and moped riders, combined) account for 3% of people killed and 8% of people seriously injured.

In 2016, most victims in traffic collisions were using safety equipment at the time of the collision (98% of all victims where safety equipment use is known). However, 41% of the people killed in traffic collisions and 7% 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.

In 2016, 96% of driver and passenger victims were using the available safety equipment (seatbelts and child safety seats) and were not ejected from the vehicle. However, 83% of people ejected and killed were not using the available safety equipment at the time of the collision.

### Drivers and Vehicles Involved in Collisions

In 2016, there are 63,839 drivers involved in traffic collisions. Of these:

- 138 are involved in fatal collisions;
- 16,753 are involved in injury collisions; and,
- 46,948 are involved in PDO collisions.

The driver involvement rate (per 10,000 licensed drivers) in traffic collisions in 2016 is 712.6, an increase of 5% compared to the rate in 2015 (677.6) and an increase of 3% from the previous five year (2011 to 2015) annual average (691.4). In 2016, driver involvement in:

- Fatal collisions (1.5) increased by 32% from 2015 and by 19% compared to the previous five years;
- Injury collisions (187.0) increased by 2% from 2015 and by 9% compared to the previous five years; and,
- PDO collisions (524.0) increased by 6% from 2015, and by 1% compared to the previous five years.

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Young drivers have a much higher rate of involvement in traffic collisions than older drivers. In 2016, drivers aged 16 to 24 years old have an involvement rate (per 10,000 licensed drivers) in traffic collisions of 1,046.1. This is:

- 1.2 times that of drivers aged 25 to 34 (rate of 867.5);
- 1.3 times that of drivers aged 35 to 44 (rate of 779.1);
- 1.5 times that of drivers aged 45 to 54 (rate of 696.0);
- 1.9 times that of drivers aged 55 to 64 (rate of 551.0); and,
- More than two-and-a-half times that of drivers aged 65 and older (rate of 402.0).

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 2016, there are 66,063 vehicles involved in traffic collisions. Of these:

- 143 are involved in fatal collisions;
- 16,927 are involved in injury collisions; and,
- 48,993 are involved in PDO collisions.

Vehicle involvement in traffic collisions per 10,000 registered vehicles (vehicle involvement rate) has increased in 2016 compared to 2015 and to the previous five year (2011 to 2015) annual average. The vehicle involvement rate in collisions in 2016 for:

- Total collisions is 738.4 – increased by nearly 6% from 2015 and by 4% from the previous five years;
- Fatal collisions is 1.6 – increased by 33% from 2015 and by 17% from the previous five years;
- Injury collisions is 189.2 – increased by 3% from 2015 and by 9% from the previous five years; and,
- PDO collisions is 547.6 – increased by 6% from 2015 and by 3% from the previous five years.

### Contributing Factors to Collisions

In 2016, 65% of all collisions have some at-fault contributing factor recorded (83% of fatal collisions; 74% of injury collisions). In 2016:

- A driver action is a contributing factor in 59% of all **collisions** (75% of fatal collisions; 71% of injury collisions; 56% of PDO collisions);
- A human condition is a contributing factor in 1% of all **collisions** (nearly 37% of fatal collisions; 1% of injury collisions; 0.5% of PDO collisions); and,
- Environmental conditions are contributing factors in 10% of all **collisions** (15% of fatal collisions; 7% of injury collisions; 11% of PDO collisions).

The most prevalent **contributing factors recorded for collisions** in 2016 include:

- Distracted driving – nearly 25% of all collisions (24% fatal; nearly 27% injury; 24% PDO);
- “Following too closely” – 15% of all collisions (1% fatal; 26% injury; 12% PDO);
- “Backing unsafely” – nearly 8% of all collisions (1% fatal; 2% injury; 9% PDO);
- Speed – nearly 7% of all collisions (27% fatal; nearly 8% injury; 6% PDO);
- “Turning improperly” – nearly 6% of all collisions (1% fatal; 8% injury; 5% PDO);
- “Fail to yield right-of-way” – 5% of all collisions (7% fatal; 8% injury; 4% PDO);
- “Changing lanes improperly” – 5% of all collisions (1% fatal; 4% injury; 5% PDO);
- The actions of a wild animal – 4% of all collisions (1% fatal; 1% injury; 5% PDO);
- “Slippery road surface” – 4% of all collisions (8% fatal; 4% injury; 4% PDO); and,
- “Lost control/Drive off the road” – 3% of all collisions (15% fatal; 4% injury; 3% PDO).



The most prevalent contributing factors recorded for collisions where **people are killed or seriously injured** in 2016 include:

- Impaired – nearly 36% of people killed and nearly 8% of people seriously injured;
- Speed – 31% of people killed and 15% of people seriously injured;
- Distracted driving – 27% of people killed and 29% of people seriously injured;
- “Lost control/Drive off the road” – 15% of people killed and 13% of people seriously injured;
- “Slippery road surface” – nearly 8% of the people killed and 5% of people seriously injured;
- “Disobey traffic control” – nearly 8% of people killed and 3% of people seriously injured;
- “Fail to yield right-of-way” – nearly 7% of people killed and 12% of people seriously injured;
- “Leave stop sign before safe to do so” – nearly 7% of people killed and nearly 8% of people seriously injured;
- “Drive wrong way on roadway” – 5% of people killed and 1 person seriously injured;
- “Pedestrian error/confusion” – 4% of people killed and 2% of people seriously injured;
- “Passing improperly” – 4% of people killed and 1% of people seriously injured;
- “Turning improperly” – 1% of people killed and 10% of people seriously injured; and,
- “Following too closely” – 1% of the people killed and 6% of people seriously injured.

### Off-Road Vehicle (ORV) Collisions

In 2016, there are 268 off-road vehicle collisions, involving 94 victims, 297 vehicles and 295 drivers. Of these:

- 18 are fatal collisions, involving 19 vehicles and 19 drivers, resulting in 20 people killed and 1 person injured;
- 66 are injury collisions, involving 77 vehicles and 76 drivers, resulting in 73 people injured; and,
- 184 are PDO collisions, involving 201 vehicles and 200 drivers.

### Alcohol-related Criminal Code Convictions

In 2015<sup>1</sup>, there are a total of 2,943 alcohol-related Criminal Code offence convictions, including:

- 1,754 convictions for driving with a blood alcohol concentration (BAC) over .08;
- 1,059 convictions for impaired driving; and,
- 130 convictions for refusing to provide a breath or blood sample.

In the 20-year period from 1996 to 2015, total alcohol-related Criminal Code convictions increased by 2%, from 2,875 in 1996 to 2,943 in 2015. Total convictions in 2015 (2,943) decreased by nearly 3% (74 less convictions) compared to 2014 (3,017); however the count increased by 33% compared to the previous five year (2010 to 2014) annual average (2,217).

Over the past twenty years, alcohol-related Criminal Code convictions have increased by 2% in Manitoba. Comparing the total number of convictions in 2015 to 1996 among drivers:

- Under 16 years of age, convictions increased by a count of 2;
- 16 to 24 years of age, convictions declined by 7%;
- 25 to 44 years of age, convictions increased by 3%;
- 45 to 64 years of age, convictions increased by nearly 17%; and,
- 65 years of age and older, convictions declined 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 2015, but accounted for 26% of convictions.
- Drivers aged 25 to 44 represented 34% of the licensed drivers in 2015, but accounted for 52% of convictions.

Over the past 10 years, from 2005 to 2015, there was a notable 45% increase in the rate of first offences. Rates of recidivism, indicated by second, and third and subsequent offences, increased at a rate of 20% in second alcohol-related Criminal Code offences in 2015. In comparison, there was a notable 62% reduction in third and subsequent offences in 2015 compared to 2005.

<sup>1</sup> There is a one-year lag in the statistics reported to allow for court processing time. Therefore, 2015 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 2006 to 2016, 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 2006 to 2015 is presented and compared to 2016. Details are provided for 2016 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 five year period 2012 to 2016 is presented. Details are provided for 2016 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 2015 by age at the time of the offence and includes historical statistics for the period 1996 to 2014. 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.

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## 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 2016. This section also presents involvement rates for drivers by specific age groups.

### **Key Highlights**

In 2016, there are a total of 45,316 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:

- 96 involve a fatality (0.2% of all collisions);
- 9,582 involve an injury, but not a fatality (21% of all collisions); and,
- 35,638 involve property damage only (79% of all collisions).

In 2016, overall traffic collisions in Manitoba increased compared to 2015 and compared to the previous five year (2011 to 2015) annual average. There are:

- 45,316 collisions in 2016;
- 41,548 collisions in 2015; and,
- 39,463 collisions on average in the five year period 2011 to 2015.

Involvement in traffic collisions in Manitoba increased from 2015 and from the previous five year (2011 to 2015) annual average. Involvement in collisions (per 10,000 licensed drivers) is:

- 505.8 in 2016;
- 471.4 in 2015; and,
- 463.3 on average in the five year period 2011 to 2015.

The increase in the total number of collisions in 2016 compared to 2015 is attributable to increases in collisions by all severity types. There are 27 more fatal collisions, 455 more injury collisions, and 3,286 more PDO collisions reported in 2016 than in 2015 (representing proportional changes of 39%, 5%, and 10%, respectively).

### **Major Elements Examined**

Counts of collisions in Manitoba for 2016 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 Assent 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: 2006 to 2016

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
2006	724,330	31,738	438.2	104	1.4	6,503	89.8	25,131	347.0
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
<b>2016</b>	<b>895,880</b>	<b>45,316</b>	<b>505.8</b>	<b>96</b>	<b>1.1</b>	<b>9,582</b>	<b>107.0</b>	<b>35,638</b>	<b>397.8</b>
2011-2015 Average	851,708	39,463	463.3	77	0.9	8,294	97.4	31,092	365.1

Relative to ten years ago, the total number of collisions in 2016 has increased by 43% (45,316 in 2016 compared to 31,738 in 2006). Crash involvement per 10,000 licensed drivers has increased by 15% in the same time period (505.8 in 2016 compared to 438.2 in 2006). Compared to 2015, total collisions have increased by 9% (up from a total of 41,548) and involvement has increased by 7%. Compared to the previous five year (2011 to 2015) annual average, total collisions have increased 15% and involvement has increased by 9%.

Compared to recent historical figures, in 2016:

- Fatal collisions have decreased by 8% compared to 2006, increased by 39% compared to 2015, and increased by 25% compared to the previous five year (2011 to 2015) annual average.
- Injury collisions have increased by 47% compared to 2006, by 5% compared to 2015 and by nearly 16% compared to the previous five year (2011 to 2015) annual average.
- PDO collisions have increased by 42% compared to 2006, by 10% compared to 2015 and by 15% compared to the previous five year (2011 to 2015) annual average.

Differences in the crash counts and rates in 2016 compared to the previous five year (2011 to 2015) annual average 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: 2006 to 2016

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
2006	438.2	-	1.4	-	89.8	-	347.0	-
2007	392.0	-10.5%	1.3	-11.1%	85.3	-5.0%	305.5	-12.0%
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%
<b>2016</b>	<b>505.8</b>	<b>7.3%</b>	<b>1.1</b>	<b>36.9%</b>	<b>107.0</b>	<b>3.3%</b>	<b>397.8</b>	<b>8.4%</b>
2011-2015 Average*	463.3	9.2%	0.9	18.5%	97.4	9.8%	365.1	9.0%

\* "% 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 2016 is:

- 505.8 for all collisions, up 7% from 2015 and up by 9% compared to the previous five year (2011 to 2015) annual average;
- 1.1 for fatal collisions, up 37% from 2015 and up by nearly 19% compared to the previous five year (2011 to 2015) annual average;
- 107.0 for injury collisions, up 3% from 2015 and up by 10% from the previous five year (2011 to 2015) annual average; and,
- 397.8 for PDO collisions, up 8% from 2015 and up by 9% compared to the previous five year (2011 to 2015) 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: 2006 to 2016

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
2006	740,636	31,738	428.5	104	1.4	6,503	87.8	25,131	339.3
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
<b>2016</b>	<b>894,690</b>	<b>45,316</b>	<b>506.5</b>	<b>96</b>	<b>1.1</b>	<b>9,582</b>	<b>107.1</b>	<b>35,638</b>	<b>398.3</b>
2011-2015 Average	850,828	39,463	463.8	77	0.9	8,294	97.5	31,092	365.4

\*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.

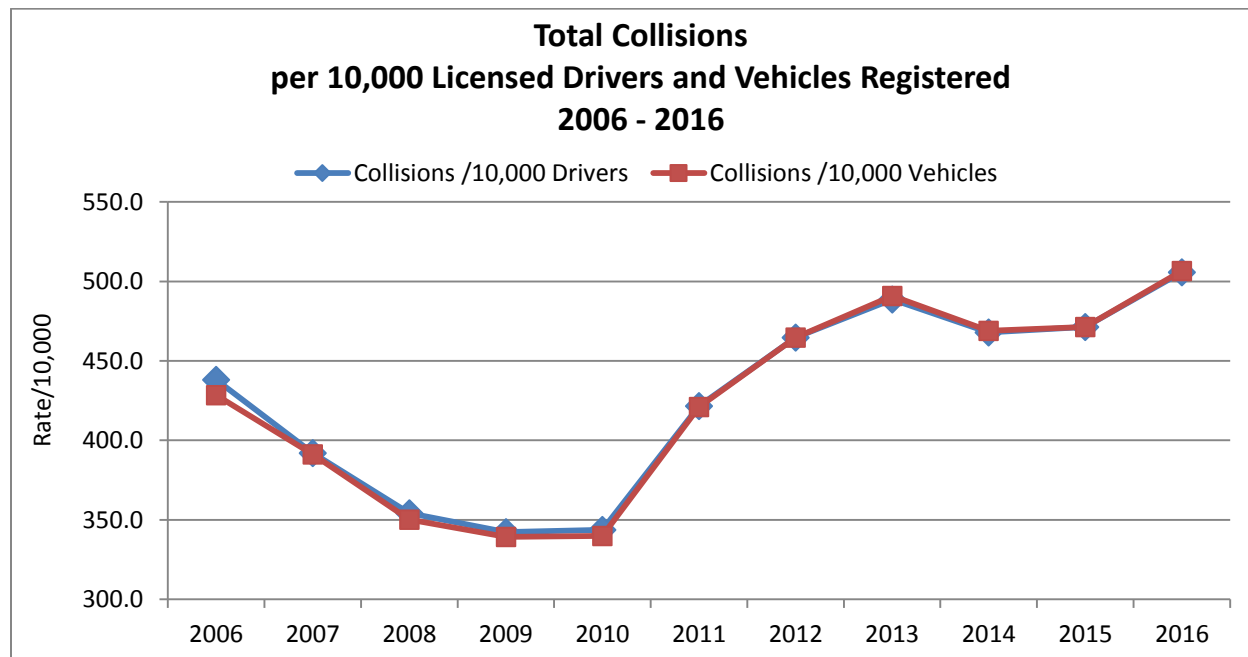
In 2016, there are 506.5 collisions for every 10,000 vehicles registered in Manitoba, up 7% compared to the rate in 2015 (471.4) and by 9% compared to the rate in the previous five year (2011 to 2015) annual average (463.8).

The changes in rate of involvement in collisions at each level of severity in 2016 vary compared to recent years. In 2016, there are 1.1 fatal collisions for every 10,000 vehicles, up 37% from 2015 (rate of 0.8), and by 19% from the previous five year (2011 to 2015) annual average (rate of 0.9). The involvement rate for injury collisions (107.1 in 2016) is up 3% compared to 2015 (rate of 103.6) and up 10% from the previous five year (2011 to 2015) annual average (rate of 97.5). Involvement in PDO collisions (398.3 in 2016) is up nearly 9% compared to 2015 (rate of 367.1) and up 9% compared to the previous five year (2011 to 2015) annual average (rate of 365.4).

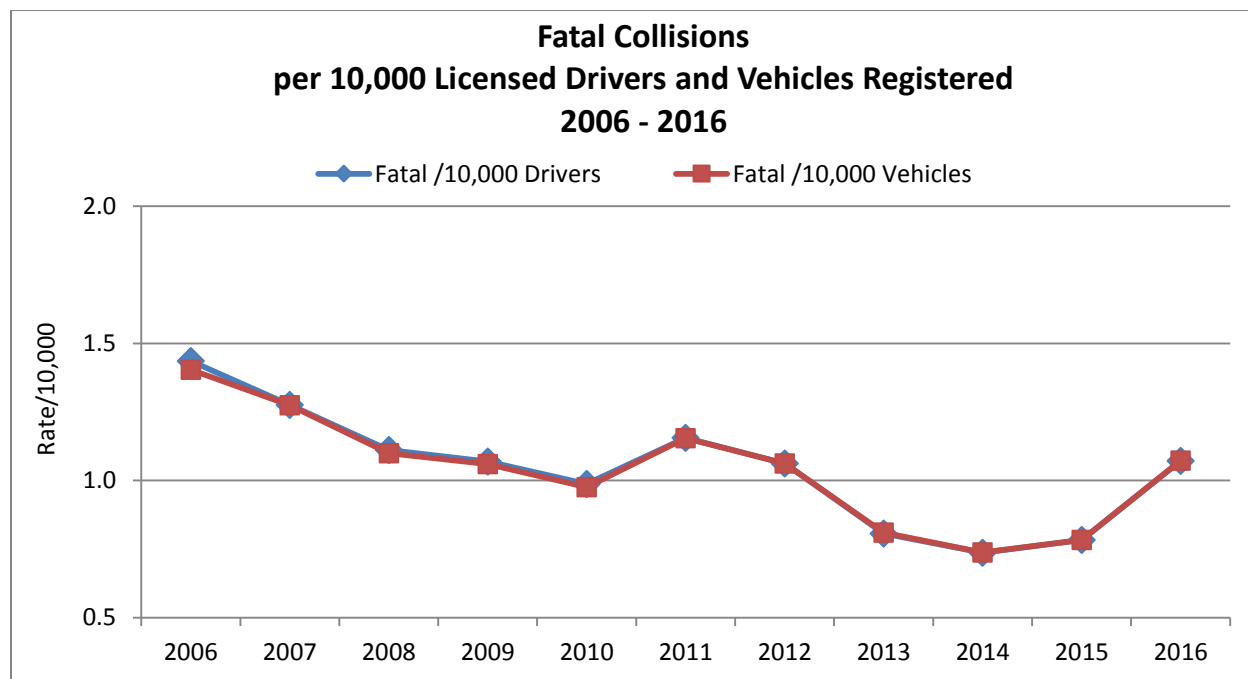
Involvement rates between 2006 and 2016 for collisions in Manitoba, both per 10,000 licensed drivers and per 10,000 registered vehicles, are noted in Figures 1-1, 1-2, 1-3 and 1-4 on the following pages. The spike in rates for overall collisions, injury collisions, and PDO collisions in 2011 and 2012 is attributable to a change in the reporting requirements, discussed under the "Reportable Collisions" definition. Year over year changes in the 2016 collision rates, however, cannot be attributed to changes in what constitutes a reportable collision.



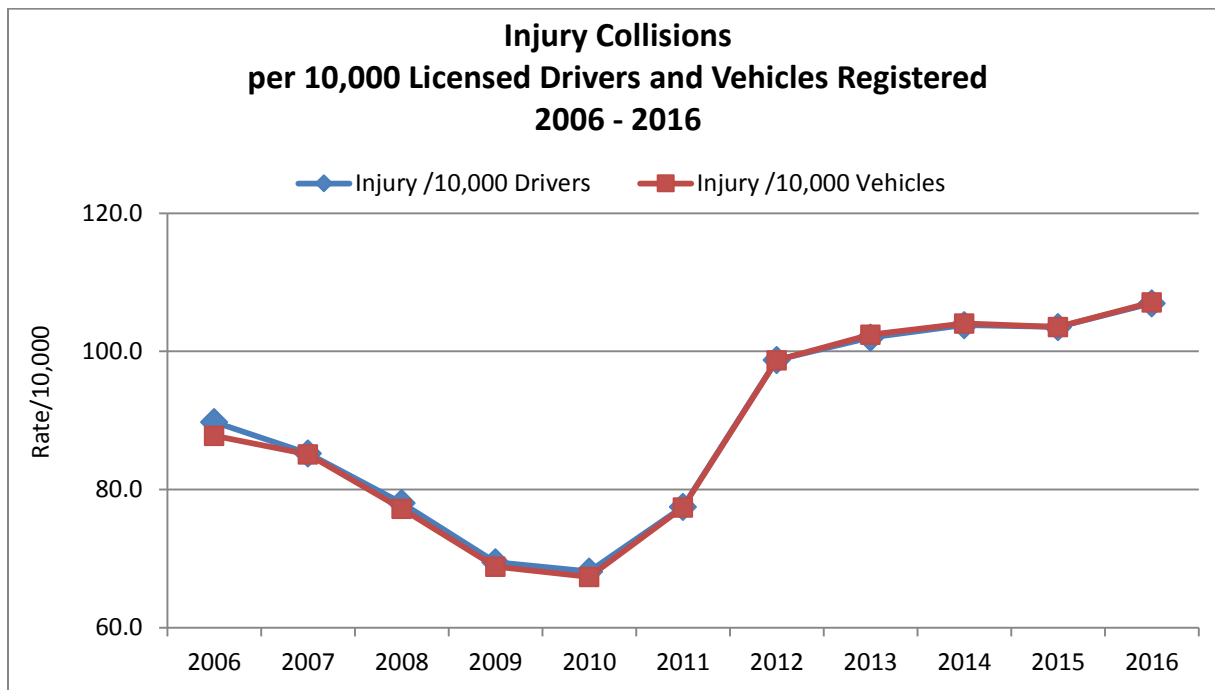
**Figure 1-1 Involvement in Total Collisions by Licensed Drivers and Vehicles Registered**



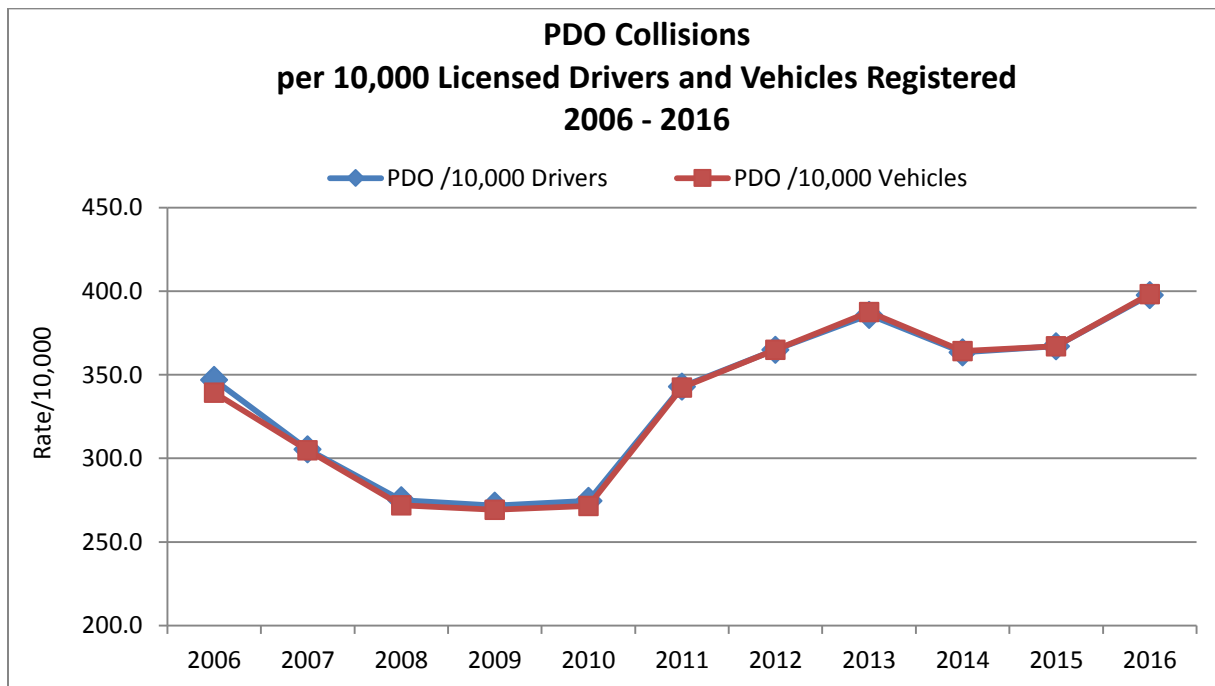
**Figure 1-2 Involvement in Fatal Collisions by Licensed Drivers and Vehicles Registered**



**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: 2006 to 2016

Age Group	Year											2011-2015 Average
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
16-19	937.9	838.7	771.7	756.1	737.3	890.8	1,095.7	1,068.3	982.5	969.1	<b>993.0</b>	1,001.9
20-24	747.6	706.2	673.8	648.8	630.4	851.6	1,114.4	1,121.0	1,059.8	1,035.3	<b>1,079.7</b>	1,038.7
25-34	541.9	511.6	493.2	460.6	470.5	671.8	860.0	920.8	871.5	826.0	<b>867.5</b>	832.3
35-44	498.9	466.1	450.5	444.0	432.1	586.9	741.6	811.3	777.2	736.8	<b>779.1</b>	732.0
45-54	452.5	429.1	402.9	393.0	397.9	524.2	645.0	698.4	668.6	652.7	<b>696.0</b>	637.5
55-64	397.1	378.6	347.6	340.4	353.0	441.6	529.8	554.4	540.4	519.3	<b>551.0</b>	517.9
65-74	342.6	310.0	296.9	289.8	285.0	366.9	416.9	458.1	441.2	414.2	<b>447.5</b>	420.8
75>	321.2	276.5	237.4	235.2	254.9	292.5	342.7	353.4	331.7	332.2	<b>333.9</b>	331.0

In 2016, 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 993.0, the involvement rate of drivers aged 16 to 19 is:

- 8% lower than the rate of those aged 20 to 24;
- Nearly 15% higher than those aged 25 to 34;
- Nearly 28% higher than those aged 35 to 44;
- 43% higher than those aged 45 to 54;
- 80% 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 2016. At 1,079.7, the involvement rate of drivers aged 20 to 24 is:

- Nearly 25% higher than those aged 25 to 34;
- 39% higher than those aged 35 to 44;
- 55% 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 867.5 in 2016, the involvement rate of drivers aged 25 to 34 is:

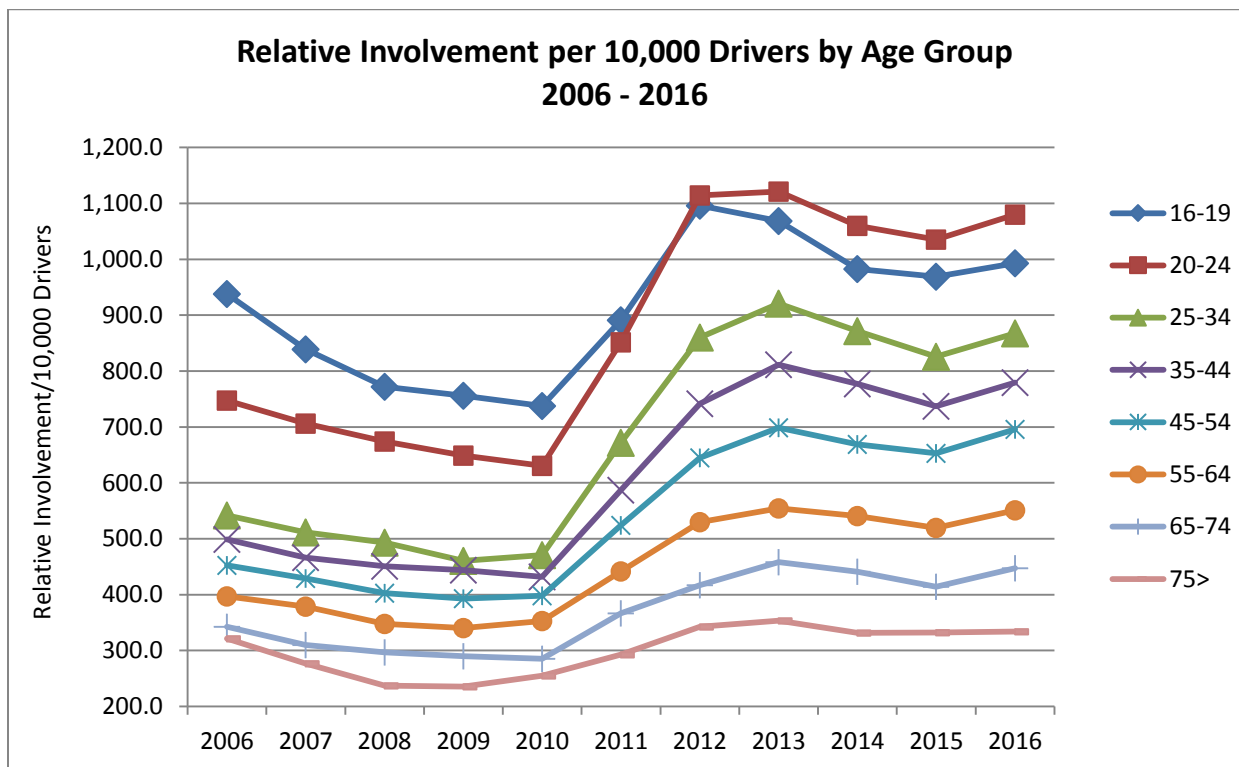
- 11% higher than those aged 35 to 44;
- 25% higher than those aged 45 to 54;
- 57% higher than those aged 55 to 64; and,
- More than double those aged 65 and older.

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

Collision involvement rates for drivers in almost all age groups have increased in 2016 compared to 2015 and to the previous five year (2011 to 2015) annual average. Involvement per 10,000 licensed drivers in 2016 by age group:

- Age 16 to 19 – 993.0 in 2016, up nearly 3% compared to 2015 and down by 1% compared to the previous five year annual average.
- Age 20 to 24 – 1,079.7 in 2016, up 4% compared to 2015 and the previous five year annual average.
- Age 25 to 34 – 867.5 in 2016, up 5% compared to 2015 and by 4% compared to the previous five year annual average.
- Age 35 to 44 – 779.1 in 2016, up 6% compared to 2015 and by 6% compared to the previous five year annual average.
- Age 45 to 54 – 696.0 in 2016, up 7% compared to 2015 and by 9% compared to the previous five year annual average.
- Age 55 to 64 – 551.0 in 2016, up 6% compared to 2015 and by 6% compared to the previous five year annual average.
- Age 65 to 74 – 447.5 in 2016, up 8% compared to 2015 and by 6% compared to the previous five year annual average.
- Age 75 and over – 333.9 in 2016, up slightly from 332.2 in 2015 and up 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 895,880 licensed drivers in Manitoba in 2016, an increase of 1.7% compared to 2015. Of these:

- 95% are Active drivers, 5% are Suspended drivers;
- 52% are Male, 48% are Female;
- 68% are between the ages of 25 and 64; and
- Men account for 67% of all Suspended drivers in Manitoba.

There is an average of 71,135 licensed motorcycle drivers in Manitoba in 2016, an increase of 2.3% compared to 2015.

### Major Elements Examined

Counts of licensed drivers in Manitoba for 2016 represent an average for the 2016 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:
  - [http://www.mpi.mb.ca/PDFs/DVL\\_PDFs/GDLGuide.pdf](http://www.mpi.mb.ca/PDFs/DVL_PDFs/GDLGuide.pdf); ou en Français,
  - [http://www.mpi.mb.ca/PDFs/DVL\\_PDFs/GDLGUIDEfr.pdf](http://www.mpi.mb.ca/PDFs/DVL_PDFs/GDLGUIDEfr.pdf)



Section 2

Licensed Drivers

Chart 2-1 Class Licence System Quick Reference Chart

Manitoba Licence Class		Allows the Licence Holder to Operate	Minimum Age	Requirements
1		Semi-trailer trucks including all vehicles in Classes 2, 3, 4, and 5.	18	<ul style="list-style-type: none"> <li>• Must hold a minimum Class 5 Intermediate or Class 5 Authorized Instruction licence to obtain authorized instruction in Classes 1–4.</li> <li>• Must pass written or oral knowledge test.</li> <li>• Requires supervising driver for Authorized Instruction.</li> <li>• 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.</li> </ul>
2	 	Buses <sup>1</sup> having a seating capacity of over 24 passengers (while carrying passengers), school buses <sup>2</sup> having a seating capacity over 36 passengers (while carrying passengers). Includes all vehicles in Classes 3, 4 and 5.		
3	 	Trucks with more than two axles, including any combination of vehicles, OR a truck with two axles towing a vehicle with a registered gross vehicle weight of more than 4,540 kg (but does not include a semi-trailer truck). Includes all vehicles in Classes 4 and 5.		
4	  	Taxis, ambulances, and other emergency vehicles, buses <sup>1</sup> with a seating capacity between 10 and 24 passengers (while carrying passengers) and school buses <sup>2</sup> with a seating capacity between 10 and 36 passengers (while carrying passengers). Includes all vehicles in Class 5.		
5	   	<p>Passenger cars, a bus while not carrying passengers, trucks with two axles, and any combination of vehicles consisting of a truck with two axles and a towed vehicle with a registered gross vehicle weight of <b>up to 4,540 kg</b>. May operate Class 3 vehicles if registered as a farm truck and the driver holds a Class 5 Intermediate or Full Stage Licence.</p> <p>May operate a Moped<sup>3</sup>, if 16 years of age or older.</p> <p><i>Note: A person must hold a valid minimum Class 5 Intermediate Stage driver's licence to 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, village or urban municipality. For further information please call 204-985-7000 or toll-free 1 800-665-2410.</i></p>	16 or 15½ if enrolled in high school driver education course	<ul style="list-style-type: none"> <li>• Must pass written or oral knowledge and sign tests for Class 5 Learner licence (minimum nine-month Learner Stage). (Must wait seven days for re-tests.)</li> <li>• Requires supervising driver for a Class 5 Learner Stage or Authorized Instruction.</li> <li>• Requires supervising driver for a Class 5 Intermediate if carrying more than one passenger between the hours of 12 midnight and 5 a.m.</li> <li>• Must pass road test to advance to the Intermediate Stage (minimum 15-month Intermediate Stage). (Must wait 14 days for re-test).</li> </ul>
6		Motorcycles.	16	<ul style="list-style-type: none"> <li>• Driver must hold a valid licence of any class and stage.</li> <li>• Must pass written or oral knowledge test. (Must wait seven days for re-tests.)</li> <li>• Must obtain Class 6 M Stage licence in order to complete motorcycle training course. The course is required before Learner Stage Licence is issued. (Contact Manitoba Safety Council for motorcycle course charges.)</li> <li>• Minimum nine-month Learner Stage.</li> <li>• Must pass road test to advance to the Intermediate Stage (minimum 15-months Intermediate Stage). (Must wait 14 days for re-test.)</li> </ul>
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. Drivers of a Class 3 truck registered as a farm truck equipped with air brakes are exempt from this requirement.		<ul style="list-style-type: none"> <li>• Must pass written or oral test.</li> <li>• Must pass Air Brake practical test for "A" (Authorized) endorsement.</li> <li>• Must pass adjustment of the manual slack adjusters for "S" (Slack Adjuster) endorsement.</li> <li>• There is 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.</li> </ul>

1. 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.  
 2. School bus certificate is required. For further information contact the Manitoba Education, Training and Youth, Pupil Transportation at 204-945-6900.  
 3. 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: 2006-2016

Licensing Year	Active Drivers	Suspended Drivers	Total Drivers	% Change to Previous Year
2006	703,051	21,279	724,330	-1.1%
2007*	728,047	24,351	752,398	3.9%
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%
<b>2016</b>	<b>852,067</b>	<b>43,813</b>	<b>895,880</b>	1.7%
Average 2011-2015	815,966	35,741	851,708	5.2%

\*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 2015, the total number of licensed drivers in Manitoba in 2016 increased by 1.7% to 895,880. This is in line with historical increases seen in recent years; the rate of change over the past five years (2011-2015) was a 2.2% increase on average each year. The total number of licensed drivers increased by 5.2% in 2016 compared to the previous five year (2011-2015) annual average.

The proportion of suspended drivers increased by 3.6% in 2016 compared to 2015, up to 43,813 from 42,302, respectively. The count of suspended drivers in 2016 is 22.6% higher than the previous five year (2011-2015) 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: 2016

Age Group	Gender	Active Drivers	Suspended Drivers	Total Drivers	% of "All Ages"	% Suspended in Category
16-17	Male	10,853	141	10,994	2.4	1.3
	Female	10,382	77	10,459	2.4	0.7
	Total	21,236	217	21,453	2.4	1.0
18-19	Male	13,100	471	13,572	2.9	3.5
	Female	12,019	308	12,328	2.9	2.5
	Total	25,120	780	25,899	2.9	3.0
20-24	Male	36,581	2,343	38,924	8.4	6.0
	Female	34,437	1,385	35,821	8.3	3.9
	Total	71,018	3,727	74,745	8.3	5.0
25-34	Male	75,730	5,132	80,863	17.4	6.3
	Female	73,480	2,930	76,410	17.7	3.8
	Total	149,210	8,062	157,273	17.6	5.1
35-44	Male	71,988	4,110	76,098	16.4	5.4
	Female	70,140	2,061	72,201	16.7	2.9
	Total	142,129	6,171	148,300	16.6	4.2
45-54	Male	76,022	4,020	80,042	17.3	5.0
	Female	73,186	1,512	74,698	17.3	2.0
	Total	149,208	5,532	154,740	17.3	3.6
55-64	Male	74,337	3,330	77,667	16.7	4.3
	Female	71,040	1,144	72,184	16.7	1.6
	Total	145,377	4,474	149,851	16.7	3.0
65-74	Male	48,149	2,478	50,626	10.9	4.9
	Female	46,393	1,096	47,489	11.0	2.3
	Total	94,542	3,574	98,116	11.0	3.6
75-84	Male	21,696	2,728	24,425	5.3	11.2
	Female	21,196	1,419	22,615	5.2	6.3
	Total	42,892	4,147	47,040	5.3	8.8
85+	Male	5,837	4,711	10,548	2.3	44.7
	Female	5,498	2,419	7,917	1.8	30.5
	Total	11,336	7,130	18,465	2.1	38.6
All Ages	Male	434,295	29,464	463,758	100.0	6.4
	Female	417,772	14,350	432,122	100.0	3.3
	Total	852,067	43,813	895,880	100.0	4.9

In 2016, the proportion of suspended drivers aged 75 or older is four times the proportion of suspended drivers under age 75 (17% 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 Licence Class, Driver Status and Gender: 2016

Licence Class	Active Drivers				Suspended Drivers				Total	%
	Male	Female	Subtotal	%	Male	Female	Subtotal	%		
1	39,013	1,490	40,503	4.8	1,098	34	1,132	2.6	41,635	4.6
2	4,675	1,665	6,340	0.7	91	20	111	0.3	6,451	0.7
3	11,380	388	11,768	1.4	276	7	283	0.6	12,051	1.3
4	12,713	4,179	16,892	2.0	453	64	516	1.2	17,408	1.9
5/F	338,555	369,786	708,340	83.1	22,905	10,381	33,285	76.0	741,626	82.8
5/I	9,594	9,808	19,401	2.3	590	234	824	1.9	20,225	2.3
5/L	15,185	24,401	39,586	4.6	2,480	2,632	5,111	11.7	44,698	5.0
5/A	3,168	6,056	9,224	1.1	889	699	1,588	3.6	10,812	1.2
Other	12	0	12	<0.1	683	280	963	2.2	975	0.1
Total	434,295	417,772	852,067	100.0	29,464	14,350	43,813	100.0	895,880	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 2016 to 2015.

**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 Licence Class: 2016

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	712	4,735	5,405	1	0	10,853
	Suspended	0	0	0	0	0	30	38	72	0	1	141
	Subtotal	0	0	0	0	0	742	4,773	5,477	1	1	10,994
18-19	Active	113	1	32	63	0	8,230	2,000	2,610	51	0	13,100
	Suspended	2	0	0	1	0	217	77	175	0	0	471
	Subtotal	114	1	32	64	0	8,446	2,077	2,785	51	0	13,572
20-24	Active	1,411	46	502	802	2	28,387	1,589	3,518	325	0	36,581
	Suspended	27	1	6	9	0	1,218	212	850	21	0	2,343
	Subtotal	1,438	46	508	812	2	29,605	1,801	4,367	346	0	38,924
25-34	Active	6,074	321	1,971	3,044	5	59,824	928	2,511	1,053	0	75,730
	Suspended	135	2	40	58	0	3,357	220	1,046	229	47	5,132
	Subtotal	6,209	323	2,011	3,102	5	63,180	1,147	3,557	1,282	47	80,863
35-44	Active	7,907	665	1,948	3,328	4	56,410	249	661	816	0	71,988
	Suspended	217	15	46	69	0	3,033	34	231	261	205	4,110
	Subtotal	8,124	680	1,994	3,397	4	59,443	282	892	1,077	205	76,098
45-54	Active	9,837	1,265	2,376	2,903	0	58,783	66	300	492	0	76,022
	Suspended	270	21	48	110	0	3,094	8	80	156	232	4,020
	Subtotal	10,107	1,286	2,424	3,013	0	61,877	75	381	647	232	80,042
55-64	Active	9,481	1,543	3,175	2,004	2	57,692	23	138	280	0	74,337
	Suspended	203	26	59	112	0	2,725	2	21	68	114	3,330
	Subtotal	9,684	1,568	3,234	2,117	2	60,417	25	158	348	114	77,667
65-74	Active	3,642	728	1,188	525	0	41,915	3	42	107	0	48,149
	Suspended	153	15	43	60	0	2,124	0	5	33	44	2,478
	Subtotal	3,795	743	1,231	585	0	44,039	3	47	140	44	50,626
75-84	Active	535	106	185	42	0	20,791	1	1	35	0	21,696
	Suspended	70	8	23	21	0	2,546	0	1	46	13	2,728
	Subtotal	605	114	208	63	0	23,337	1	2	81	13	24,425
85+	Active	12	1	3	2	0	5,811	0	0	8	0	5,837
	Suspended	21	4	12	11	0	4,561	0	0	75	28	4,711
	Subtotal	33	5	14	13	0	10,372	0	0	82	28	10,548
Total	Active	39,013	4,675	11,380	12,713	12	338,555	9,594	15,185	3,168	0	434,295
	Suspended	1,098	91	276	453	0	22,905	590	2,480	889	683	29,464
	Total	40,111	4,766	11,656	13,165	12	361,459	10,183	17,665	4,057	683	463,758

Men aged 25 to 34 make up the largest number of licensed drivers in Manitoba (9% of all drivers; 17% of all male drivers), closely followed by men aged 45 to 54 (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 (16% of all suspended drivers; 23% 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 Licence Class: 2016

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	655	4,240	5,487	1	0	10,382
	Suspended	0	0	0	0	0	5	13	58	0	0	77
	Subtotal	0	0	0	0	0	660	4,253	5,545	1	0	10,459
18-19	Active	1	0	5	18	0	7,321	1,723	2,929	23	0	12,019
	Suspended	0	0	0	0	0	73	32	203	0	0	308
	Subtotal	1	0	5	19	0	7,394	1,754	3,132	23	0	12,328
20-24	Active	30	8	41	347	0	26,936	1,658	5,148	270	0	34,437
	Suspended	0	0	0	1	0	483	76	818	6	0	1,385
	Subtotal	30	8	41	348	0	27,419	1,734	5,966	276	0	35,821
25-34	Active	159	115	95	1,078	0	62,881	1,470	5,603	2,080	0	73,480
	Suspended	5	1	1	9	0	1,530	88	1,083	202	11	2,930
	Subtotal	164	116	96	1,087	0	64,411	1,558	6,686	2,281	11	76,410
35-44	Active	321	311	61	1,153	0	62,821	535	3,075	1,864	0	70,140
	Suspended	7	2	2	15	0	1,377	21	319	238	80	2,061
	Subtotal	328	313	63	1,168	0	64,198	556	3,394	2,102	80	72,201
45-54	Active	517	556	67	977	0	68,137	149	1,594	1,190	0	73,186
	Suspended	13	7	2	17	0	1,148	4	114	125	82	1,512
	Subtotal	530	563	69	994	0	69,285	153	1,707	1,315	82	74,698
55-64	Active	375	541	82	520	0	68,529	28	480	486	0	71,040
	Suspended	5	7	1	10	0	993	0	30	48	51	1,144
	Subtotal	380	548	83	529	0	69,522	28	509	534	51	72,184
65-74	Active	84	129	35	83	0	45,863	6	80	114	0	46,393
	Suspended	3	1	0	5	0	1,035	0	7	17	28	1,096
	Subtotal	87	130	36	89	0	46,898	6	86	131	28	47,489
75-84	Active	4	7	1	3	0	21,156	0	6	20	0	21,196
	Suspended	0	0	1	3	0	1,370	0	1	31	13	1,419
	Subtotal	4	7	2	6	0	22,526	0	7	51	13	22,615
85+	Active	0	0	1	0	0	5,487	0	1	9	0	5,498
	Suspended	0	1	0	3	0	2,366	0	0	32	16	2,419
	Subtotal	0	1	1	3	0	7,854	0	1	41	16	7,917
Total	Active	1,490	1,665	388	4,179	0	369,786	9,808	24,401	6,056	0	417,772
	Suspended	34	20	7	64	0	10,381	234	2,632	699	280	14,350
	Total	1,524	1,685	395	4,243	0	380,166	10,042	27,033	6,755	280	432,122

Women aged 25 to 34 make up the largest number of licensed female drivers in Manitoba (nearly 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 33% of suspended drivers in Manitoba. Women aged 25 to 34 account for the highest proportion of suspended female drivers under the age of 75 (28%).

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

Table 2-6  
Total Class 6 Active Licensed Drivers by Year: 2006 to 2016

Licensing Year	Active Drivers	% Change to Previous Year
2006	54,642	-
2007	56,825	4.0%
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%
<b>2016</b>	<b>71,135</b>	<b>2.3%</b>
Average 2011-2015	66,657	6.7%

In 2016, the number of motorcycle licence holders increased by 2.3% compared to 2015, in line with the annual average rate of change in the previous five years (2011-2015 – 2.5%). The total number of motorcycle licence holders increased by 6.7% in 2016 compared to the previous five year (2011-2015) 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 are counted separately to avoid any duplication of counts with Class 1-5 licence holders. This means 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: 2016

Age Group	Gender	Active Drivers	%
16-17	Male	114	
	Female	9	
	Total	123	0.2
18-19	Male	379	
	Female	42	
	Total	421	0.6
20-24	Male	2,295	
	Female	325	
	Total	2,620	3.7
25-34	Male	7,814	
	Female	1,280	
	Total	9,093	12.8
35-44	Male	8,294	
	Female	1,566	
	Total	9,860	13.9
45-54	Male	14,624	
	Female	2,451	
	Total	17,076	24.0
55-64	Male	18,935	
	Female	2,627	
	Total	21,562	30.3
65-74	Male	7,926	
	Female	835	
	Total	8,761	12.3
75-84	Male	1,278	
	Female	107	
	Total	1,385	1.9
85+	Male	210	
	Female	23	
	Total	233	0.3
All Ages	Male	61,869	
	Female	9,266	
	Total	71,135	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 (68%). Men aged 35 to 64 make up 59% 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 Licence Class and Gender: 2016

Licence Class	Active Drivers			
	Male	Female	Total	%
6/F	47,052	5,118	52,170	73.3
6/I	8	0	8	<0.1
6/L	8,837	2,613	11,451	16.1
6/A	2,732	389	3,122	4.4
6/M	3,241	1,145	4,386	6.2
Total	61,869	9,266	71,135	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 2016, Full Class 6 licence holders account for 73% of all Manitoba Class 6 licence holders and Learners account for 16%. This distribution is similar to 2015.

**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 Licence Class: 2016

Age Group	Licence Class					Total	% of Total
	6/F	6/I	6/L	6/A	6/M		
16-17	4	6	71	0	33	114	0.2
18-19	42	1	203	0	133	379	0.6
20-24	465	0	1,207	26	597	2,295	3.7
25-34	2,615	0	3,535	322	1,341	7,814	12.6
35-44	4,774	0	1,887	1,047	586	8,294	13.4
45-54	12,348	0	1,090	874	313	14,624	23.6
55-64	17,789	0	623	362	160	18,935	30.6
65-74	7,589	0	194	84	60	7,926	12.8
75-84	1,220	0	25	16	17	1,278	2.1
85+	205	0	3	1	1	210	0.3
Total	47,052	8	8,837	2,732	3,241	61,869	

**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 Licence Class: 2016

Age Group	Licence Class					Total	% of Total
	6/F	6/I	6/L	6/A	6/M		
16-17	1	0	4	0	4	9	0.1
18-19	3	0	28	0	10	42	0.5
20-24	27	0	177	1	120	325	3.5
25-34	230	0	692	23	335	1,280	13.8
35-44	537	0	674	117	239	1,566	16.9
45-54	1,389	0	678	147	237	2,451	26.5
55-64	2,044	0	335	83	166	2,627	28.4
65-74	760	0	25	17	34	835	9.0
75-84	106	0	0	1	0	107	1.2
85+	22	0	0	1	0	23	0.3
Total	5,118	0	2,613	389	1,145	9,266	



## 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 949,761 Non-commercial vehicles registered in Manitoba in 2016.

- This is a 0.6% increase over 2015 and a 24% increase from 2006.
- This is a nearly 5% increase over the average registrations for the period 2011-2015.

There are a total of 120,355 Commercial vehicles registered in Manitoba in 2016.

- This is a nearly 12% increase over 2015 and a 53% increase from 2006.
- This is a 19% increase over the average registrations for the period 2011-2015.

Overall, there is a 2% increase in the total vehicle registrations (commercial and non-commercial, combined) in Manitoba from 1,052,376 in 2015 to 1,070,115 in 2016.

There are a total of 34,061 Snowmobiles registered in Manitoba in 2016.

- There are 326 more registered snowmobiles in 2016 than in 2015 (a 1% increase); a nearly 64% increase from 2006.
- This is a 5% increase over the average registrations for the period 2011-2015.

### **Major Elements Examined**

Counts for each Commercial and Non-commercial registration types represent an average registration over the twelve-month period January through December 2016. 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 2015 through to and including April 2016 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: 2016

Vehicle Class*	Total	%
Passenger	565,348	59.5
Antique	145	<0.1
Motorcycle/Moped	14,634	1.5
Truck	150,401	15.8
Farm Truck	43,908	4.6
Snow Vehicle	48	<0.1
Trailer	175,160	18.4
Tractor (Other than Farm-type)	116	<0.1
<b>Total Non-Commercial Vehicles Registered</b>	<b>949,761</b>	<b>100</b>
Snowmobiles (Recreational)		
Snowmobiles	34,061	

\*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: 2016

Vehicle Class*	Total	%
Commercial Truck	40,161	33.4
Public Service Vehicle (PSV) Truck	14,647	12.2
Dealer and Repairer	6,551	5.4
Taxi/Livery/Limousine	883	0.7
Public Service Vehicle (PSV) Bus	188	0.2
Commercial Trailer	57,824	48.0
Public Service Vehicle (PSV) Trailer	101	<0.1
<b>Total Commercial Vehicles Registered</b>	<b>120,355</b>	<b>100</b>

\*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: 2006 to 2016

Registration Class	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	5-year (2011- 2015) Average	2016	% Change 2016 vs. 2015	% Change (2016 vs. 2011-2015 average)
<b>Non-Commercial Vehicle Class</b>														
Passenger	491,363	499,078	509,856	516,185	521,894	529,406	539,384	545,723	551,113	559,606	545,046	<b>565,348</b>	1.0	3.7
Antique**	80	82	84	77	95	103	131	134	133	136	128	<b>145</b>	6.6	13.9
Motorcycle/Moped	8,357	9,143	10,059	10,413	10,732	11,229	12,329	12,658	13,042	13,732	12,598	<b>14,634</b>	6.6	16.2
Truck	117,278	120,217	123,766	127,154	133,057	139,530	145,405	149,295	153,077	156,302	148,722	<b>150,401</b>	-3.8	1.1
Farm Truck	45,083	44,477	44,073	43,746	43,517	42,942	43,384	43,361	43,517	43,749	43,391	<b>43,908</b>	0.4	1.2
Snow Vehicle**	48	49	47	49	50	48	46	43	45	49	46	<b>48</b>	-1.5	4.3
Trailer	103,840	111,630	120,891	127,080	134,358	143,249	154,603	160,451	165,492	170,778	158,915	<b>175,160</b>	2.6	10.2
Tractor (non-farm)	125	120	117	122	123	120	117	116	113	117	117	<b>116</b>	-1.2	-0.7
Subtotal	766,174	784,796	808,892	824,824	843,825	866,628	895,400	911,781	926,533	944,469	908,962	<b>949,761</b>	0.6	4.5
<b>Commercial Vehicle Class</b>														
Truck	24,305	24,987	26,123	26,851	27,690	28,928	30,391	31,407	32,227	33,521	31,295	<b>40,161</b>	19.8	28.3
PSV Truck	9,526	10,115	9,863	9,818	9,849	10,244	10,934	11,337	11,813	12,447	11,355	<b>14,647</b>	17.7	29.0
Dealer/Repairer	6,512	6,511	6,546	6,347	6,229	6,185	6,178	6,210	6,354	6,439	6,273	<b>6,551</b>	1.7	4.4
Taxi/Livery	772	769	778	834	854	871	885	892	893	903	889	<b>883</b>	-2.2	-0.7
PSV Bus**	134	143	146	155	161	150	143	153	156	168	154	<b>188</b>	11.5	21.9
Trailers*	37,226	38,183	42,304	41,846	45,249	45,221	49,389	50,936	55,000	54,342	50,977	<b>57,824</b>	6.4	13.4
PSV Trailers**	58	56	51	57	57	57	71	78	82	87	75	<b>101</b>	16.5	35.2
Subtotal	78,533	80,764	85,811	85,909	90,089	91,655	97,991	101,012	106,525	107,907	101,018	<b>120,355</b>	11.5	19.1
<b>Total Registrations - Non-Commercial and Commercial Vehicle Classes</b>														
Total Registrations	844,707	865,560	894,703	910,732	933,914	958,283	993,390	1,012,793	1,033,058	1,052,376	1,009,980	<b>1,070,115</b>	1.7	6.0
<b>Snowmobiles***</b>														
Total	20,832	23,401	26,359	27,664	28,064	30,421	30,650	32,851	34,280	33,735	32,387	<b>34,061</b>	1.0	5.2
<b>Off-Road Vehicle Dealer Plates</b>														
Total	446	429	473	464	454	471	469	505	518	529	499	<b>562</b>	6.2	12.7

\*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 2016, December 2015 through April 2016, inclusive).



The total count of vehicles registered in Manitoba in 2016 (1,070,115) has increased by 2% compared to 2015. This increase is in line with year-over-year increases seen in previous years. The count of registered vehicles in 2016 is 6% higher than the five year (2011-2015) annual average.

The total increase in overall vehicle registrations in 2016 comes from an increase in both non-commercial and commercial vehicle registrations. Non-commercial vehicle registrations increased by 0.6% in 2016 compared to 2015. Commercial vehicle registrations increased by nearly 12% in 2016 compared to 2015.

Snowmobile registrations increased by 1% in 2016 over 2015, and by 5% compared to the five year (2011-2015) 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 2006 to 2015 is presented and compared to 2016. Details are provided for 2016 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 2016, there are 12,653 victims from 45,316 collisions involving 66,063 vehicles and 63,839 drivers. Of the 45,316 collisions:

- 96 are fatal collisions involving 143 vehicles and 138 drivers, resulting in 107 people killed and 84 people injured;
- 9,582 are injury collisions involving 16,927 vehicles and 16,753 drivers, resulting in 12,462 people injured; and,
- 35,638 are PDO collisions involving 48,993 vehicles and 46,948 drivers.

Collisions on public roadways in Manitoba in 2016 most frequently occur:

- In Winnipeg (nearly 62% of all collisions; 20% of fatal, 75% of injury and 58% of PDO collisions) and in rural locations (23% of all collisions, 68% of fatal, 14% of injury and 25% of PDO collisions);
- In the winter months (January, February, and December) – 32% of all collisions; nearly 12% of fatal, 33% of injury and 32% of PDO collisions;
- On weekdays (Monday through Friday) with Friday specifically accounting for 17% of all collisions; nearly 12% of fatal, 17% of injury and 17% of PDO collisions; and,
- Between the hours of 3 and 6 p.m. (15:00 to 17:59) – 24% of all collisions; nearly 12% of fatal, 29% of injury and 23% of PDO collisions.

Collisions on public roadways in Manitoba in 2016 are most frequently:

- “Motor vehicle to motor vehicle” in nature – nearly 62% of all collisions; 48% of fatal, 81% of injury and 56% of PDO collisions; and,
- “Rear end” collisions (36% of all collisions), collisions occurring at 90° intersections (17% of all collisions), collisions involving a fixed object (12% of all collisions), side-swipe collisions (13% of all collisions), collisions while parking (8% of all collisions), collisions resulting from leaving the road (6% of all collisions), collisions associated with turning (5% of all collisions), and head-on collisions (2% of all collisions).

### Major Elements Examined

Counts of collisions in Manitoba for 2016 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 2006 through 2016. Following that, the majority of this section explores traffic collisions occurring in 2016 and provides comparisons to annual average counts of collisions for the time period 2011 to 2015.

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 2011 to 2015. 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.

## Section 4

## Traffic Collisions

**Table 4-1 Historical Summary of Traffic Collisions**

Table 4-1  
Historical Summary of Traffic Collisions: 2006 to 2016

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	<b>2016</b>	2011-2015 Average
Total Collisions	31,738	29,494	27,092	26,578	27,172	34,302	38,972	41,819	40,672	41,548	<b>45,316</b>	39,463
Fatal	104	96	85	83	78	94	89	69	64	69	<b>96</b>	77
Injury	6,503	6,415	5,974	5,396	5,386	6,309	8,280	8,729	9,023	9,127	<b>9,582</b>	8,294
PDO	25,131	22,983	21,033	21,099	21,708	27,899	30,603	33,021	31,585	32,352	<b>35,638</b>	31,092
Total Victims	8,825	8,632	7,924	7,302	7,130	8,337	10,623	11,234	11,676	12,017	<b>12,653</b>	10,777
Killed	119	109	92	86	87	110	96	85	68	78	<b>107</b>	87
Injured	8,706	8,523	7,832	7,216	7,043	8,227	10,527	11,149	11,608	11,939	<b>12,546</b>	10,690
Total Vehicles Involved	51,620	48,491	44,555	43,610	44,979	53,516	59,556	64,316	62,277	61,711	<b>66,063</b>	60,275
Fatal	151	141	141	126	110	141	126	111	95	106	<b>143</b>	116
Injury	11,312	11,099	10,219	9,268	9,358	10,956	14,802	15,663	16,233	16,184	<b>16,927</b>	14,768
PDO	40,157	37,251	34,195	34,216	35,511	42,419	44,628	48,542	45,949	45,421	<b>48,993</b>	45,392
Total Drivers Involved	46,380	44,814	42,120	41,097	42,310	51,279	58,877	63,501	61,294	59,716	<b>63,839</b>	58,933
Fatal	145	135	121	120	105	130	119	106	90	103	<b>138</b>	110
Injury	10,827	10,696	9,854	8,938	8,969	10,644	14,696	15,539	16,120	16,088	<b>16,753</b>	14,617
PDO	35,408	33,983	32,145	32,039	33,236	40,505	44,062	47,856	45,084	43,525	<b>46,948</b>	44,206

In 2016, there are 12,653 victims from 45,316 collisions involving 66,063 vehicles and 63,839 drivers. Of the 45,316 collisions:

- 96 are fatal collisions involving 143 vehicles and 138 drivers, resulting in 107 people killed and 84 people injured;
- 9,582 are injury collisions involving 16,927 vehicles and 16,753 drivers, resulting in 12,462 people injured; and,
- 35,638 are PDO collisions involving 48,993 vehicles and 46,948 drivers.

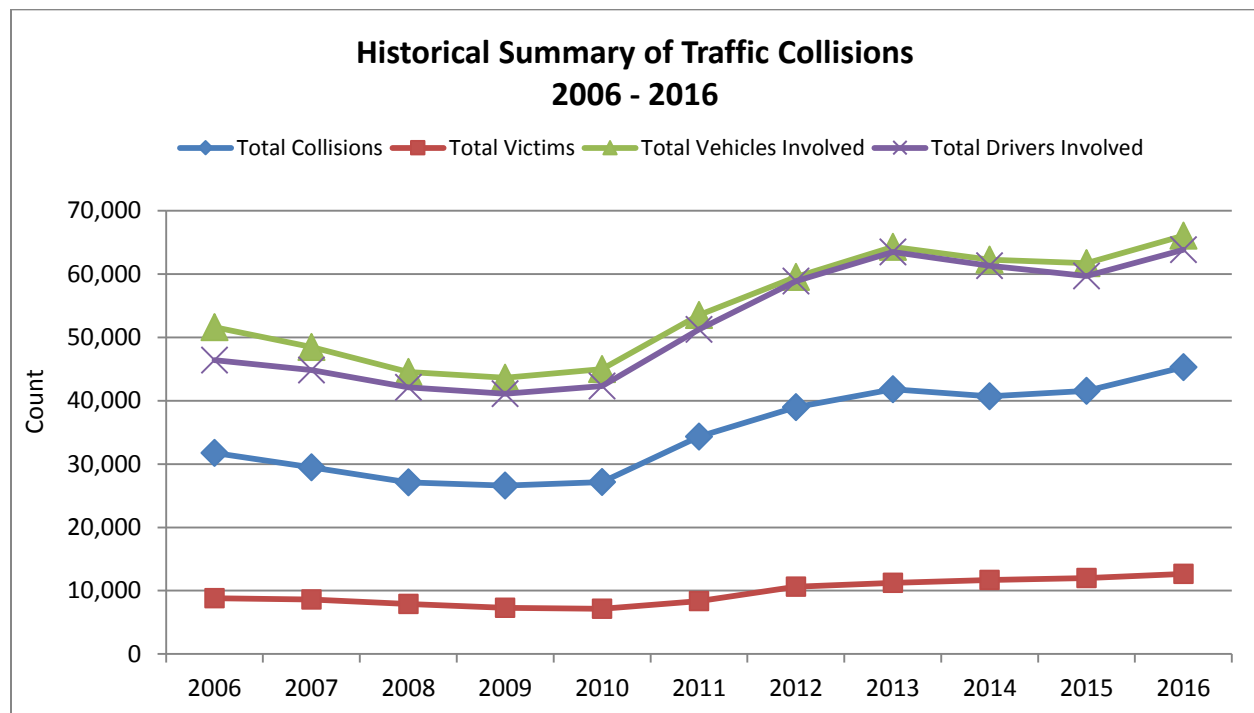
Total collisions in 2016 are up 9% compared to 2015 and by 15% compared to the number of collisions in the previous five year (2011 to 2015) annual average.

- Fatal collisions increased by 39% compared to 2015 and by 25% compared to the previous five years.
- Injury collisions increased by 5% compared to 2015 and by nearly 16% compared to the previous five years.
- PDO collisions increased by 10% compared to 2015 and by 15% compared to the previous five years.

The total number of collision victims in 2016 increased by 5% compared to 2015 and by 17% compared to the previous five year (2011 to 2015) annual average. The number of people killed in collisions in 2016 increased by 37% compared to 2015 and by 22% compared to the previous five years. The count of people killed in 2016 is the highest it has been since 2011.

The total number of drivers involved in collisions in 2016 is up 7% compared to 2015 and by 8% compared to the previous five year (2011 to 2015) annual average. The number of vehicles involved in collisions in 2016 is up 7% from 2015 and up 10% compared to the previous five years.

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



## Section 4

## Traffic Collisions

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

Table 4-2  
Traffic Collisions by Month of Occurrence and Collision Severity: 2016, 2011-2015 Average

Month	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
January	1	1.0%	1,077	11.2%	3,664	10.3%	<b>4,742</b>	10.5%	4	996	3,859	4,859	12.3%
February	6	6.3%	941	9.8%	3,005	8.4%	<b>3,952</b>	8.7%	5	760	2,792	3,557	9.0%
March	6	6.3%	738	7.7%	2,770	7.8%	<b>3,514</b>	7.8%	2	710	2,585	3,297	8.4%
April	11	11.5%	587	6.1%	2,359	6.6%	<b>2,957</b>	6.5%	5	500	1,834	2,339	5.9%
May	8	8.3%	675	7.0%	2,318	6.5%	<b>3,001</b>	6.6%	7	546	1,857	2,409	6.1%
June	9	9.4%	656	6.8%	2,590	7.3%	<b>3,255</b>	7.2%	8	544	1,989	2,541	6.4%
July	13	13.5%	676	7.1%	2,558	7.2%	<b>3,247</b>	7.2%	10	534	1,914	2,458	6.2%
August	10	10.4%	734	7.7%	2,470	6.9%	<b>3,214</b>	7.1%	8	553	1,834	2,395	6.1%
September	6	6.3%	703	7.3%	2,614	7.3%	<b>3,323</b>	7.3%	10	604	2,042	2,656	6.7%
October	11	11.5%	793	8.3%	3,018	8.5%	<b>3,822</b>	8.4%	7	707	2,724	3,438	8.7%
November	11	11.5%	885	9.2%	3,574	10.0%	<b>4,470</b>	9.9%	6	898	3,817	4,721	12.0%
December	4	4.2%	1,117	11.7%	4,698	13.2%	<b>5,819</b>	12.8%	6	941	3,846	4,793	12.1%
Total	96	100%	9,582	100%	35,638	100%	<b>45,316</b>	100%	77	8,294	31,092	39,463	100%

Note: Counts of collisions in the 2011-2015 average may not add to the total due to rounding.

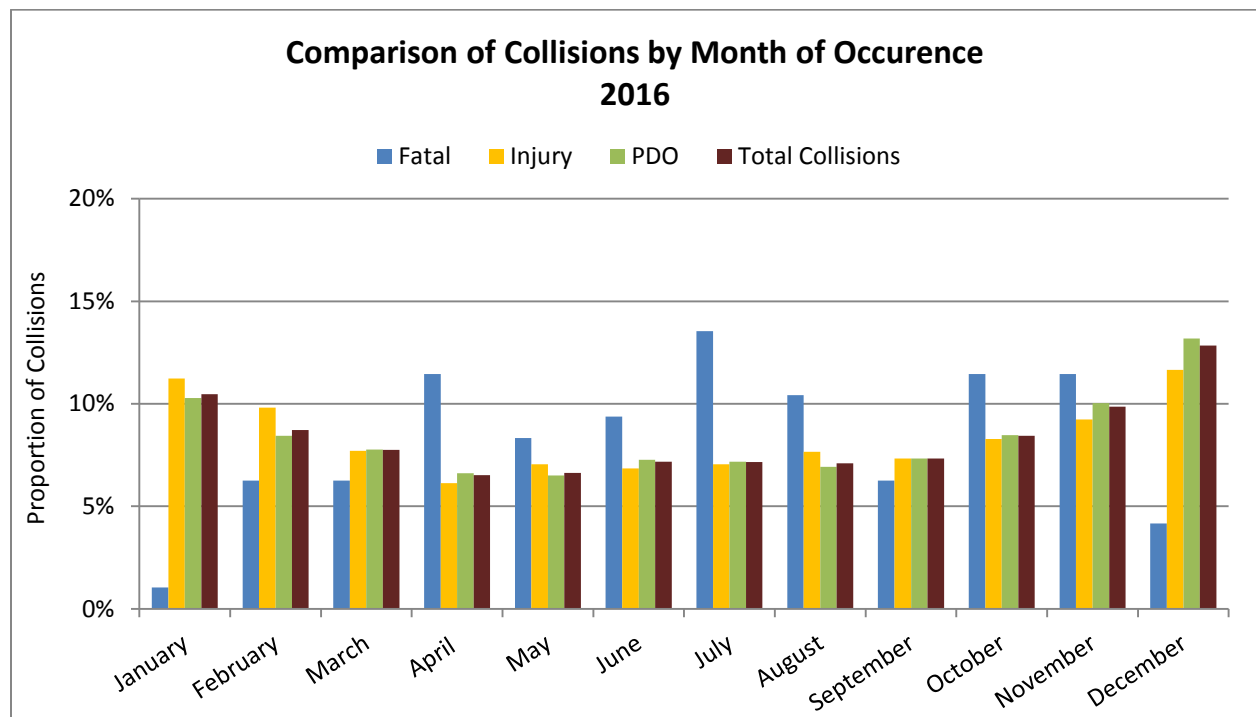


The winter months of January, February and December continue to account for a high proportion of collisions in Manitoba, with one-third (32%) of all collisions happening in these months in 2016. In the previous five year period (2011 to 2015), these months also accounted for an average of nearly 34% of all collisions. In 2016, January, February and December (combined), account for:

- Nearly 12% of all fatal collisions;
- 33% of all injury collisions; and,
- 32% of all PDO collisions.

Fatal collisions in 2016 occur most often in April, July, August, October, and November (58% of fatal crashes combined). Comparatively, 47% 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 2016, injury collisions and PDO collisions occur most frequently in the months of November through February (42% of injury and PDO collisions). In the previous five year period (2011 to 2015), these months account for 43% of injury collisions and 46% of PDO collisions.

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

Table 4-3  
Traffic Collisions by Day of Week of Occurrence and Collision Severity: 2016, 2011-2015 Average

Day of Week	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Sunday	20	20.8%	870	9.1%	3,739	10.5%	<b>4,629</b>	10.2%	11	753	3,319	4,083	10.3%
Monday	9	9.4%	1,417	14.8%	5,186	14.6%	<b>6,612</b>	14.6%	11	1,186	4,270	5,466	13.9%
Tuesday	12	12.5%	1,490	15.5%	5,244	14.7%	<b>6,746</b>	14.9%	8	1,290	4,507	5,805	14.7%
Wednesday	14	14.6%	1,482	15.5%	5,438	15.3%	<b>6,934</b>	15.3%	11	1,330	4,676	6,017	15.2%
Thursday	11	11.5%	1,534	16.0%	5,184	14.5%	<b>6,729</b>	14.8%	10	1,313	4,726	6,049	15.3%
Friday	11	11.5%	1,632	17.0%	6,089	17.1%	<b>7,732</b>	17.1%	14	1,417	5,407	6,838	17.3%
Saturday	19	19.8%	1,157	12.1%	4,758	13.4%	<b>5,934</b>	13.1%	13	1,005	4,187	5,205	13.2%
Total	96	100%	9,582	100%	35,638	100%	<b>45,316</b>	100%	77	8,294	31,092	39,463	100%

Note: Counts of collisions in the 2011-2015 average may not add to the total due to rounding.

Collisions in 2016 most frequently occur on weekdays, especially on Friday. Monday through Friday combined account for 77% of all collisions, 59% of fatal collisions, 79% of injury collisions and 76% of PDO collisions. In the previous five year (2011 to 2015) annual average, with the exception of fatal collisions, weekdays account for the same proportions (nearly 77% of all collisions; 69% fatal; 79% injury; 76% PDO).

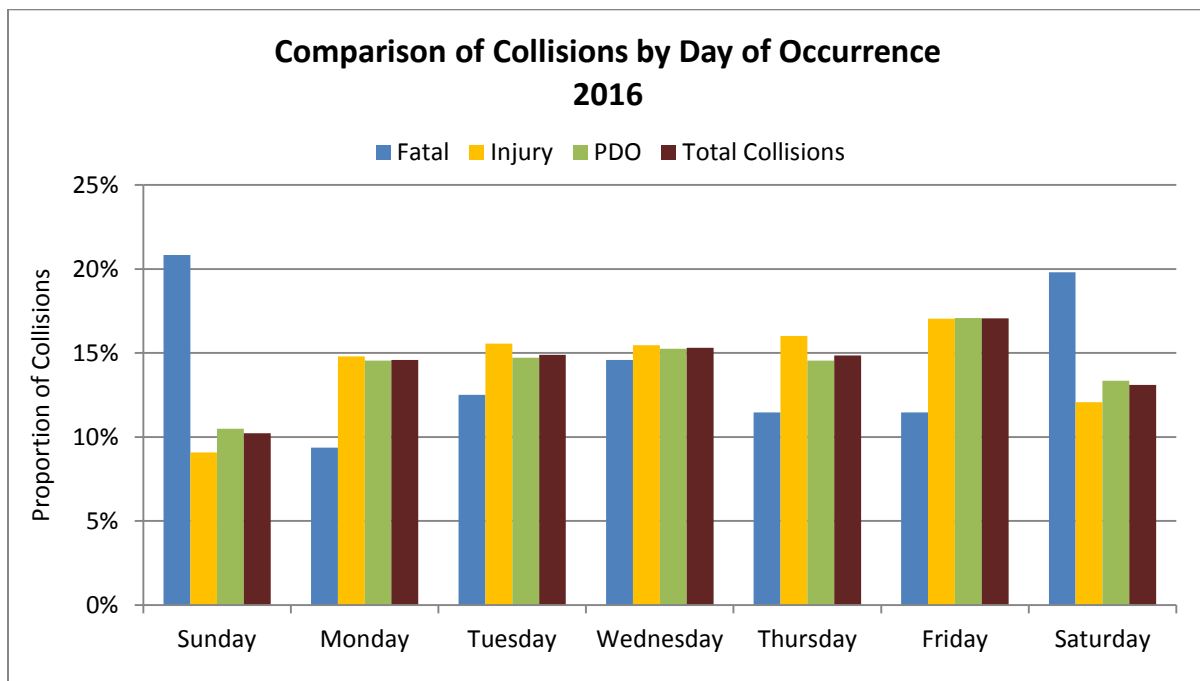
Overall, Friday accounts for the single largest proportion of collisions in 2016; this is also the case in the previous five year (2011 to 2015) annual average. Friday accounts for:

- 17% of all collisions in 2016 and in the previous five years;
- Nearly 12% of fatal collisions in 2016 and 18% in the previous five years;
- 17% of injury collisions in 2016 and in the previous five years; and,
- 17% of PDO collisions in 2016 and in the previous five years.

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

- 40% of all collisions in 2016 and 41% in the previous five years (2011 to 2015);
- 52% of fatal collisions in 2016 and 49% in the previous five years;
- 38% of injury collisions in 2016 and in the previous five years; and,
- 41% of PDO collisions in 2016 and nearly 42% in the previous five years.

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



In 2016, fatal collisions occur most often on Saturday (count of 19 or 20% of fatal collisions) and Sunday (count of 20; 21%). In the previous five year (2011 to 2015) annual average, Fridays account for the highest number of fatal crashes (count of 14; 18% of fatal collisions), closely followed by Saturdays (count of 13; 17%).

## Section 4

## Traffic Collisions

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

Table 4-4  
Traffic Collisions by Time of Occurrence and Collision Severity: 2016, 2011-2015 Average

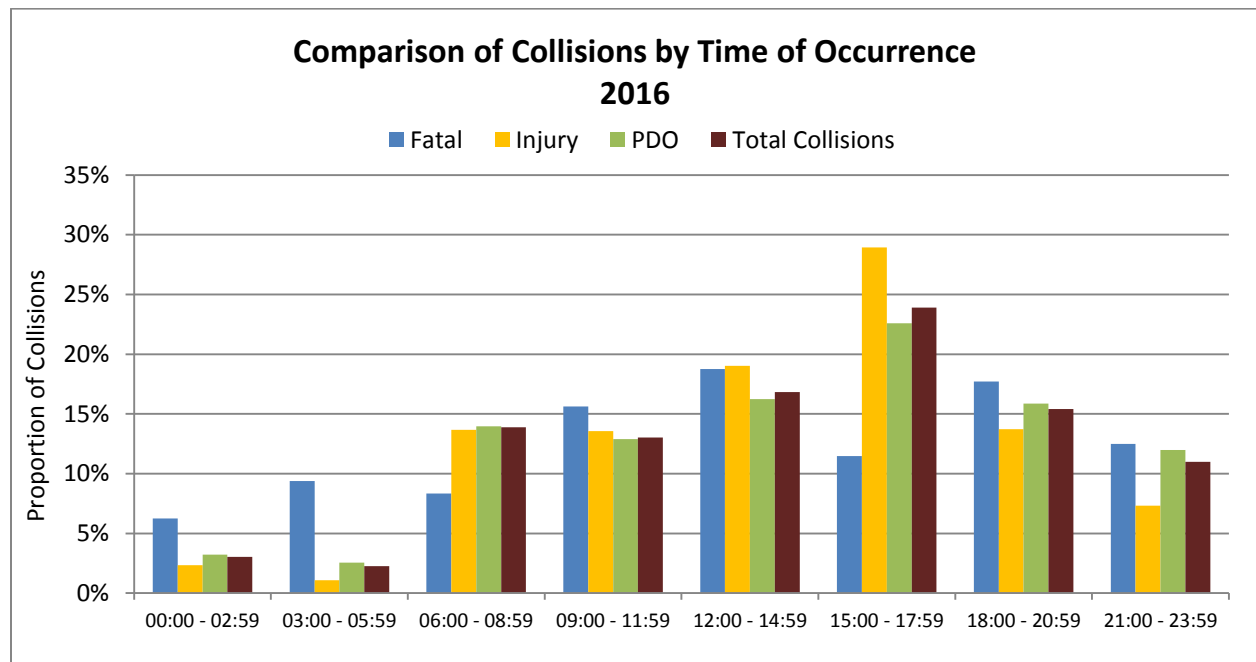
Time	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
00:00 - 02:59	6	6.3%	223	2.3%	1147	3.2%	<b>1,376</b>	3.0%	7	194	961	1,160	2.9%
03:00 - 05:59	9	9.4%	104	1.1%	908	2.5%	<b>1,021</b>	2.3%	6	128	757	890	2.3%
06:00 - 08:59	8	8.3%	1,310	13.7%	4,972	14.0%	<b>6,290</b>	13.9%	6	1,114	4,016	5,136	13.0%
09:00 - 11:59	15	15.6%	1,299	13.6%	4,592	12.9%	<b>5,906</b>	13.0%	8	1,171	4,185	5,364	13.6%
12:00 - 14:59	18	18.8%	1,823	19.0%	5,783	16.2%	<b>7,624</b>	16.8%	10	1,639	5,382	7,031	17.8%
15:00 - 17:59	11	11.5%	2,774	29.0%	8,046	22.6%	<b>10,831</b>	23.9%	11	2,345	7,336	9,692	24.6%
18:00 - 20:59	17	17.7%	1,314	13.7%	5,650	15.9%	<b>6,981</b>	15.4%	12	1,082	4,690	5,784	14.7%
21:00 - 23:59	12	12.5%	700	7.3%	4,268	12.0%	<b>4,980</b>	11.0%	12	574	3,534	4,119	10.4%
Not Stated	-	-	35	0.4%	272	0.8%	<b>307</b>	0.7%	7	47	232	286	0.7%
Total	96	100%	9,582	100%	35,638	100%	<b>45,316</b>	100%	77	8,294	31,092	39,463	100%

Note: Counts of collisions in the 2011-2015 average may not add to the total due to rounding.

Four in ten collisions in 2016 occur between noon and 6 p.m. (41% of all collisions, 30% 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 (2011 to 2015) annual average (42% of all collisions, 27% of fatal collisions, 48% of injury collisions, and 41% of PDO collisions).

The largest proportion of total traffic collisions in 2016 occur between 3 and 6 p.m. (15:00 – 17:59), what is often considered the “afternoon rush”. One in four (24%) collisions occur during these hours (nearly 12% of fatal collisions, 29% of injury collisions and 23% of PDO collisions). This is relatively consistent with the proportion of collisions occurring during these hours in the previous five year (2011 to 2015) annual average.

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



In 2016, 30% of fatal crashes occur between 6 p.m. and midnight, while another 16% of fatal crashes occur between the hours of midnight and 6 a.m. This is consistent with the previous five years.

## Section 4

## Traffic Collisions

**Table 4-5 Traffic Collisions by Provincial Location and Collision Severity**Table 4-5  
Traffic Collisions by Provincial Location and Collision Severity: 2016, 2011-2015 Average

Location	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Winnipeg	19	19.8%	7,224	75.4%	20,620	57.9%	<b>27,863</b>	61.5%	13	6,235	18,579	24,828	62.9%
Brandon	1	1.0%	205	2.1%	985	2.8%	<b>1,191</b>	2.6%	<1	208	1,049	1,258	3.2%
Portage	0	-	59	0.6%	245	0.7%	<b>304</b>	0.7%	<1	51	273	324	0.8%
Flin Flon	0	-	3	<0.1%	69	0.2%	<b>72</b>	0.2%	<1	5	79	84	0.2%
Dauphin	1	1.0%	25	0.3%	157	0.4%	<b>183</b>	0.4%	1	34	163	198	0.5%
Thompson	2	2.1%	35	0.4%	202	0.6%	<b>239</b>	0.5%	<1	31	215	246	0.6%
The Pas	0	-	10	0.1%	122	0.3%	<b>132</b>	0.3%	-	17	138	155	0.4%
Selkirk	1	1.0%	80	0.8%	257	0.7%	<b>338</b>	0.7%	<1	62	253	315	0.8%
Other Urban	7	7.3%	634	6.6%	4,116	11.5%	<b>4,757</b>	10.5%	9	550	3,944	4,503	11.4%
All Rural	65	67.7%	1,307	13.6%	8,865	24.9%	<b>10,237</b>	22.6%	52	1,102	6,398	7,552	19.1%
Total	96	100%	9,582	100%	35,638	100%	<b>45,316</b>	100%	77	8,294	31,092	39,463	100%

Note: Counts of collisions in the 2011-2015 average may not add to the total due to rounding.

Urban locations account for 77% of collisions in Manitoba, but only 32% of fatal collisions in 2016 (86% of injury collisions and 75% of PDO collisions). Rural locations account for 23% of all collisions, but 68% of fatal collisions. This is consistent with historical results. In the previous five year period (2011 to 2015), urban locations accounted for an average of 81% of all collisions, 31% of fatal collisions, 87% of injury collisions, and 79% of PDO collisions.

In 2016, nearly 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 (2011 to 2015) annual average, 63% of all collisions occur in Winnipeg and 18% occur in other urban locations.

This pattern holds when we consider both injury and PDO collisions. In 2016:

- 75% of injury collisions occur in Winnipeg, 11% occur in other urban locations and 14% occur in rural locations.
- 58% of PDO collisions occur in Winnipeg, 17% occur in other urban locations and 25% occur in rural locations.

Fatal collisions are different from the distribution of total crashes when it comes to the urban-rural split. In 2016, more than two-thirds of fatal collisions (68%) occur in rural locations, while 20% occur in Winnipeg and nearly 13% occur in other urban locations. The over-representation of rural locations for fatal collisions in 2016 is consistent with the previous five year (2011 to 2015) annual average, where 67% of fatal collisions occur in rural locations, 17% occur in Winnipeg and 16% occur in other urban locations.

Section 4

Traffic Collisions

**Table 4-6 Collision Type by Urban/Rural Location**

Table 4-6  
Collision Type by Urban/Rural Location: 2016, 2011-2015 Average

Collision Type	Location												2011-2015 Average Count of Total Collisions					
	2016 Urban				2016 Rural				2016 Provincial Total				2016 Provincial Total as % of Total	Fatal	Injury	PDO	Total	% of Total
	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	Total						
Collision with pedestrian	4	61	69	134	1	4	5	10	5	65	74	144	0.3%	5	86	44	134	0.3%
Collision with other motor vehicle	16	7,274	19,206	26,496	30	461	889	1,380	46	7,735	20,095	27,876	61.5%	34	6,437	18,174	24,646	62.5%
Collisions with train	0	2	2	4	0	1	0	1	0	3	2	5	<0.1%	<1	2	5	8	<0.1%
Collision with motorcycle	0	7	9	16	0	0	0	0	0	7	9	16	<0.1%	2	23	9	34	<0.1%
Collision with animal drawn vehicle	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	<0.1%
Collision with bicycle	1	31	57	89	0	3	2	5	1	34	59	94	0.2%	2	48	43	93	0.2%
Collision with animal	0	52	1,197	1,249	0	307	6,061	6,368	0	359	7,258	7,617	16.8%	<1	246	4,961	5,208	13.2%
Collision with fixed object	4	422	3,645	4,071	20	395	1,176	1,591	24	817	4,821	5,662	12.5%	14	713	4,500	5,227	13.3%
Collision with other object	6	379	2,383	2,768	8	98	623	729	14	477	3,006	3,497	7.7%	6	482	2,764	3,252	8.2%
Overtaken in roadway	0	5	6	11	1	5	7	13	1	10	13	24	<0.1%	2	33	56	91	0.2%
Ran off roadway	0	3	5	8	4	9	8	21	4	12	13	29	<0.1%	11	120	201	332	0.8%
Collision with moped	0	2	2	4	0	0	0	0	0	2	2	4	<0.1%	-	<1	2	2	<0.1%
Other non-collision	0	37	192	229	1	24	94	119	1	61	286	348	0.8%	<1	83	332	415	1.1%
<b>Total</b>	<b>31</b>	<b>8,275</b>	<b>26,773</b>	<b>35,079</b>	<b>65</b>	<b>1,307</b>	<b>8,865</b>	<b>10,237</b>	<b>96</b>	<b>9,582</b>	<b>35,638</b>	<b>45,316</b>	<b>100%</b>	<b>77</b>	<b>8,272</b>	<b>31,092</b>	<b>39,441</b>	<b>100%</b>

Note: Counts of collisions in the 2011-2015 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 2016 and in the previous five year (2011 to 2015) annual average. In 2016, “motor vehicle to motor vehicle” collisions account for:

- Nearly 62% of all collisions;
- 48% of fatal collisions;
- 81% of injury collisions; and,
- 56% of PDO collisions.

Collisions occurring in urban locations are also predominantly “motor vehicle to motor vehicle” in nature. In urban locations in 2016, “motor vehicle to motor vehicle” collisions account for:

- Nearly 76% of all collisions;
- 52% of fatal collisions;
- 88% of injury collisions; and,
- 72% 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 2016:

- 62% of all collisions are “motor vehicle to animal” in nature (no fatal collisions; nearly 24% of injury collisions; and 68% of PDO collisions);
- Nearly 16% of all collisions are “motor vehicle to fixed object” in nature (31% of fatal collisions; 30% of injury collisions; and 13% of PDO collisions); and,
- Nearly 14% of all collisions are “motor vehicle to motor vehicle” in nature (46% of fatal collisions; 35% of injury collisions; and 10% of PDO collisions).

Collisions with pedestrians (accounting for less than half a percent of all collisions in 2016) account for a high proportion of fatal collisions occurring in urban locations. In 2016, 0.3% of fatal collisions in the province were “motor vehicle to pedestrian”; but in urban locations, 13% of fatal collisions involve a motor vehicle hitting a pedestrian.

## Section 4

## Traffic 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: 2016, 2011-2015 Average

Road Surface Condition	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Dry	66	68.8%	5,538	57.8%	20,301	57.0%	<b>25,905</b>	57.2%	51	4,354	15,733	20,138	51.0%
Wet	7	7.3%	1,126	11.8%	3,646	10.2%	<b>4,779</b>	10.5%	5	903	2,873	3,780	9.6%
Mud	2	2.1%	11	0.1%	122	0.3%	<b>135</b>	0.3%	-	6	67	73	0.2%
Snow	4	4.2%	706	7.4%	3,748	10.5%	<b>4,458</b>	9.8%	4	725	3,663	4,391	11.1%
Ice	5	5.2%	1,560	16.3%	5,251	14.7%	<b>6,816</b>	15.0%	7	1,795	6,855	8,657	21.9%
Slush	2	2.1%	238	2.5%	690	1.9%	<b>930</b>	2.1%	<1	200	594	795	2.0%
Loose Sand/ Gravel/ Dirt	1	1.0%	55	0.6%	238	0.7%	<b>294</b>	0.6%	3	71	266	340	0.9%
Fresh Oil	0	-	6	<0.1%	18	<0.1%	<b>24</b>	<0.1%	-	4	13	17	<0.1%
Other	1	1.0%	28	0.3%	118	0.3%	<b>147</b>	0.3%	<1	17	107	125	0.3%
Not Applicable	1	1.0%	147	1.5%	412	1.2%	<b>560</b>	1.2%	2	132	432	566	1.4%
Unknown	7	7.3%	167	1.7%	1,094	3.1%	<b>1,268</b>	2.8%	4	85	489	578	1.5%
<b>Total</b>	<b>96</b>	<b>100%</b>	<b>9,582</b>	<b>100%</b>	<b>35,638</b>	<b>100%</b>	<b>45,316</b>	<b>100%</b>	<b>77</b>	<b>8,291</b>	<b>31,092</b>	<b>39,460</b>	<b>100%</b>

Note: Counts of collisions in the 2011-2015 average may not add to the total due to rounding.

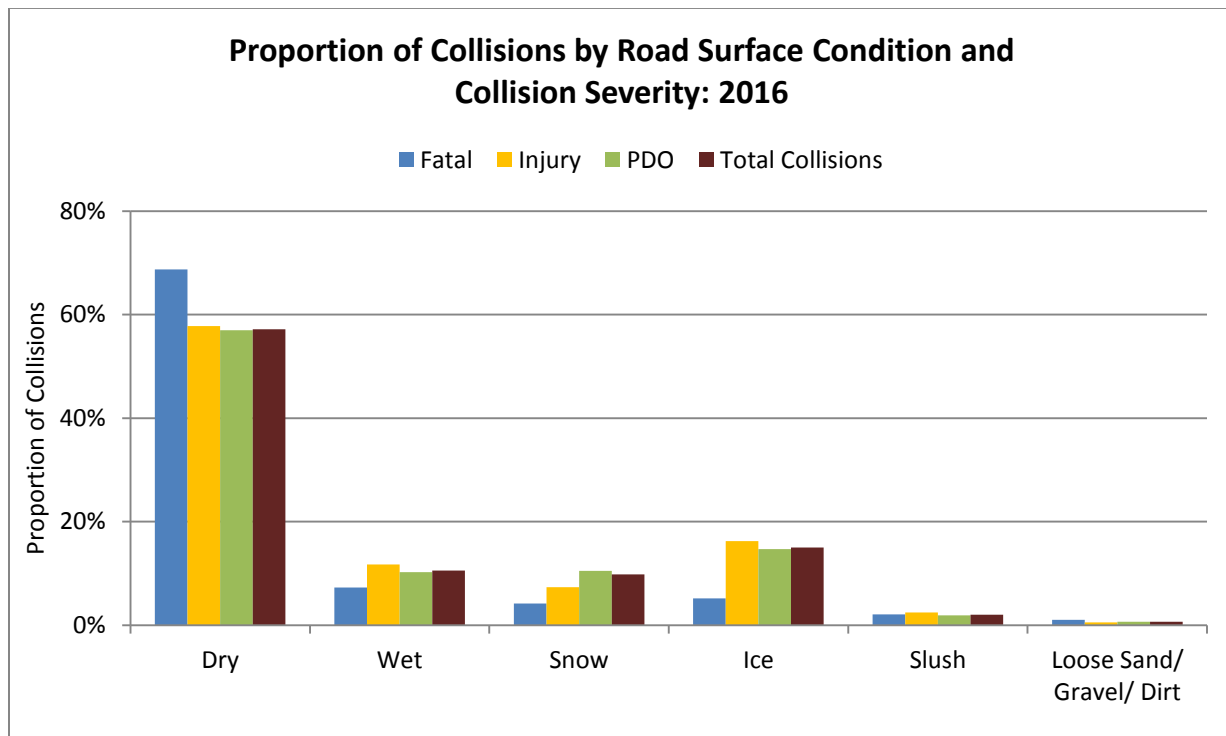
Collisions in Manitoba occur most often under “dry” road conditions. More than half (57%) of all collisions in 2016 and 51% in the previous five year (2011 to 2015) annual average occur on “dry” roads.

In 2016, 69% of fatal collisions occur on “dry” roads. This is consistent with the previous five year (2011 to 2015) annual average.

Icy road conditions account for 15% of all collisions in 2016, including 5% of fatal collisions, 16% of injury collisions and 15% of PDO collisions. This is similar to the previous five year (2011 to 2015) annual average where icy roads account for 22% of all collisions, 10% of fatal collisions, 22% of injury collisions and 22% of PDO collisions.

“Snow” covered and “wet” roads account for the next highest proportions of all collisions in 2016, at 10% and nearly 11% respectively. These proportions are similar to the previous five year (2011 to 2015) annual average (11% and 10% respectively).

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



## Section 4

## Traffic Collisions

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

Table 4-8  
Traffic Collisions by Weather Condition and Collision Severity: 2016, 2011-2015 Average

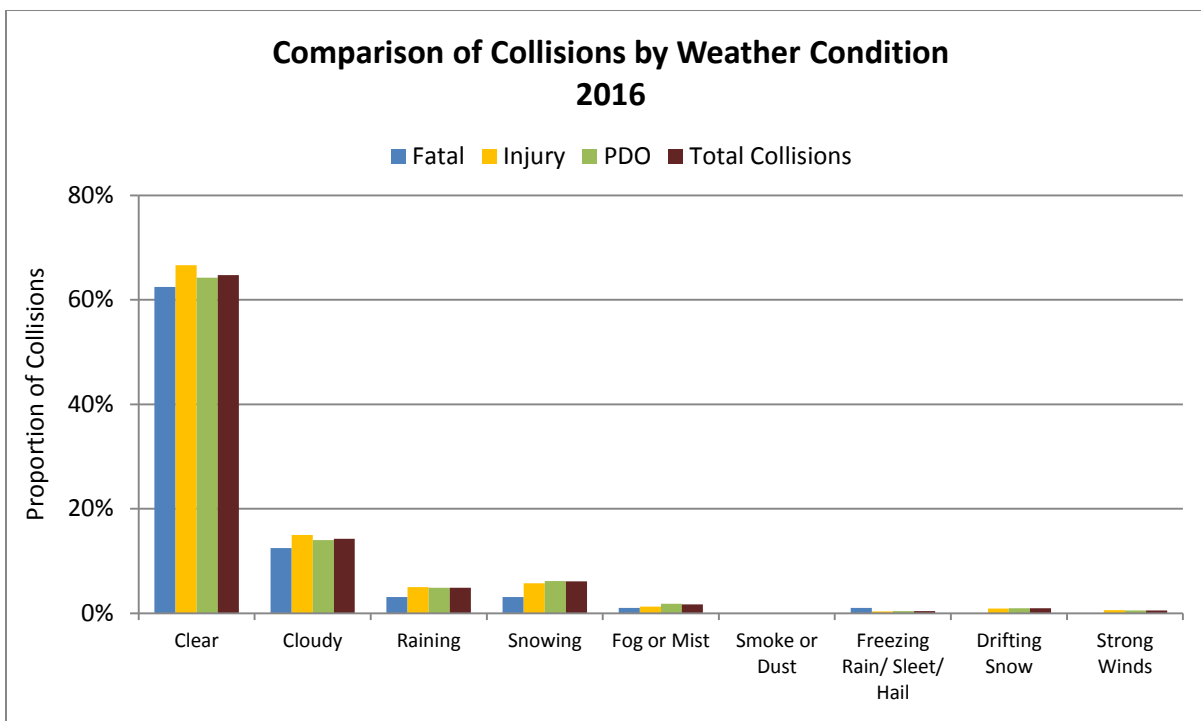
Weather Condition	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Clear	60	62.5%	6,383	66.6%	22,906	64.3%	<b>29,349</b>	64.8%	53	5,592	20,282	25,927	65.7%
Cloudy	12	12.5%	1,438	15.0%	5,002	14.0%	<b>6,452</b>	14.2%	8	1,199	4,435	5,642	14.3%
Raining	3	3.1%	479	5.0%	1,736	4.9%	<b>2,218</b>	4.9%	2	362	1,226	1,591	4.0%
Snowing	3	3.1%	548	5.7%	2,202	6.2%	<b>2,753</b>	6.1%	2	549	2,277	2,827	7.2%
Fog or Mist	1	1.0%	123	1.3%	652	1.8%	<b>776</b>	1.7%	1	86	431	517	1.3%
Smoke or Dust	0	-	8	<0.1%	27	<0.1%	<b>35</b>	<0.1%	<1	9	33	43	0.1%
Freezing Rain/ Sleet/ Hail	1	1.0%	32	0.3%	144	0.4%	<b>177</b>	0.4%	<1	41	161	202	0.5%
Drifting Snow	0	-	87	0.9%	347	1.0%	<b>434</b>	1.0%	3	107	472	582	1.5%
Strong Winds	0	-	56	0.6%	189	0.5%	<b>245</b>	0.5%	2	60	251	313	0.8%
Other	1	1.0%	15	0.2%	97	0.3%	<b>113</b>	0.2%	<1	8	68	76	0.2%
Not Applicable	1	1.0%	157	1.6%	572	1.6%	<b>730</b>	1.6%	2	149	595	746	1.9%
Unknown	14	14.6%	256	2.7%	1,764	4.9%	<b>2,034</b>	4.5%	4	128	861	993	2.5%
<b>Total</b>	<b>96</b>	<b>100%</b>	<b>9,582</b>	<b>100%</b>	<b>35,638</b>	<b>100%</b>	<b>45,316</b>	<b>100%</b>	<b>77</b>	<b>8,291</b>	<b>31,092</b>	<b>39,460</b>	<b>100%</b>

Note: Counts of collisions in the 2011-2015 average may not add to the total due to rounding.

Most collisions in Manitoba occur during “clear” weather conditions. Around two-thirds (65%) of all collisions in 2016 and 66% in the previous five year (2011 to 2015) annual average occur in “clear” weather. This holds for all collisions regardless of severity. Other weather conditions when collisions occur in 2016 include:

- “Cloudy” – 14% of all collisions (nearly 13% of fatal collisions; 15% of injury collisions; 14% of PDO collisions);
- “Snowing” – 6% of all collisions (3% of fatal collisions; 6% of injury collisions; 6% of PDO collisions); and,
- “Raining” – 5% of all collisions (3% of fatal collisions; 5% of injury collisions; 5% of PDO collisions).

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



## Section 4

## Traffic Collisions

Table 4-9 Accident Configuration and Collision Severity

Table 4-9  
Accident Configuration and Collision Severity: 2016, 2011-2015 Average

Accident Configuration	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 Average Count of Collisions				
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO			Fatal	Injury	PDO	Total	% of Total
Rear End	5	9.3%	4,054	50.0%	6,715	30.8%	10,774	36.0%	2	3,394	6,481	9,878	35.6%
Head On	19	35.2%	111	1.4%	365	1.7%	495	1.7%	12	185	1,205	1,401	5.0%
Side Swipe Opposing	0	-	61	0.8%	289	1.3%	350	1.2%	1	66	299	367	1.3%
Side Swipe Same Direction	1	1.9%	450	5.5%	2,960	13.6%	3,411	11.4%	<1	333	2,553	2,886	10.4%
Overtaking	0	-	29	0.4%	133	0.6%	162	0.5%	1	39	249	289	1.0%
Right Turn - Same direction	1	1.9%	32	0.4%	181	0.8%	214	0.7%	-	28	219	247	0.9%
Right Turn - Opposing	0	-	17	0.2%	46	0.2%	63	0.2%	-	13	72	85	0.3%
Left Turn - Opposing	3	5.6%	211	2.6%	341	1.6%	555	1.9%	<1	201	399	600	2.2%
Left Turn - Same direction	0	-	29	0.4%	181	0.8%	210	0.7%	-	37	196	233	0.8%
Left Turn - Across	1	1.9%	208	2.6%	347	1.6%	556	1.9%	<1	164	425	589	2.1%
Intersection 90°	10	18.5%	1,922	23.7%	3,102	14.3%	5,034	16.8%	10	1,554	3,081	4,645	16.7%
Off Road Right	8	14.8%	274	3.4%	822	3.8%	1,104	3.7%	9	266	907	1,182	4.3%
Off Road Left	1	1.9%	184	2.3%	599	2.8%	784	2.6%	6	195	621	822	3.0%
Fixed Object	2	3.7%	314	3.9%	3,388	15.6%	3,704	12.4%	4	315	2,953	3,272	11.8%
Parking	0	-	140	1.7%	2,199	10.1%	2,339	7.8%	-	108	973	1,081	3.9%
Pedestrian	3	5.6%	78	1.0%	100	0.5%	181	0.6%	10	110	68	188	0.7%
Other	42	-	1,468	-	13,870	-	15,380	-	21	1,282	10,393	11,695	-
Total	96	100%	9,582	100%	35,638	100%	45,316	100%	77	8,290	31,092	39,459	100%

Note: Counts of collisions in the 2011-2015 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.

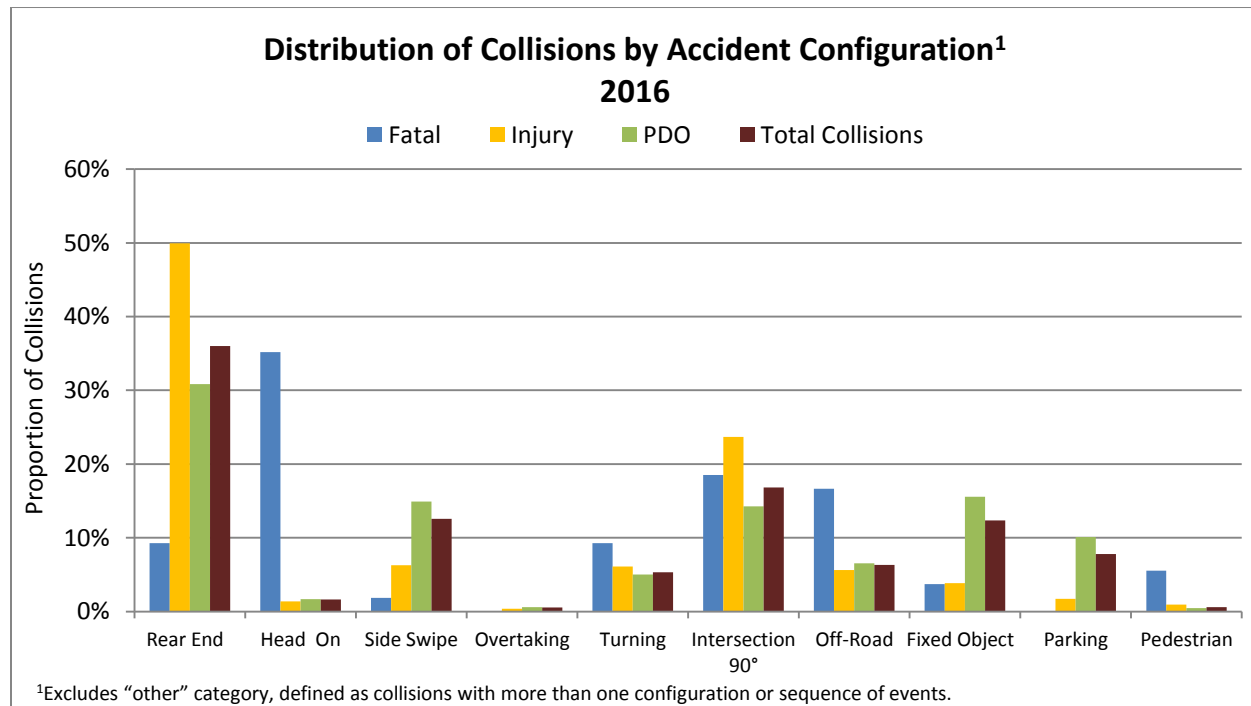
The most common accident configuration (or sequence of events immediately prior to or at the start of a collision) for collisions occurring in Manitoba (excluding “other”) is a “rear end” type. “Rear end” crashes account for 36% of all collisions in 2016 (9% fatal collision; 50% of injury collisions; 31% of PDO collisions) and 36% of all collisions in the previous five year (2011 to 2015) annual average.

Following “rear end” collisions, the next most common accident configurations in 2016 (excluding “other”) are:

- Collisions occurring at “intersection 90°” – 17% of all collisions, nearly 19% of fatal collisions, 24% of injury collisions, and 14% of PDO collisions;
- “Fixed object” collisions – 12% of all collisions, 4% fatal collisions, 4% of injury collisions, and 16% of PDO collisions;
- “Side-swipe” collisions, including in the same or opposing direction – 13% of all collisions, 2% of fatal collision, 6% of injury collisions, and 15% of PDO collisions;
- Collisions where the vehicle leaves the road (either “off road left” or “off road right”) – 6% of all collisions, 17% of fatal collisions, 6% of injury collisions, and nearly 7% of 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, 9% of fatal collision, 6% of injury collisions, and 5% of PDO collisions; and,
- “Head on” collisions – 2% of all collisions, 35% of fatal collisions, 1% of injury collisions, and 2% of 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 2016, 34% of all collisions (44% fatal; 15% injury; 39% PDO) are recorded as “other”. In the previous five year (2011 to 2015) annual average, 30% of all collisions (27% fatal; nearly 16% injury; 33% 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 2016 (35%), followed by collisions occurring at intersections (“intersection 90°” – nearly 19%), collisions as a result of the vehicle leaving the road (“off-road left or right” - 17%), “rear end” collisions (9%), and collisions where at least one vehicle is “turning” (9%).

## 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 2016, there are 12,653 victims (or casualties) of traffic collisions. Of these:

- 107 are killed;
- 478 are seriously injured;
- 2,174 sustain minor injuries;
- 9,710 sustain minimal injuries; and,
- 184 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 2016 (944.7) has increased by 4% compared to 2015 (910.1) and by 13% compared to the previous five years (2011 to 2015) annual average (835.5). Victim involvement rates in traffic collisions in 2016 where the person:

- Is killed (8.0 in 2016) is 35% higher than in 2015 and 17% higher than in the previous five years; and,
- Is injured, including all levels of severity (but excluding killed; 936.8 in 2016), is 4% higher than in 2015 and 13% higher than in the previous five years.

People aged 25 to 34 and 35 to 44 have the highest victim involvement rates (per 100,000 people) overall in 2016.

- Children under age 15 – rate of 222.6
- People aged 15 to 24 – rate of 1,175.1
- People aged 25 to 34 – rate of 1,347.6
- People aged 35 to 44 – rate of 1,347.8
- People aged 45 to 54 – rate of 1,196.8
- People aged 55 and older – rate of 713.5

While women account for more than half of all casualties in traffic collisions (59%), men account for the highest proportion of people killed (63%). Men also account for more of the people seriously injured (51% compared to 49% women).

“Drivers” account for 75% 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 2016, “Pedestrians” account for 12% of people killed in traffic collisions.

In 2016, casualties in traffic collisions most frequently result from crashes occurring:

- In Winnipeg – 74% of all victims;
- In the late fall, winter and early spring months (including October through March) – 57% of all victims; 41% of people killed and nearly 58% of people injured;
- On Thursday (16%) or Friday (nearly 17%); and,
- Between noon and 6 p.m. (12:00-14:59 – 19% of all victims; 15:00 to 17:59 – 29% of all victims).

### Major Elements Examined

Counts of collisions in Manitoba for 2016 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 2011 to 2015. 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.

## Section 5

## Collision Victims

**Table 5-1 Historical Summary of Victims in Traffic Collisions**

Table 5-1  
 Historical Summary of Victims in Traffic Collisions: 2006 to 2016

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		
2006	119	-	484	-	3,458	-	3,945	-	819	-	8,706	-	8,825	-
2007	109	-8.4%	426	-12.0%	3,198	-7.5%	3,994	1.2%	905	10.5%	8,523	-2.1%	8,632	-2.2%
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%
<b>2016</b>	<b>107</b>	<b>37.2%</b>	<b>478</b>	<b>15.2%</b>	<b>2,174</b>	<b>11.7%</b>	<b>9,710</b>	<b>7.7%</b>	<b>184</b>	<b>-67.3%</b>	<b>12,546</b>	<b>5.1%</b>	<b>12,653</b>	<b>5.3%</b>
2011-2015 Average*	87	22.4%	340	40.5%	2,180	-0.3%	7,775	24.9%	395	-53.4%	10,690	17.4%	10,777	17.4%

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

In 2016, there are 12,653 victims (or casualties) of traffic collisions. Of these:

- 107 are killed;
- 478 are seriously injured;
- 2,174 sustain minor injuries;
- 9,710 sustain minimal injuries; and,
- 184 sustain injuries that are undefined in terms of severity.

Overall, the total number of casualties in 2016 (12,653) is 5% higher than in 2015 (12,017). In 2016, there are 29 more people killed than in 2015, 63 more people seriously injured, 227 more people with minor injuries, 696 more people with minimal injuries, and 379 fewer people with other or undefined injuries.

Compared to the previous five year (2011 to 2015) annual average, in 2016:

- The number of people killed is up 22%;
- The number of people seriously injured is up nearly 41%;
- The number of people sustaining minor injuries is down by a count of 6;
- The number of people sustaining minimal injuries is up 25%; and,
- The number of people sustaining “other” injuries is down 53%.

## Section 5

## Collision Victims

**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: 2006 to 2016

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		
2006	10.1	-	41.1	-	293.4	-	334.8	-	69.5	-	738.8	-	748.9	-
2007	9.2	-9.0%	35.9	-12.6%	269.6	-8.1%	336.7	0.6%	76.3	9.8%	718.4	-2.8%	727.6	-2.8%
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%
<b>2016</b>	<b>8.0</b>	<b>35.2%</b>	<b>35.7</b>	<b>13.5%</b>	<b>162.3</b>	<b>10.1%</b>	<b>725.0</b>	<b>6.2%</b>	<b>13.7</b>	<b>-67.8%</b>	<b>936.8</b>	<b>3.6%</b>	<b>944.7</b>	<b>3.8%</b>
2011-2015 Average*	6.8	17.3%	26.4	35.1%	169.6	-4.3%	601.7	20.5%	31.0	-55.7%	828.7	13.0%	835.5	13.1%

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

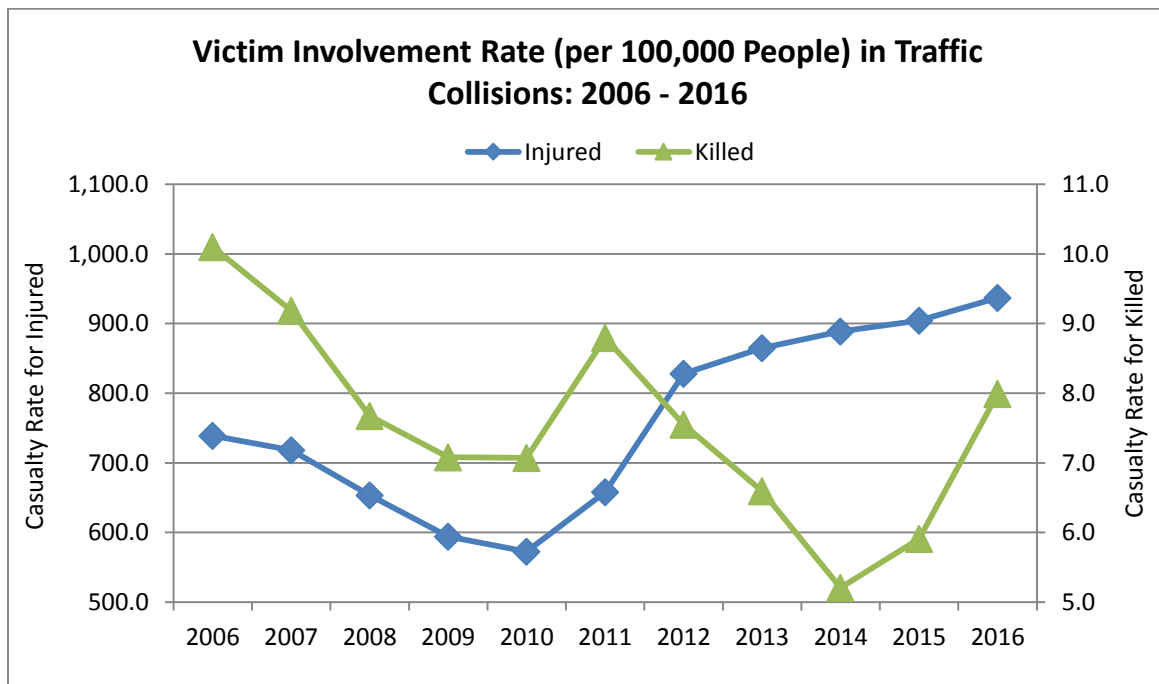
Recognizing that counts of victims of collisions could be impacted either positively or negatively by changing population statistics, involvement rates per 100,000 people in the general population in Manitoba is examined (see Table 5-2) to provide a standardized rate comparison. This accounts for changing 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 2016 (944.7) has increased by 4% compared to 2015 (910.1) and by 13% compared to the previous five years (2011 to 2015 – 835.5) on average.

Casualty involvement rates in traffic collisions in 2016 where a person:

- Is killed (8.0 in 2016) increased by 35% compared to 2015 and by 17% compared to the previous five years;
- Is injured, including all levels of severity (but excluding killed; 936.8 in 2016), increased by 4% compared to 2015 and by 13% compared to the previous five years;
- Is seriously injured (35.7 in 2016) increased by nearly 14% compared to 2015 and by 35% compared to the previous five years;
- Sustains minor injuries (162.3 in 2016) increased by 10% compared to 2015, but decreased by 4% compared to the previous five years;
- Sustains minimal injuries (725.0 in 2016) increased by 6% compared to 2015 and by nearly 21% compared to the previous five years; and,
- Sustains injuries that are unspecified in severity (“other injury”; 13.7 in 2016) decreased by 68% compared to 2015 and by 56% compared to the previous five years.

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



## Section 5

## Collision Victims

**Table 5-3 Collision Victims by Month of Occurrence and Casualty Type**Table 5-3  
Collision Victims by Month of Occurrence and Casualty Type: 2016

Month of Occurrence	2016 Casualty Type												2016 Total Victims	% of 2016 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	0.9%	47	9.8%	177	8.1%	1,151	11.9%	19	10.3%	1,394	11.1%	<b>1,395</b>	11.0%
February	6	5.6%	23	4.8%	185	8.5%	968	10.0%	53	28.8%	1,229	9.8%	<b>1,235</b>	9.8%
March	6	5.6%	36	7.5%	162	7.5%	724	7.5%	31	16.8%	953	7.6%	<b>959</b>	7.6%
April	13	12.1%	43	9.0%	119	5.5%	607	6.3%	17	9.2%	786	6.3%	<b>799</b>	6.3%
May	9	8.4%	44	9.2%	204	9.4%	634	6.5%	6	3.3%	888	7.1%	<b>897</b>	7.1%
June	9	8.4%	35	7.3%	156	7.2%	668	6.9%	10	5.4%	869	6.9%	<b>878</b>	6.9%
July	15	14.0%	37	7.7%	198	9.1%	679	7.0%	12	6.5%	926	7.4%	<b>941</b>	7.4%
August	11	10.3%	44	9.2%	194	8.9%	679	7.0%	19	10.3%	936	7.5%	<b>947</b>	7.5%
September	6	5.6%	42	8.8%	158	7.3%	718	7.4%	5	2.7%	923	7.4%	<b>929</b>	7.3%
October	15	14.0%	36	7.5%	207	9.5%	813	8.4%	5	2.7%	1,061	8.5%	<b>1,076</b>	8.5%
November	12	11.2%	53	11.1%	194	8.9%	885	9.1%	6	3.3%	1,138	9.1%	<b>1,150</b>	9.1%
December	4	3.7%	38	7.9%	220	10.1%	1,184	12.2%	1	0.5%	1,443	11.5%	<b>1,447</b>	11.4%
Total	107	100%	478	100%	2,174	100%	9,710	100%	184	100%	12,546	100%	<b>12,653</b>	100%



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

Table 5-3a

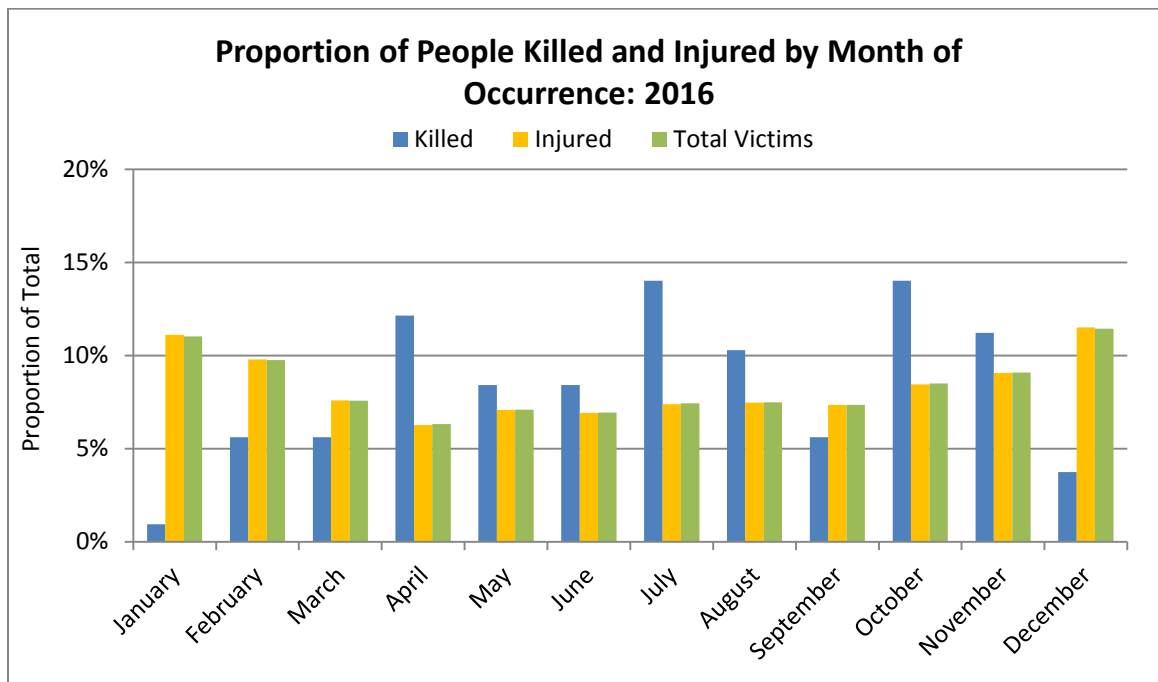
Collision Victims by Month of Occurrence and Casualty Type: 2011-2015 Average

Month of Occurrence	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
January	5	28	214	985	36	1,263	1,268	11.8%
February	5	19	173	737	40	969	974	9.0%
March	2	23	193	650	45	911	913	8.5%
April	6	20	144	439	29	632	638	5.9%
May	8	27	159	491	32	709	717	6.7%
June	8	29	169	488	34	720	728	6.8%
July	12	27	185	469	32	714	725	6.7%
August	9	33	170	500	33	736	745	6.9%
September	11	38	182	529	33	782	793	7.4%
October	8	35	196	651	24	907	914	8.5%
November	7	31	198	883	29	1,141	1,148	10.7%
December	6	30	197	952	27	1,207	1,213	11.3%
Total	87	340	2,180	7,775	395	10,690	10,777	100%

Note: Counts of victims in the 2011-2015 average may not add to the total due to rounding.

Victims in 2016 appear to follow a fairly typical distribution compared to past years in terms of month of occurrence. The winter months (January, February, and December) stand out as the months accounting for a disproportionate number of traffic collision victims overall, both in 2016 (32% of all victims) and in the previous five year (2011 to 2015) annual average (32%). In 2016 (and very similar to the previous five years), the count of victims is lowest in the late spring and summer months (ranging from 6% to nearly 8% of all victims in each month from April to August) and is highest in late fall, winter and early spring (ranging from 8% 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 2016, April, July, August, October, and November account for the highest proportions of people killed (12%, 14%, 10%, 14% and 11% of people killed, respectively) by month. This is somewhat different from the previous five year (2011 to 2015) annual average, where the months of July, August and September account for the highest proportions of deaths.

## Section 5

## Collision Victims

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

Table 5-4  
Collision Victims by Day of Occurrence and Casualty Type: 2016

Day of the Week	2016 Casualty Type												2016 Total Victims	% of 2016 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	22	20.6%	72	15.1%	241	11.1%	934	9.6%	19	10.3%	1,266	10.1%	<b>1,288</b>	10.2%
Monday	9	8.4%	70	14.6%	314	14.4%	1,397	14.4%	31	16.8%	1,812	14.4%	<b>1,821</b>	14.4%
Tuesday	13	12.1%	64	13.4%	316	14.5%	1,508	15.5%	22	12.0%	1,910	15.2%	<b>1,923</b>	15.2%
Wednesday	16	15.0%	44	9.2%	307	14.1%	1,507	15.5%	41	22.3%	1,899	15.1%	<b>1,915</b>	15.1%
Thursday	11	10.3%	66	13.8%	312	14.4%	1,577	16.2%	23	12.5%	1,978	15.8%	<b>1,989</b>	15.7%
Friday	12	11.2%	67	14.0%	370	17.0%	1,605	16.5%	29	15.8%	2,071	16.5%	<b>2,083</b>	16.5%
Saturday	24	22.4%	95	19.9%	314	14.4%	1,182	12.2%	19	10.3%	1,610	12.8%	<b>1,634</b>	12.9%
Total	107	100%	478	100%	2,174	100%	9,710	100%	184	100%	12,546	100%	<b>12,653</b>	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: 2011-2015 Average

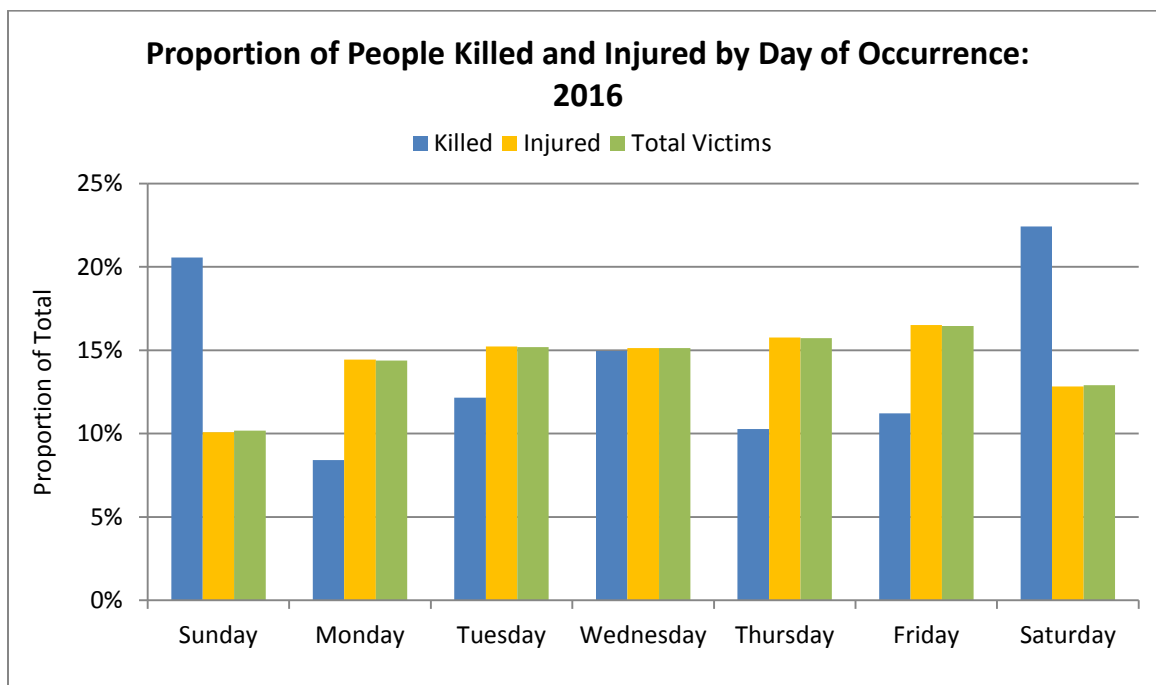
Day of the Week	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Sunday	13	44	245	711	37	1,036	1,049	9.7%
Monday	12	47	298	1,114	49	1,507	1,519	14.1%
Tuesday	8	41	316	1,202	57	1,616	1,624	15.1%
Wednesday	12	47	312	1,249	66	1,674	1,686	15.6%
Thursday	12	46	321	1,228	70	1,665	1,677	15.6%
Friday	16	59	375	1,324	66	1,824	1,840	17.1%
Saturday	15	56	313	948	51	1,368	1,383	12.8%
Total	87	340	2,180	7,775	395	10,690	10,777	100%

Note: Counts of victims in the 2011-2015 average may not add to the total due to rounding.

In 2016, the victims involved in traffic collisions are fairly evenly distributed throughout the week, with lowest on Sunday (10%) and highest on Friday (nearly 17%). This is very similar to the previous five year (2011 to 2015) annual average.

More than half (54%) of people killed in crashes in 2016 were killed on the weekend (11% Friday; 22% Saturday; 21% Sunday). This is similar to the previous five year (2011 to 2015) annual average, where the weekend (Friday, Saturday, and Sunday) is when most people are killed (50% cumulatively).

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



## Section 5

## Collision Victims

**Table 5-5 Collision Victims by Time of Occurrence and Casualty Type**Table 5-5  
Collision Victims by Time of Occurrence and Casualty Type: 2016

Time of the Day	2016 Casualty Type												2016 Total Victims	% of 2016 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	7.5%	19	4.0%	69	3.2%	188	1.9%	6	3.3%	282	2.2%	<b>290</b>	2.3%
03:00 - 05:59	9	8.4%	14	2.9%	32	1.5%	87	0.9%	1	0.5%	134	1.1%	<b>143</b>	1.1%
06:00 - 08:59	12	11.2%	39	8.2%	288	13.2%	1,280	13.2%	27	14.7%	1,634	13.0%	<b>1,646</b>	13.0%
09:00 - 11:59	16	15.0%	74	15.5%	265	12.2%	1,296	13.3%	24	13.0%	1,659	13.2%	<b>1,675</b>	13.2%
12:00 - 14:59	19	17.8%	73	15.3%	409	18.8%	1,898	19.5%	34	18.5%	2,414	19.2%	<b>2,433</b>	19.2%
15:00 - 17:59	11	10.3%	118	24.7%	566	26.0%	2,902	29.9%	46	25.0%	3,632	28.9%	<b>3,643</b>	28.8%
18:00 - 20:59	19	17.8%	95	19.9%	332	15.3%	1,359	14.0%	31	16.8%	1,817	14.5%	<b>1,836</b>	14.5%
21:00 - 23:59	13	12.1%	44	9.2%	196	9.0%	673	6.9%	14	7.6%	927	7.4%	<b>940</b>	7.4%
Not Stated	0	-	2	0.4%	17	0.8%	27	0.3%	1	0.5%	47	0.4%	<b>47</b>	0.4%
<b>Total</b>	<b>107</b>	<b>100%</b>	<b>478</b>	<b>100%</b>	<b>2,174</b>	<b>100%</b>	<b>9,710</b>	<b>100%</b>	<b>184</b>	<b>100%</b>	<b>12,546</b>	<b>100%</b>	<b>12,653</b>	<b>100%</b>

**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: 2011-2015 Average

Time of the Day	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
00:00 - 02:59	6	19	76	152	12	260	266	2.5%
03:00 - 05:59	8	14	52	87	6	160	167	1.6%
06:00 - 08:59	7	37	272	1,007	48	1,365	1,371	12.7%
09:00 - 11:59	10	44	312	1,095	56	1,507	1,517	14.1%
12:00 - 14:59	14	56	396	1,591	78	2,122	2,136	19.8%
15:00 - 17:59	13	76	533	2,302	102	3,012	3,025	28.1%
18:00 - 20:59	13	51	314	1,026	52	1,444	1,456	13.5%
21:00 - 23:59	13	36	200	491	27	754	767	7.1%
Not Stated	4	6	24	23	14	67	71	0.7%
<b>Total</b>	<b>87</b>	<b>340</b>	<b>2,180</b>	<b>7,775</b>	<b>395</b>	<b>10,690</b>	<b>10,777</b>	<b>100%</b>

Note: Counts of victims in the 2011-2015 average may not add to the total due to rounding.

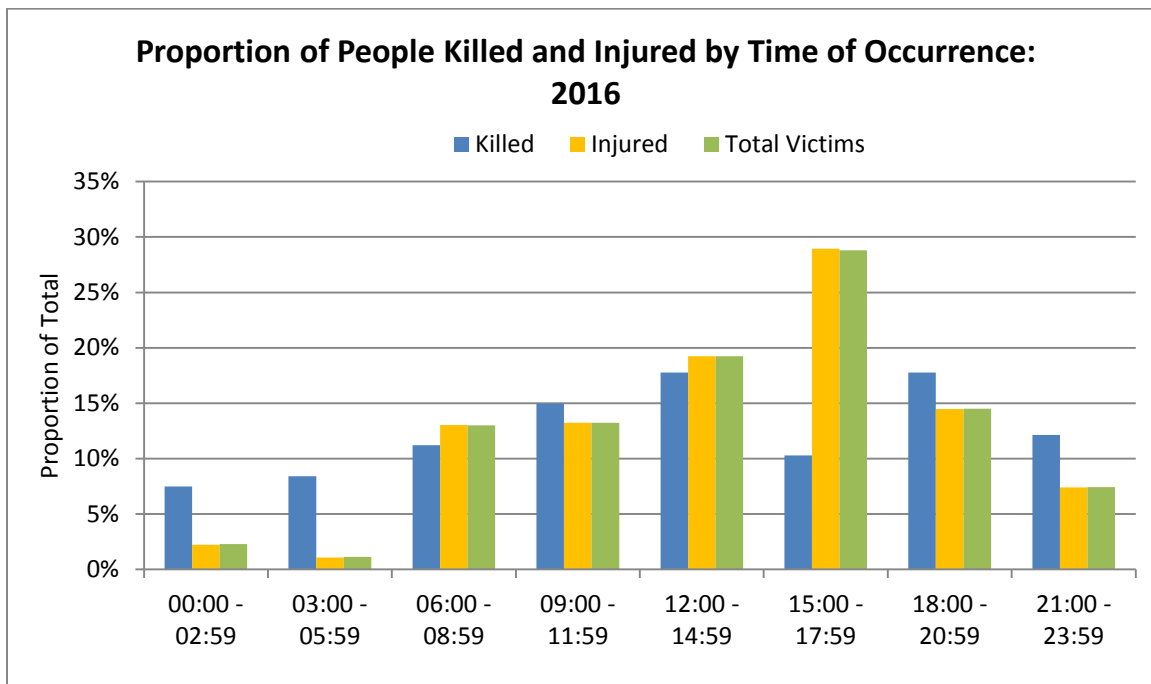
People are most often killed and injured in traffic collisions between noon and 6 p.m. In 2016, 48% of all victims are involved in traffic collisions between 12:00 and 14:59 (19%) and between 15:00 to 17:59 (29%). This is consistent with the previous five year (2011 to 2015) annual average (12:00-14:59 – 20% of all victims; 15:00 to 17:59 – 28% of all victims).

In 2016, most people are killed between noon and midnight (12:00-17:59 – 28% of people killed, 18:00 – 23:59 – 30% killed). This is similar to the previous five year (2011 to 2015) annual average where 31% of people are killed between noon and 6 p.m. and 29% are killed in collisions between 6 p.m. and midnight.

Comparing 2016 to the previous five year (2011 to 2015) annual average, there are small differences in the proportional distribution of people killed by time of the day. In 2016:

- 26% of people are killed between 6 a.m. and noon (06:00-08:59 – 11%; 09:00-11:59 – 15%), compared to nearly 19% in the previous five years;
- 28% of people are killed between noon and 6 p.m. (12:00-14:59 – 18%; 15:00 to 17:59 – 10%), compared to 31% in the previous five years;
- 30% of people are killed between 6 p.m. and midnight (18:00-20:59 – 18%; 21:00 to 23:59 – 12%), compared to 29% in the previous five years; and,
- 16% of people are killed between midnight to 6 a.m. (00:00-02:59 – nearly 8%; 03:00-05:59 – 8%), compared to 16% in the previous five years.

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



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## Collision Victims

**Table 5-6 Collision Victims by Gender and Casualty Type**Table 5-6  
Collision Victims by Gender and Casualty Type: 2016

Gender	2016 Casualty Type												2016 Total Victims	% of 2016 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	40	37.4%	235	49.2%	1,171	55.7%	5,742	60.6%	90	51.7%	7,238	59.2%	<b>7,278</b>	59.0%
Male	67	62.6%	243	50.8%	932	44.3%	3,738	39.4%	84	48.3%	4,997	40.8%	<b>5,064</b>	41.0%
Total	107	100%	478	100%	2,103	100%	9,480	100%	174	100%	12,235	100%	<b>12,342</b>	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: 2011-2015 Average

Gender	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Female	27	152	1,207	4,554	214	6,127	6,154	58.9%
Male	60	180	880	2,992	175	4,228	4,288	41.1%
Total	87	332	2,087	7,546	389	10,355	10,442	100%

Note: Counts of victims in the 2011-2015 average may not add to the total due to rounding.

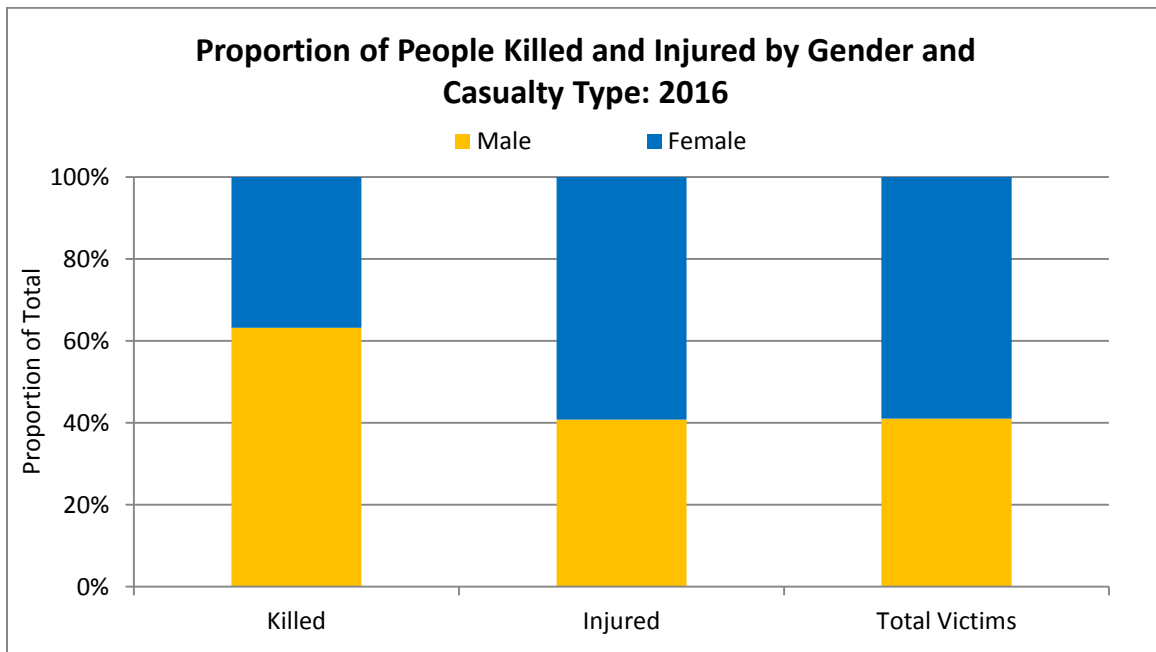
Note: Some victims do not have age and gender recorded and are therefore missing from the table above.



In 2016, women account for 59% of all casualties in traffic collisions, same as the previous five year (2011 to 2015) annual average (59%). In 2016:

- Men account for a higher proportion of people killed (63%) than women, similar to the previous five years when men accounted for 69% of victims killed;
- Women account for the majority of people injured (but not killed) overall (59%), same as the previous five years (59%);
- Men account for just over half of people seriously injured (51% compared to 49% women), similar to the previous five years (54% men compared to 46% women); and,
- Women account for more people sustaining minor injuries (56%) and minimal injuries (61%) than men, similar to the previous five years (minor injuries – 58%; minimal injuries – 60%).

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



## Section 5

## Collision Victims

**Table 5-7 Collision Victims by Age Group and Casualty Type**Table 5-7  
Collision Victims by Age Group and Casualty Type: 2016

Age Group	2016 Casualty Type												2016 Total Victims	% of 2016 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	-	11	2.3%	44	2.1%	134	1.4%	4	2.3%	193	1.6%	<b>193</b>	1.6%
5-9	0	-	14	2.9%	48	2.3%	126	1.3%	3	1.7%	191	1.6%	<b>191</b>	1.6%
10-14	3	2.8%	4	0.8%	39	1.9%	126	1.3%	5	2.9%	174	1.4%	<b>177</b>	1.4%
15-19	12	11.2%	51	10.7%	204	9.8%	585	6.2%	10	5.8%	850	7.0%	<b>862</b>	7.0%
20-24	10	9.3%	58	12.2%	266	12.7%	944	10.0%	13	7.5%	1,281	10.5%	<b>1,291</b>	10.5%
25-34	25	23.4%	72	15.2%	441	21.1%	1,974	20.9%	29	16.8%	2,516	20.6%	<b>2,541</b>	20.7%
35-44	14	13.1%	70	14.7%	300	14.3%	1,898	20.1%	29	16.8%	2,297	18.8%	<b>2,311</b>	18.8%
45-54	14	13.1%	66	13.9%	307	14.7%	1,694	17.9%	30	17.3%	2,097	17.2%	<b>2,111</b>	17.2%
55-64	9	8.4%	58	12.2%	260	12.4%	1,247	13.2%	29	16.8%	1,594	13.1%	<b>1,603</b>	13.0%
65+	20	18.7%	71	14.9%	183	8.7%	725	7.7%	21	12.1%	1,000	8.2%	<b>1,020</b>	8.3%
Not Stated	0	-	3	-	11	-	27	-	1	-	42	-	<b>42</b>	-
<b>Total</b>	<b>107</b>	<b>100%</b>	<b>478</b>	<b>100%</b>	<b>2,103</b>	<b>100%</b>	<b>9,480</b>	<b>100%</b>	<b>174</b>	<b>100%</b>	<b>12,235</b>	<b>100%</b>	<b>12,342</b>	<b>100%</b>

\*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: 2011-2015 Average

Age Group	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
0-4	1	3	35	82	2	122	123	1.2%
5-9	1	3	43	81	5	132	133	1.3%
10-14	2	6	44	97	5	151	153	1.5%
15-19	11	35	238	494	21	787	798	7.9%
20-24	12	42	261	782	23	1,109	1,121	11.1%
25-34	14	56	384	1,547	49	2,036	2,049	20.4%
35-44	10	49	323	1,431	41	1,845	1,855	18.4%
45-54	11	43	317	1,421	35	1,816	1,827	18.2%
55-64	7	38	213	909	26	1,187	1,194	11.9%
65+	19	52	179	546	13	791	809	8.0%
Not Stated	-	5	49	156	170	380	380	-
Total	87	332	2,087	7,546	389	10,355	10,442	100%

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

Note: Counts of victims in the 2011-2015 average may not add to the total due to rounding.

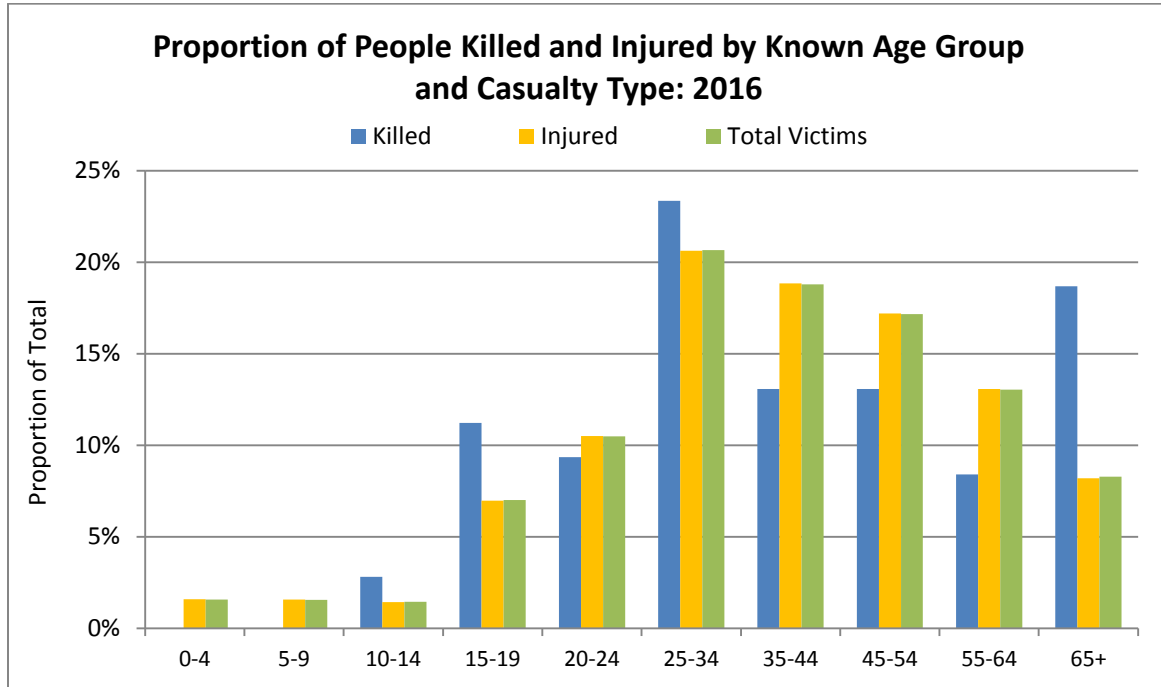
Note: Some victims do not have age and gender recorded and are therefore missing from the table above.

Victims aged 25 to 34 account for the highest proportion of casualties in 2016 (21% of all casualties; 23% of people killed; 15% of people seriously injured), followed by those aged 35 to 44 (19% of all casualties; 13% of people killed; 15% of people seriously injured) and those age 45 to 54 (17% of all casualties; 13% of people killed; 14% 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 2016 is very similar to what it has been in the previous five year (2011 to 2015) annual average. In the previous five years, victims aged 25 to 34 (20% of all victims) account for the largest group, followed by victims aged 35 to 44 (18% of all victims) and those aged 45 to 54 (18% of all victims). Victims aged 15 to 19 and 20 to 24 account for 8% and 11% of all victims in the five year period (2011 to 2015), respectively.

In 2016, 44% of all people killed are aged 15 to 34 (11% aged 15-19; 9% aged 20-24; 23% aged 25-34), 26% are aged 35 to 54, and 27% are aged 55 and older. In the previous five year (2011 to 2015) annual average, 42% of people killed are aged 15 to 34, 24% are aged 35 to 54, and 30% are aged 55 and older.

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



In 2016, people aged 25 to 34 make up the largest group of people killed in traffic collisions (23%), followed by those aged 65 and older (19%).

NOTE: For a detailed count of collision victims for 2016 and the previous five year (2011 to 2015) 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.

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Collision Victims

**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: 2016

Age Group		2016 Casualty Type											2016 Total Victims	% of 2016 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	-	5	2.1%	18	1.5%	69	1.2%	3	3.3%	95	1.3%	95	1.3%
	5-9	0	-	7	3.0%	21	1.8%	66	1.2%	1	1.1%	95	1.3%	95	1.3%
	10-14	3	7.5%	1	0.4%	26	2.2%	79	1.4%	2	2.2%	108	1.5%	111	1.5%
	15-19	3	7.5%	26	11.1%	127	10.9%	344	6.0%	6	6.7%	503	7.0%	506	7.0%
	20-24	2	5.0%	26	11.1%	151	13.0%	594	10.4%	8	8.9%	779	10.8%	781	10.8%
	25-34	8	20.0%	37	15.8%	255	21.9%	1,183	20.7%	17	18.9%	1,492	20.7%	1,500	20.7%
	35-44	4	10.0%	41	17.5%	156	13.4%	1,169	20.4%	14	15.6%	1,380	19.1%	1,384	19.1%
	45-54	6	15.0%	27	11.5%	181	15.5%	1,053	18.4%	11	12.2%	1,272	17.6%	1,278	17.6%
	55-64	1	2.5%	30	12.8%	136	11.7%	734	12.8%	16	17.8%	916	12.7%	917	12.6%
	65+	13	32.5%	34	14.5%	93	8.0%	434	7.6%	12	13.3%	573	7.9%	586	8.1%
	Not Stated	0	-	1	-	7	-	17	-	0	-	25	-	25	-
<b>Total Female</b>	<b>40</b>	<b>100%</b>	<b>235</b>	<b>100%</b>	<b>1,171</b>	<b>100%</b>	<b>5,742</b>	<b>100%</b>	<b>90</b>	<b>100%</b>	<b>7,238</b>	<b>100%</b>	<b>7,278</b>	100%	
Male	0-4	0	-	6	2.5%	26	2.8%	65	1.7%	1	1.2%	98	2.0%	98	1.9%
	5-9	0	-	7	2.9%	27	2.9%	60	1.6%	2	2.4%	96	1.9%	96	1.9%
	10-14	0	-	3	1.2%	13	1.4%	47	1.3%	3	3.6%	66	1.3%	66	1.3%
	15-19	9	13.4%	25	10.4%	77	8.3%	241	6.5%	4	4.8%	347	7.0%	356	7.1%
	20-24	8	11.9%	32	13.3%	115	12.4%	350	9.4%	5	6.0%	502	10.1%	510	10.1%
	25-34	17	25.4%	35	14.5%	186	20.0%	791	21.2%	12	14.5%	1,024	20.6%	1,041	20.6%
	35-44	10	14.9%	29	12.0%	144	15.5%	729	19.6%	15	18.1%	917	18.4%	927	18.4%
	45-54	8	11.9%	39	16.2%	126	13.6%	641	17.2%	19	22.9%	825	16.6%	833	16.5%
	55-64	8	11.9%	28	11.6%	124	13.4%	513	13.8%	13	15.7%	678	13.6%	686	13.6%
	65+	7	10.4%	37	15.4%	90	9.7%	291	7.8%	9	10.8%	427	8.6%	434	8.6%
	Not Stated	0	-	2	-	4	-	10	-	1	-	17	-	17	-
<b>Total Male</b>	<b>67</b>	<b>100%</b>	<b>243</b>	<b>100%</b>	<b>932</b>	<b>100%</b>	<b>3,738</b>	<b>100%</b>	<b>84</b>	<b>100%</b>	<b>4,997</b>	<b>100%</b>	<b>5,064</b>	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: 2011-2015 Average

Age Group		2011-2015 Average Count of Victims							
		Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Female	0-4	1	2	19	46	<1	68	69	1.2%
	5-9	<1	1	20	42	2	65	66	1.1%
	10-14	<1	3	20	55	3	81	82	1.4%
	15-19	3	17	141	295	10	463	467	7.9%
	20-24	5	21	155	481	13	670	675	11.4%
	25-34	4	23	231	941	29	1,224	1,228	20.7%
	35-44	2	22	189	876	23	1,110	1,112	18.7%
	45-54	4	20	177	870	19	1,086	1,090	18.3%
	55-64	1	17	121	549	18	705	706	11.9%
	65+	7	23	104	311	7	445	451	7.6%
	Not Stated	-	2	28	88	90	209	209	-
	Total Female	27	152	1,207	4,554	214	6,127	6,154	100%
Male	0-4	<1	<1	17	35	1	54	54	1.3%
	5-9	1	2	22	39	3	66	67	1.6%
	10-14	1	3	24	42	2	70	71	1.7%
	15-19	7	18	96	198	10	324	331	8.0%
	20-24	7	22	106	301	11	439	446	10.8%
	25-34	9	32	153	607	20	812	821	19.9%
	35-44	8	27	134	556	18	735	743	18.1%
	45-54	7	23	140	551	16	730	737	17.9%
	55-64	6	21	93	360	8	481	488	11.8%
	65+	12	29	75	235	6	346	358	8.7%
	Not Stated	-	2	21	68	80	171	171	-
	Total Male	60	180	880	2,992	175	4,228	4,288	100%

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

Note: Counts of victims in the 2011-2015 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.

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**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: 2016, 2011-2015 Average

Age Group		2016 Casualty Type						2016 Total Victims	2011-2015 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	-	12.1	43.6	167.0	7.3	230.0	<b>230.0</b>	2.5	5.9	46.0	114.6	1.0	167.5	170.0
	5-9	-	16.6	49.8	156.4	2.4	225.1	<b>225.1</b>	0.5	3.0	51.4	105.3	5.0	164.7	165.2
	10-14	7.7	2.6	66.3	201.6	5.1	275.6	<b>283.2</b>	1.0	7.1	51.9	140.9	6.6	206.5	207.5
	15-19	7.2	62.7	306.2	829.4	14.5	1,212.7	<b>1,219.9</b>	7.9	39.0	328.0	685.8	23.7	1,076.6	1,084.5
	20-24	4.2	55.1	320.0	1,258.9	17.0	1,651.0	<b>1,655.3</b>	10.8	44.5	335.4	1,040.4	27.2	1,447.5	1,458.3
	25-34	8.5	39.2	269.9	1,252.1	18.0	1,579.2	<b>1,587.7</b>	4.8	26.8	265.2	1,078.1	32.8	1,402.9	1,407.7
	35-44	4.7	47.8	181.8	1,362.1	16.3	1,608.0	<b>1,612.6</b>	2.4	26.3	228.3	1,056.7	27.8	1,339.1	1,341.5
	45-54	6.8	30.7	205.8	1,197.0	12.5	1,446.0	<b>1,452.8</b>	4.0	22.3	195.5	958.4	20.9	1,197.2	1,201.1
	55-64	1.2	35.7	161.7	873.0	19.0	1,089.4	<b>1,090.6</b>	1.3	21.6	153.2	696.3	23.3	894.4	895.6
	65+	11.8	30.9	84.5	394.2	10.9	520.5	<b>532.3</b>	13.4	47.3	211.8	633.0	13.8	905.9	919.4
	<b>Total Female</b>	<b>5.9</b>	<b>34.9</b>	<b>173.8</b>	<b>852.2</b>	<b>13.4</b>	<b>1,074.2</b>	<b>1,080.1</b>	4.2	23.5	186.6	704.2	33.1	947.3	951.5
Male	0-4	-	13.7	59.2	148.0	2.3	223.2	<b>223.2</b>	0.5	1.9	39.6	84.5	3.3	129.4	129.9
	5-9	-	15.9	61.4	136.3	4.5	218.1	<b>218.1</b>	2.5	3.9	55.1	96.9	6.9	162.7	165.2
	10-14	-	7.2	31.4	113.4	7.2	159.3	<b>159.3</b>	2.9	6.9	57.8	101.9	5.4	172.0	175.0
	15-19	20.3	56.3	173.4	542.7	9.0	781.4	<b>801.7</b>	16.6	41.2	215.8	444.2	23.3	724.4	741.0
	20-24	16.0	63.8	229.3	697.9	10.0	1,000.9	<b>1,016.9</b>	14.7	45.7	222.1	630.2	22.6	920.5	935.2
	25-34	18.1	37.2	197.7	840.8	12.8	1,088.5	<b>1,106.6</b>	10.8	37.0	175.5	696.8	23.0	932.2	943.0
	35-44	11.7	33.9	168.1	851.2	17.5	1,070.7	<b>1,082.4</b>	9.7	32.9	162.5	672.7	22.0	890.2	899.8
	45-54	9.0	44.1	142.5	724.9	21.5	933.0	<b>942.0</b>	7.9	25.0	153.0	604.4	17.3	799.8	807.7
	55-64	9.6	33.5	148.2	613.1	15.5	810.2	<b>819.8</b>	8.2	27.1	118.5	460.2	10.2	616.0	624.2
	65+	7.8	41.2	100.3	324.1	10.0	475.6	<b>483.4</b>	28.4	67.9	175.3	547.0	14.0	804.2	832.6
	<b>Total Male</b>	<b>10.1</b>	<b>36.5</b>	<b>140.0</b>	<b>561.7</b>	<b>12.6</b>	<b>750.9</b>	<b>760.9</b>	9.4	28.1	137.4	466.9	27.4	659.8	669.2

Note: Counts of victims in the 2011-2015 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 2016 is 1,080.1, while for males it is 760.9 (per 100,000 people). Similarly, in the previous five year (2011 to 2015) annual average, women have a higher involvement rate than men (women 951.5; men 669.2). However, men have higher involvement rates than women when it comes to being killed and sustaining serious injuries.

People aged 25 to 34 and 35 to 44 have the highest victim involvement rates (per 100,000 people) overall in 2016.

- Children under age 15 – rate of 222.6
- People aged 15 to 24 – rate of 1,175.1
- People aged 25 to 34 – rate of 1,347.6
- People aged 35 to 44 – rate of 1,347.8
- People aged 45 to 54 – rate of 1,196.8
- People aged 55 and older – rate of 713.5

In 2016, women aged 20 to 24 have the highest victim involvement rate of any age-gender group (1,655.3 per 100,000 people) followed by women aged 35 to 44 (1,612.6) and women aged 25 to 34 (1,587.7).

While the victim involvement rates for young men is lower than young women in 2016, men aged 25 to 34 have the highest rate among male age groups (1,106.6 per 100,000 people) followed by men aged 35 to 44 (1,082.4) and men aged 20 to 24 (1,016.9).

The overall victim involvement rates in 2016 are generally higher than the rates in the previous five year (2011 to 2015) annual average.

- Compared to the previous five years, victim involvement rates for women increased by nearly 14% overall. The rate for women killed and seriously injured in 2016 increased by 40% and 49%, respectively, compared to the previous five years.
- Compared to the previous five years, victim involvement rates for men increased by 14% overall. The rate for men killed and seriously injured in 2016 increased by nearly 8% and 30%, respectively, compared to the previous five years.



## Section 5

## Collision Victims

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: 2016

Age Group		2016 Casualty Type											2016 Total Victims	% of 2016 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	-	0	-	0	-	0	-	1	1.0%	1	<0.1%	1	<0.1%
	15-19	8	14.3%	27	10.2%	145	9.8%	400	5.3%	9	8.7%	581	6.2%	589	6.3%
	20-24	6	10.7%	36	13.6%	194	13.1%	772	10.3%	7	6.8%	1,009	10.8%	1,015	10.8%
	25-34	13	23.2%	43	16.2%	354	23.8%	1,653	22.0%	20	19.4%	2,070	22.1%	2,083	22.1%
	35-44	7	12.5%	45	17.0%	236	15.9%	1,627	21.7%	18	17.5%	1,926	20.6%	1,933	20.5%
	45-54	7	12.5%	38	14.3%	233	15.7%	1,431	19.1%	21	20.4%	1,723	18.4%	1,730	18.4%
	55-64	7	12.5%	33	12.5%	191	12.9%	1,038	13.8%	17	16.5%	1,279	13.7%	1,286	13.7%
	65+	8	14.3%	43	16.2%	132	8.9%	580	7.7%	10	9.7%	765	8.2%	773	8.2%
	Not Stated	0	-	0	-	2	-	5	-	0	-	7	-	7	-
<b>Total Drivers*</b>	<b>56</b>	<b>100%</b>	<b>265</b>	<b>100%</b>	<b>1,487</b>	<b>100%</b>	<b>7,506</b>	<b>100%</b>	<b>103</b>	<b>100%</b>	<b>9,361</b>	<b>100%</b>	<b>9,417</b>	100%	
Passenger	0-4	0	-	10	7.7%	46	9.7%	114	6.4%	2	9.1%	172	7.1%	172	7.0%
	5-9	0	-	12	9.2%	44	9.2%	120	6.7%	0	-	176	7.3%	176	7.2%
	10-14	3	10.3%	4	3.1%	36	7.6%	124	6.9%	0	-	164	6.8%	167	6.8%
	15-19	2	6.9%	17	13.1%	55	11.6%	178	10.0%	1	4.5%	251	10.4%	253	10.4%
	20-24	2	6.9%	12	9.2%	56	11.8%	154	8.6%	4	18.2%	226	9.4%	228	9.3%
	25-34	8	27.6%	13	10.0%	65	13.7%	301	16.8%	2	9.1%	381	15.8%	389	15.9%
	35-44	4	13.8%	16	12.3%	41	8.6%	240	13.4%	5	22.7%	302	12.5%	306	12.5%
	45-54	2	6.9%	14	10.8%	43	9.0%	234	13.1%	3	13.6%	294	12.2%	296	12.1%
	55-64	1	3.4%	12	9.2%	48	10.1%	182	10.2%	2	9.1%	244	10.1%	245	10.0%
	65+	7	24.1%	20	15.4%	42	8.8%	140	7.8%	3	13.6%	205	8.5%	212	8.7%
	Not Stated	0	-	2	-	37	-	109	-	0	-	148	-	148	-
<b>Total Passengers*</b>	<b>29</b>	<b>100%</b>	<b>132</b>	<b>100%</b>	<b>513</b>	<b>100%</b>	<b>1,896</b>	<b>100%</b>	<b>22</b>	<b>100%</b>	<b>2,563</b>	<b>100%</b>	<b>2,592</b>	100%	

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Section 5

Collision Victims

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Age Group		2016 Casualty Type											2016 Total Victims	% of 2016 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	2.9%	2	3.7%	1	1.4%	0	-	4	2.5%	4	2.4%
	20-24	0	-	5	14.3%	6	11.1%	7	9.6%	0	-	18	11.0%	18	10.8%
	25-34	1	33.3%	6	17.1%	7	13.0%	14	19.2%	0	-	27	16.6%	28	16.9%
	35-44	1	33.3%	3	8.6%	11	20.4%	18	24.7%	0	-	32	19.6%	33	19.9%
	45-54	1	33.3%	8	22.9%	14	25.9%	16	21.9%	1	100.0%	39	23.9%	40	24.1%
	55-64	0	-	8	22.9%	11	20.4%	15	20.5%	0	-	34	20.9%	34	20.5%
	65+	0	-	4	11.4%	3	5.6%	2	2.7%	0	-	9	5.5%	9	5.4%
	Not Stated	0	-	0	-	0	-	0	-	0	-	0	-	0	-
	<b>Total Motorcyclists*</b>	<b>3</b>	<b>100%</b>	<b>35</b>	<b>100%</b>	<b>54</b>	<b>100%</b>	<b>73</b>	<b>100%</b>	<b>1</b>	<b>100%</b>	<b>163</b>	<b>100%</b>	<b>166</b>	<b>100%</b>
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	-	0	-	0	-	0	-	0	-	0	-
	20-24	0	-	0	-	0	-	1	20.0%	0	-	1	7.7%	1	7.7%
	25-34	0	-	0	-	2	40.0%	1	20.0%	0	-	3	23.1%	3	23.1%
	35-44	0	-	1	50.0%	2	40.0%	1	20.0%	0	-	4	30.8%	4	30.8%
	45-54	0	-	1	50.0%	1	20.0%	1	20.0%	0	-	3	23.1%	3	23.1%
	55-64	0	-	0	-	0	-	1	20.0%	0	-	1	7.7%	1	7.7%
	65+	0	-	0	-	0	-	0	-	1	100.0%	1	7.7%	1	7.7%
	Not Stated	0	-	0	-	0	-	0	-	0	-	0	-	0	-
	<b>Total Moped*</b>	<b>0</b>	<b>0%</b>	<b>2</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>1</b>	<b>100%</b>	<b>13</b>	<b>100%</b>	<b>13</b>	<b>100%</b>

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Collision Victims

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Age Group		2016 Casualty Type											2016 Total Victims	% of 2016 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	-	0	-	3	7.3%	0	-	3	2.7%	3	2.6%
	5-9	0	-	0	-	2	5.1%	1	2.4%	0	-	3	2.7%	3	2.6%
	10-14	0	-	0	-	2	5.1%	1	2.4%	2	11.1%	5	4.5%	5	4.4%
	15-19	0	-	3	25.0%	2	5.1%	5	12.2%	0	-	10	9.1%	10	8.8%
	20-24	0	-	1	8.3%	8	20.5%	5	12.2%	0	-	14	12.7%	14	12.3%
	25-34	0	-	3	25.0%	8	20.5%	8	19.5%	3	16.7%	22	20.0%	22	19.3%
	35-44	2	50.0%	1	8.3%	7	17.9%	5	12.2%	5	27.8%	18	16.4%	20	17.5%
	45-54	1	25.0%	2	16.7%	6	15.4%	6	14.6%	3	16.7%	17	15.5%	18	15.8%
	55-64	0	-	1	8.3%	2	5.1%	4	9.8%	3	16.7%	10	9.1%	10	8.8%
	65+	1	25.0%	1	8.3%	2	5.1%	3	7.3%	2	11.1%	8	7.3%	9	7.9%
	Not Stated	0	-	0	-	0	-	0	-	0	-	0	-	0	-
	<b>Total Bicyclists*</b>	<b>4</b>	<b>100%</b>	<b>12</b>	<b>100%</b>	<b>39</b>	<b>100%</b>	<b>41</b>	<b>100%</b>	<b>18</b>	<b>100%</b>	<b>110</b>	<b>100%</b>	<b>114</b>	100%
Pedestrian	0-4	0	-	1	3.8%	1	2.1%	2	3.8%	1	4.3%	5	3.4%	5	3.1%
	5-9	0	-	1	3.8%	3	6.3%	1	1.9%	1	4.3%	6	4.0%	6	3.7%
	10-14	0	-	0	-	2	4.2%	0	-	0	-	2	1.3%	2	1.2%
	15-19	2	15.4%	3	11.5%	2	4.2%	4	7.7%	2	8.7%	11	7.4%	13	8.0%
	20-24	2	15.4%	3	11.5%	5	10.4%	5	9.6%	2	8.7%	15	10.1%	17	10.5%
	25-34	3	23.1%	5	19.2%	7	14.6%	7	13.5%	4	17.4%	23	15.4%	26	16.0%
	35-44	0	-	3	11.5%	4	8.3%	11	21.2%	2	8.7%	20	13.4%	20	12.3%
	45-54	1	7.7%	3	11.5%	9	18.8%	12	23.1%	2	8.7%	26	17.4%	27	16.7%
	55-64	1	7.7%	4	15.4%	11	22.9%	7	13.5%	5	21.7%	27	18.1%	28	17.3%
	65+	4	30.8%	3	11.5%	4	8.3%	3	5.8%	4	17.4%	14	9.4%	18	11.1%
	Not Stated	0	-	1	-	1	-	2	-	6	-	10	-	10	-
	<b>Total Pedestrians*</b>	<b>13</b>	<b>100%</b>	<b>27</b>	<b>100%</b>	<b>49</b>	<b>100%</b>	<b>54</b>	<b>100%</b>	<b>29</b>	<b>100%</b>	<b>159</b>	<b>100%</b>	<b>172</b>	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 2016, there are 87 victims in the class "Riding/hanging on" (i.e., not in the passenger compartment) who are not included in Table 5-10. This includes 2 people killed, 2 with a serious injury, 14 with minor injuries, 60 with minimal injuries, and 9 with other injuries.

Note: Some victims do not have their position in the vehicle recorded and are therefore missing from the table above. This includes 92 injured people (3 serious, 13 minor, 75 minimal injured, 1 'other').

**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: 2011-2015 Average

Age Group		2011-2015 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	2	<0.1%
	15-19	4	19	153	355	14	541	545	6.9%
	20-24	6	24	190	644	15	874	879	11.1%
	25-34	8	36	296	1,328	39	1,698	1,706	21.6%
	35-44	5	34	252	1,264	35	1,584	1,590	20.1%
	45-54	7	27	246	1,240	28	1,541	1,548	19.6%
	55-64	5	24	162	780	21	987	992	12.6%
	65+	11	38	129	446	9	623	634	8.0%
	Not Stated	-	<1	19	73	107	199	199	-
	Total Drivers*	46	203	1,448	6,134	267	8,052	8,098	100%
Passenger	0-4	1	3	38	100	2	143	144	7.3%
	5-9	1	2	42	87	4	135	136	6.9%
	10-14	<1	3	39	107	4	153	154	7.8%
	15-19	4	13	75	145	5	239	243	12.3%
	20-24	3	12	56	130	5	203	207	10.5%
	25-34	3	12	65	205	8	290	294	14.9%
	35-44	3	9	53	161	4	227	229	11.6%
	45-54	2	7	53	169	5	234	236	11.9%
	55-64	1	7	37	123	4	171	172	8.7%
	65+	3	10	43	101	2	156	160	8.1%
	Not Stated	-	4	51	149	26	230	230	-
	Total Passengers*	22	83	552	1,477	70	2,183	2,205	100%
Motorcyclist	0-4	-	-	-	-	-	-	-	-
	5-9	-	-	<1	-	-	<1	<1	0.2%
	10-14	<1	<1	<1	-	-	<1	<1	0.7%
	15-19	<1	<1	1	1	-	3	4	3.2%
	20-24	<1	2	6	5	<1	14	14	12.8%
	25-34	1	3	7	9	<1	19	21	18.3%
	35-44	<1	3	6	8	<1	18	19	16.5%
	45-54	<1	6	10	13	<1	29	30	26.4%
	55-64	<1	5	8	6	<1	20	21	18.6%
	65+	<1	<1	1	1	-	4	4	3.4%
	Not Stated	-	<1	<1	3	4	7	7	-
	Total Motorcyclists*	5	22	41	47	5	115	120	100%

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Age Group		2011-2015 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	1.7%
	20-24	-	-	<1	<1	-	1	1	8.5%
	25-34	-	<1	<1	3	-	4	4	30.5%
	35-44	-	<1	1	<1	-	2	2	15.3%
	45-54	-	<1	2	2	<1	4	4	32.2%
	55-64	-	<1	<1	<1	-	1	1	8.5%
	65+	-	<1	<1	-	-	<1	<1	3.4%
	Not Stated	-	-	<1	<1	<1	1	1	-
	Total Moped*	-	2	5	6	1	13	13	100%
Bicyclist	0-4	-	-	-	<1	-	<1	<1	0.3%
	5-9	<1	-	1	<1	<1	2	2	3.0%
	10-14	<1	<1	4	<1	<1	5	5	7.3%
	15-19	<1	1	4	3	<1	9	9	12.2%
	20-24	<1	<1	4	6	<1	10	11	14.7%
	25-34	<1	1	8	4	<1	13	14	18.8%
	35-44	<1	<1	4	4	<1	10	10	14.1%
	45-54	<1	1	4	4	1	11	12	15.8%
	55-64	-	<1	3	4	-	7	7	9.5%
	65+	1	-	1	1	-	2	3	4.3%
	Not Stated	-	<1	5	6	13	25	25	-
	Total Bicyclists*	4	6	38	33	17	94	98	100%
Pedestrian	0-4	<1	<1	3	<1	-	4	4	2.9%
	5-9	-	<1	2	<1	<1	4	4	2.5%
	10-14	<1	1	6	1	<1	8	9	6.3%
	15-19	1	1	7	3	<1	12	14	9.6%
	20-24	2	3	9	5	2	19	21	14.4%
	25-34	1	2	11	6	2	21	22	15.3%
	35-44	<1	3	10	6	1	20	21	14.6%
	45-54	<1	2	8	4	<1	16	16	11.4%
	55-64	<1	2	6	4	1	14	15	10.2%
	65+	3	4	6	4	1	15	18	12.7%
	Not Stated	-	2	9	7	21	39	39	-
	Total Pedestrians*	11	21	78	41	31	171	182	100%

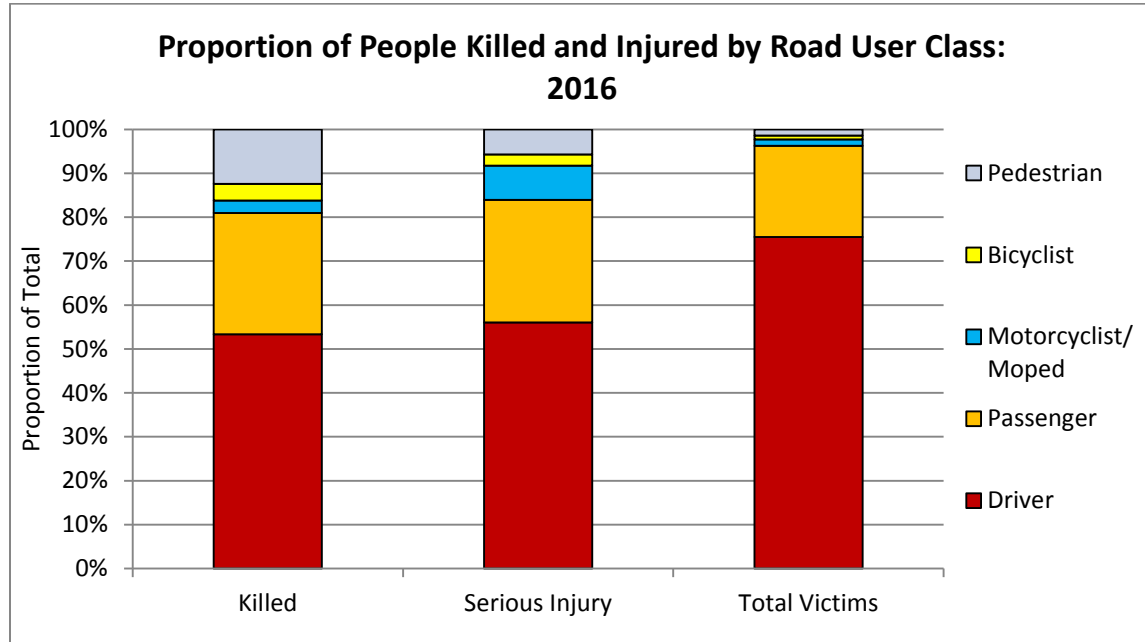
\*Percentage of the total does not include the "not stated" category.

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

Note: Counts of victims in the 2011-2015 average may not add to the total due to rounding.

Note: In 2011-2015, there is an average of 7 victims in the class "Riding/Hanging On". There is also an average of 55 victims whose Road User Class cannot be determined. None of these people were killed in the five year period. These victims are not included in Table 5-10a.

In 2016, "Drivers" account for 75% 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 2016, "Pedestrians" account for 12% 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 2016:

- Drivers account for the largest proportion of people killed (52%) and seriously injured (56%);
- Passengers account for 27% of people killed and 28% of people seriously injured;
- Pedestrians account for nearly 12% of people killed and 6% of people seriously injured;
- Bicyclists account for 4% of people killed and nearly 3% of people seriously injured; and,
- Motorcyclists (including motorcycle and moped riders, combined) account for 3% of people killed and 8% 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 12% of people killed and 6% of people seriously injured, but only 1% of all victims in 2016.
- Bicyclists account for 4% of people killed and nearly 3% of people seriously injured, but only 1% of all victims in 2016.
- Motorcyclists and moped riders account for 3% of people killed and 8% of people seriously injured, but only 1% of all victims in 2016.

## Section 5

## Collision Victims

**Table 5-11 Collision Victims by Collision Type and Casualty Type**Table 5-11  
Collision Victims by Collision Type and Casualty Type: 2016

Collision Type	2016 Casualty Type												2016 Total Victims	% of 2016 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	6	5.6%	10	2.1%	23	1.1%	19	0.2%	18	9.8%	70	0.6%	<b>76</b>	0.6%
Collision with other motor vehicle	49	45.8%	276	57.7%	1,546	71.1%	8,307	85.6%	132	71.7%	10,261	81.8%	<b>10,310</b>	81.5%
Collisions with train	0	-	2	0.4%	1	<0.1%	0	-	0	-	3	<0.1%	<b>3</b>	<0.1%
Collision with motorcycle	0	-	4	0.8%	1	<0.1%	1	<0.1%	1	0.5%	7	<0.1%	<b>7</b>	<0.1%
Collision with animal drawn vehicle	0	-	0	-	0	-	0	-	0	-	0	-	<b>0</b>	-
Collision with bicycle	1	0.9%	4	0.8%	12	0.6%	14	0.1%	5	2.7%	35	0.3%	<b>36</b>	0.3%
Collision with animal	0	-	13	2.7%	36	1.7%	371	3.8%	1	0.5%	421	3.4%	<b>421</b>	3.3%
Collision with fixed object	28	26.2%	103	21.5%	340	15.6%	541	5.6%	11	6.0%	995	7.9%	<b>1,023</b>	8.1%
Collision with other object	17	15.9%	46	9.6%	184	8.5%	394	4.1%	9	4.9%	633	5.0%	<b>650</b>	5.1%
Overtaken in roadway	1	0.9%	2	0.4%	5	0.2%	6	<0.1%	0	-	13	0.1%	<b>14</b>	0.1%
Ran off roadway	4	3.7%	13	2.7%	9	0.4%	5	<0.1%	1	0.5%	28	0.2%	<b>32</b>	0.3%
Collision with moped	0	-	0	-	1	<0.1%	1	<0.1%	0	-	2	<0.1%	<b>2</b>	<0.1%
Other non-collision	1	0.9%	5	1.0%	16	0.7%	51	0.5%	6	3.3%	78	0.6%	<b>79</b>	0.6%
<b>Total</b>	<b>107</b>	<b>100%</b>	<b>478</b>	<b>100%</b>	<b>2,174</b>	<b>100%</b>	<b>9,710</b>	<b>100%</b>	<b>184</b>	<b>100%</b>	<b>12,546</b>	<b>100%</b>	<b>12,653</b>	<b>100%</b>

**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: 2011-2015 Average

Collision Type	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Collision with pedestrian	5	10	37	19	26	92	97	0.9%
Collision with other motor vehicle	41	173	1,471	6,479	287	8,410	8,451	78.6%
Collisions with train	1	1	<1	<1	-	3	4	<0.1%
Collision with motorcycle	2	5	8	8	5	27	29	0.3%
Collision with animal drawn vehicle	-	-	-	-	-	-	-	-
Collision with bicycle	2	2	18	19	14	52	54	0.5%
Collision with animal	<1	6	43	233	8	290	291	2.7%
Collision with fixed object	15	61	281	486	22	850	865	8.1%
Collision with other object	7	35	161	394	16	605	612	5.7%
Overtaken in roadway	2	5	26	14	<1	45	47	0.4%
Ran off roadway	12	32	92	43	15	181	193	1.8%
Collision with moped	-	-	<1	-	-	<1	<1	<0.1%
Other non-collision	<1	6	34	62	2	104	105	1.0%
Total	87	336	2,173	7,757	395	10,661	10,748	100%

Note: Counts of victims in the 2011-2015 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 2016 and in the previous five year (2011 to 2015) annual average. In 2016, "collision with other motor vehicle" accounts for:

- Nearly 82% of all casualties (79% in the previous five years);
- 46% of people killed (47% in the previous five years); and,
- 58% of people seriously injured (nearly 52% in the previous five years).

"Collision with a pedestrian", "collision with bicycle", "collision with fixed object", "collision with other object", "overtaken in roadway", and "ran off roadway" each account for a higher proportion of people killed than of people injured in traffic collisions.



## Section 5

## Collision Victims

**Table 5-12 Collision Victims by Accident Configuration and Casualty Type**Table 5-12  
Collision Victims by Accident Configuration and Casualty Type: 2016

Accident Configuration	2016 Casualty Type												2016 Total Victims	% of 2016 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	5	8.5%	45	12.7%	462	25.4%	4,747	56.3%	61	43.6%	5,315	49.5%	<b>5,320</b>	49.3%
Head On	24	40.7%	20	5.7%	57	3.1%	89	1.1%	3	2.1%	169	1.6%	<b>193</b>	1.8%
Side Swipe Opposing	0	-	4	1.1%	13	0.7%	56	0.7%	2	1.4%	75	0.7%	<b>75</b>	0.7%
Side Swipe Same Direction	1	1.7%	16	4.5%	57	3.1%	472	5.6%	4	2.9%	549	5.1%	<b>550</b>	5.1%
Overtaking	0	-	3	0.8%	6	0.3%	25	0.3%	0	-	34	0.3%	<b>34</b>	0.3%
Right Turn - Same direction	1	1.7%	0	-	11	0.6%	30	0.4%	0	-	41	0.4%	<b>42</b>	0.4%
Right Turn - Opposing	0	-	0	-	5	0.3%	17	0.2%	0	-	22	0.2%	<b>22</b>	0.2%
Left Turn - Opposing	3	5.1%	9	2.5%	74	4.1%	210	2.5%	3	2.1%	296	2.8%	<b>299</b>	2.8%
Left Turn - Same direction	0	-	0	-	5	0.3%	32	0.4%	0	-	37	0.3%	<b>37</b>	0.3%
Left Turn - Across	1	1.7%	14	4.0%	59	3.2%	200	2.4%	5	3.6%	278	2.6%	<b>279</b>	2.6%
Intersection 90°	10	16.9%	138	39.1%	706	38.9%	1,863	22.1%	29	20.7%	2,736	25.5%	<b>2,746</b>	25.4%
Off Road Right	8	13.6%	37	10.5%	137	7.5%	166	2.0%	3	2.1%	343	3.2%	<b>351</b>	3.3%
Off Road Left	1	1.7%	30	8.5%	76	4.2%	117	1.4%	1	0.7%	224	2.1%	<b>225</b>	2.1%
Fixed Object	2	3.4%	25	7.1%	100	5.5%	234	2.8%	9	6.4%	368	3.4%	<b>370</b>	3.4%
Parking	0	-	2	0.6%	23	1.3%	135	1.6%	5	3.6%	165	1.5%	<b>165</b>	1.5%
Pedestrian	3	5.1%	10	2.8%	25	1.4%	39	0.5%	15	10.7%	89	0.8%	<b>92</b>	0.9%
Other	48	-	125	-	358	-	1,278	-	44	-	1,805	-	<b>1,853</b>	-
<b>Total</b>	<b>107</b>	<b>100%</b>	<b>478</b>	<b>100%</b>	<b>2,174</b>	<b>100%</b>	<b>9,710</b>	<b>100%</b>	<b>184</b>	<b>100%</b>	<b>12,546</b>	<b>100%</b>	<b>12,653</b>	<b>100%</b>

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: 2011-2015 Average

Accident Configuration	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Rear End	3	32	441	3,712	125	4,310	4,313	47.1%
Head On	16	26	82	152	7	268	284	3.1%
Side Swipe Opposing	1	6	24	63	<1	94	95	1.0%
Side Swipe Same Direction	<1	5	53	329	12	399	399	4.4%
Overtaking	1	2	9	36	3	49	50	0.6%
Right Turn - Same direction	-	<1	5	24	1	31	31	0.3%
Right Turn - Opposing	-	<1	3	11	1	16	16	0.2%
Left Turn - Opposing	<1	8	71	201	5	285	285	3.1%
Left Turn - Same direction	-	<1	12	32	2	47	47	0.5%
Left Turn - Across	<1	5	59	149	12	225	226	2.5%
Intersection 90°	11	75	605	1,418	66	2,163	2,174	23.8%
Off Road Right	9	38	145	151	7	341	350	3.8%
Off Road Left	7	24	111	109	6	249	256	2.8%
Fixed Object	4	19	93	241	11	363	367	4.0%
Parking	-	1	10	109	3	123	123	1.3%
Pedestrian	10	13	45	34	28	120	130	1.4%
Other	23	84	409	1,003	108	1,604	1,627	-
Total	87	340	2,179	7,773	395	10,687	10,774	100%

Note: Counts of victims in the 2011-2015 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 collisions involving at least one vehicle turning, side-swipe collisions, and collisions where the vehicle leaves the road (either in the right or left). In 2016:

- "Rear end" collisions account for 49% of all victims, nearly 9% of people killed, and 13% of people seriously injured;
- "Intersection 90°" collisions account for 25% of all victims, 17% of people killed, and 39% of people seriously injured;
- "Left turn" (including across, in the same direction, and opposing) collisions account for 6% of all victims, 7% of people killed, and nearly 7% of people seriously injured;
- "Side swipe" (either opposing or same direction) collisions account for 6% of all victims, 1 person killed, and 6% of people seriously injured; and,
- "Off road" (either right or left) collisions account for 5% of all victims, 15% of people killed, and 19% of people seriously injured.

In 2016, people are most often killed in traffic collisions where:

- A "head on" collision occurs (41% of people killed);
- A collision occurs at 90° intersections (17% of people killed);
- A vehicle goes "off road" (either right or left; 15% of people killed); or,
- A "rear end" collision occurs (nearly 9% of people killed).

## Section 5

## Collision Victims

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

Table 5-13  
Collision Victims by Provincial Location and Casualty Type: 2016

Location	2016 Casualty Type												2016 Total Victims	% of 2016 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	23	21.5%	198	41.4%	1,209	55.6%	7,835	80.7%	137	74.5%	9,379	74.8%	<b>9,402</b>	74.3%
Brandon	1	0.9%	14	2.9%	67	3.1%	160	1.6%	5	2.7%	246	2.0%	<b>247</b>	2.0%
Portage	0	-	4	0.8%	14	0.6%	60	0.6%	2	1.1%	80	0.6%	<b>80</b>	0.6%
Flin Flon	0	-	0	-	3	0.1%	1	<0.1%	0	-	4	<0.1%	<b>4</b>	<0.1%
Dauphin	1	0.9%	4	0.8%	11	0.5%	11	0.1%	3	1.6%	29	0.2%	<b>30</b>	0.2%
Thompson	3	2.8%	2	0.4%	12	0.6%	29	0.3%	4	2.2%	47	0.4%	<b>50</b>	0.4%
The Pas	0	-	0	-	8	0.4%	5	<0.1%	0	-	13	0.1%	<b>13</b>	0.1%
Selkirk	1	0.9%	0	-	17	0.8%	80	0.8%	1	0.5%	98	0.8%	<b>99</b>	0.8%
Other Urban	8	7.5%	61	12.8%	245	11.3%	537	5.5%	15	8.2%	858	6.8%	<b>866</b>	6.8%
All Rural	70	65.4%	195	40.8%	588	27.0%	992	10.2%	17	9.2%	1,792	14.3%	<b>1,862</b>	14.7%
Total	107	100%	478	100%	2,174	100%	9,710	100%	184	100%	12,546	100%	<b>12,653</b>	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: 2011-2015 Average

Location	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Winnipeg	14	124	1,148	6,277	316	7,866	7,879	73.1%
Brandon	<1	9	91	157	8	264	264	2.4%
Portage	<1	2	23	39	1	66	66	0.6%
Flin Flon	<1	<1	1	4	-	6	6	<0.1%
Dauphin	1	2	20	21	<1	43	44	0.4%
Thompson	<1	1	14	21	2	39	40	0.4%
The Pas	-	2	10	10	<1	22	22	0.2%
Selkirk	<1	3	26	51	3	83	84	0.8%
Other Urban	10	44	236	438	16	734	744	6.9%
All Rural	61	153	611	756	47	1,567	1,628	15.1%
Total	87	340	2,180	7,775	395	10,690	10,777	100%

Note: Counts of victims in the 2011-2015 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 2016, 85% of all casualties result from traffic collisions in urban areas. Traffic collisions in rural locations, however, account for 65% of people killed and 41% of people seriously injured. In the previous five year (2011 to 2015) annual average, 85% of all victims are from traffic collisions in urban locations, while 69% of people killed and 45% of people seriously injured are from traffic collisions in rural locations.

## Section 5

## Collision Victims

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

Table 5-14  
Collision Victims by Safety Equipment Use and Casualty Type: 2016

Safety Equipment	2016 Casualty Type												2016 Total Victims	% of 2016 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	2	2.3%	1	0.2%	14	0.7%	61	0.6%	1	0.8%	77	0.6%	<b>79</b>	0.6%
Lap belt only installed - Not in use	3	3.4%	5	1.2%	4	0.2%	15	0.2%	0	-	24	0.2%	<b>27</b>	0.2%
Shoulder belt only installed - In use	2	2.3%	7	1.6%	10	0.5%	34	0.4%	1	0.8%	52	0.4%	<b>54</b>	0.4%
Shoulder belt only installed - Not in use	2	2.3%	7	1.6%	8	0.4%	22	0.2%	0	-	37	0.3%	<b>39</b>	0.3%
Lap and shoulder belt assembly - In use	15	17.0%	190	43.8%	1,219	59.2%	8,116	85.6%	107	84.3%	9,632	79.6%	<b>9,647</b>	79.2%
Combined belt installed - Not in use	10	11.4%	8	1.8%	28	1.4%	35	0.4%	0	-	71	0.6%	<b>81</b>	0.7%
Only lap part of full assembly in use	0	-	0	-	1	<0.1%	15	0.2%	0	-	16	0.1%	<b>16</b>	0.1%
Air bag deployed - Safety belt in use	12	13.6%	139	32.0%	590	28.7%	767	8.1%	7	5.5%	1,503	12.4%	<b>1,515</b>	12.4%
Air bag deployed - Safety belt not use	5	5.7%	4	0.9%	12	0.6%	11	0.1%	1	0.8%	28	0.2%	<b>33</b>	0.3%
Safety seat properly installed - In use	0	-	14	3.2%	71	3.4%	231	2.4%	2	1.6%	318	2.6%	<b>318</b>	2.6%
Safety seat improperly installed - In use	0	-	1	0.2%	3	0.1%	19	0.2%	0	-	23	0.2%	<b>23</b>	0.2%
Safety seat installed - Not in use	0	-	0	-	2	<0.1%	4	<0.1%	0	-	6	<0.1%	<b>6</b>	<0.1%
Safety helmet worn	1	1.1%	32	7.4%	52	2.5%	73	0.8%	2	1.6%	159	1.3%	<b>160</b>	1.3%
Safety helmet not worn	0	-	2	0.5%	2	<0.1%	1	<0.1%	0	-	5	<0.1%	<b>5</b>	<0.1%
No safety device available	2	2.3%	3	0.7%	4	0.2%	4	<0.1%	0	-	11	<0.1%	<b>13</b>	0.1%
Other	5	5.7%	3	0.7%	11	0.5%	9	<0.1%	1	0.8%	24	0.2%	<b>29</b>	0.2%
Not Applicable	1	1.1%	8	1.8%	12	0.6%	44	0.5%	1	0.8%	65	0.5%	<b>66</b>	0.5%
Unknown	28	31.8%	10	2.3%	16	0.8%	19	0.2%	4	3.1%	49	0.4%	<b>77</b>	0.6%
<b>Total</b>	<b>88</b>	<b>100%</b>	<b>434</b>	<b>100%</b>	<b>2,059</b>	<b>100%</b>	<b>9,480</b>	<b>100%</b>	<b>127</b>	<b>100%</b>	<b>12,100</b>	<b>100%</b>	<b>12,188</b>	<b>100%</b>

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: 2011-2015 Average

Safety Equipment	2011-2015 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	1	4	35	71	3	112	113	1.1%
Lap belt only installed - Not in use	1	3	9	15	<1	27	29	0.3%
Shoulder belt only installed - In use	1	2	15	35	1	53	54	0.5%
Shoulder belt only installed - Not in use	2	2	7	14	1	25	27	0.3%
Lap and shoulder belt assembly - In use	20	164	1,402	6,772	179	8,518	8,538	81.8%
Combined belt installed - Not in use	15	11	27	19	1	58	72	0.7%
Only lap part of full assembly in use	-	<1	4	17	<1	23	23	0.2%
Air bag deployed - Safety belt in use	7	66	387	441	14	907	914	8.8%
Air bar deployed - Safety belt not use	3	4	11	9	<1	25	28	0.3%
Safety seat properly installed - In use	1	3	42	125	4	174	175	1.7%
Safety seat improperly installed - In use	<1	<1	5	8	<1	14	14	0.1%
Safety seat installed - Not in use	<1	<1	2	2	-	4	4	<0.1%
Safety helmet worn	3	22	44	46	1	113	116	1.1%
Safety helmet not worn	<1	3	1	1	-	5	6	<0.1%
No safety device available	<1	2	5	5	-	12	12	0.1%
Other	1	2	8	22	2	34	35	0.3%
Not Applicable	2	2	6	14	2	24	26	0.2%
Unknown	14	20	36	46	132	234	248	2.4%
<b>Total</b>	<b>73</b>	<b>310</b>	<b>2,046</b>	<b>7,663</b>	<b>343</b>	<b>10,362</b>	<b>10,435</b>	<b>100%</b>

Note: Counts of victims in the 2011-2015 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 2016, most victims in traffic collisions were using safety equipment at the time of the collision (98% of all victims where safety equipment use is known, i.e., excluding "other", "not applicable" and "unknown").

In 2016, 41% of the people killed in traffic collisions and 7% 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': 2016

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 <u>not</u> in use	204	22	10.8%	29	14.2%	152	74.5%	1	0.5%
Equipment in use	11,812	32	0.3%	384	3.3%	11,276	95.5%	120	1.0%
<b>Safety Equipment Effectiveness*</b>		<b>39.81</b>		<b>4.37</b>		<b>0.78</b>		<b>0.48</b>	

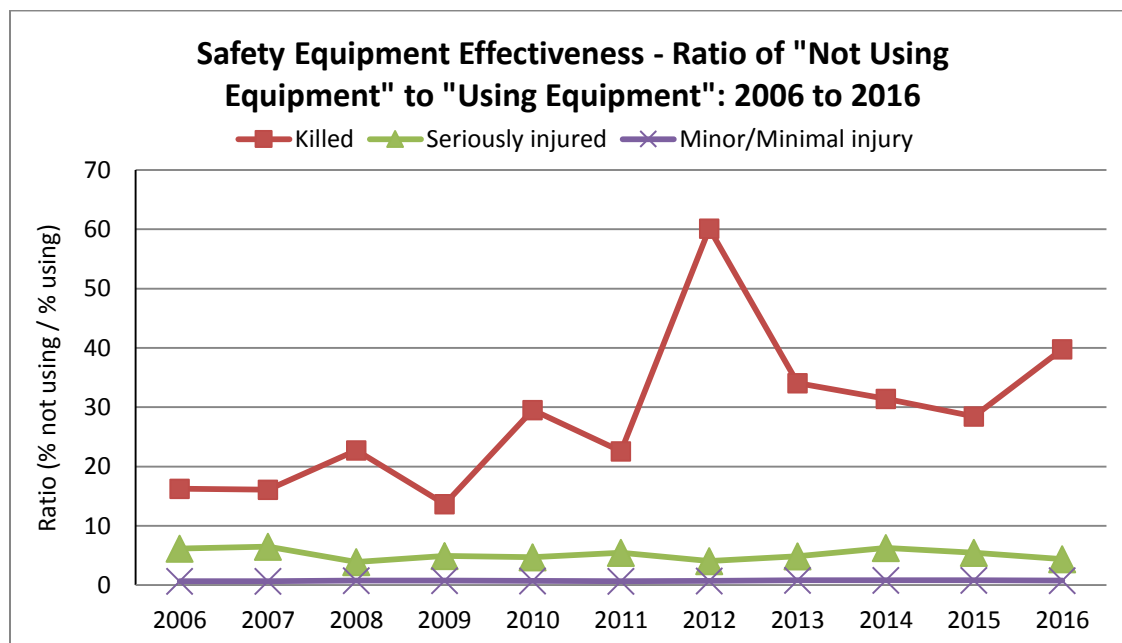
\*Ratio of % not using equipment over the % using equipment.

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 2016, victims not using safety equipment are almost forty 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 (2011 to 2015), people not using the available safety equipment are thirty-five 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"**



## Section 5

## Collision Victims

**Table 5-16 Vehicle Occupant Victim Ejections in Traffic Collision**

Table 5-16  
Vehicle Occupant Victims by Ejection From Vehicle and Casualty Type: 2016

Ejection	2016 Casualty Type												2016 Total Victims	% of 2016 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	57	67.1%	371	93.5%	1,974	98.7%	9,352	99.5%	124	99.2%	11,821	99.1%	<b>11,878</b>	98.9%
Fully Ejected	24	28.2%	19	4.8%	23	1.2%	37	0.4%	0	-	79	0.7%	<b>103</b>	0.9%
Partially Ejected	4	4.7%	7	1.8%	3	0.2%	13	0.1%	1	0.8%	24	0.2%	<b>28</b>	0.2%
<b>Total</b>	<b>85</b>	<b>100%</b>	<b>397</b>	<b>100%</b>	<b>2,000</b>	<b>100%</b>	<b>9,402</b>	<b>100%</b>	<b>125</b>	<b>100%</b>	<b>11,924</b>	<b>100%</b>	<b>12,009</b>	<b>100%</b>

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: 2011-2015 Average

Ejection	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Not Ejected	52	263	1,975	7,562	335	10,135	10,186	98.9%
Fully Ejected	14	20	20	38	2	80	94	0.9%
Partially Ejected	2	3	6	11	0	20	22	0.2%
Total	68	286	2,001	7,611	337	10,234	10,302	100%

Note: Counts of victims in the 2011-2015 average may not add to the total due to rounding.

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

In 2016, people fully or partially ejected from a vehicle and killed during a traffic collision account for 21% of all victims ejected from the vehicle. People killed but not ejected account for 0.5% of all victims not ejected during the collision. This makes people ejected during a collision nearly forty-five times more likely to be killed than people not ejected. Similarly, people ejected and seriously injured during a collision account for 20% 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.

It is not common for a victim to be ejected from a vehicle during a collision while using the available safety equipment. In 2016, 96% of vehicle occupant casualties were using the available safety equipment (seatbelts and child safety seats) and were not ejected from the vehicle.

Even though the proportion of casualties ejected from the vehicle is very small, people ejected from a vehicle are much more likely to be killed or seriously injured when they are not using seatbelts and child safety seats. In 2016, 15 of 18 people ejected and killed (83%) were not using the available safety equipment at the time of the collision. This compares to only three people ejected and killed who were using the available safety equipment.

In the previous five year (2011 to 2015) annual average, people ejected from a vehicle while not using the seatbelts and child safety seats are nearly six times more likely to be killed than people ejected from a vehicle while using seatbelts and child safety seats.

## 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 2016, there are 172 pedestrians killed or injured in traffic collisions. Of these:

- 13 are killed;
- 27 are seriously injured;
- 49 sustain minor injuries;
- 54 sustain minimal injuries; and
- 29 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 2016 (12.8) has increased by 30% compared to 2015 (9.8), but has decreased by 9% compared to the previous five year (2011 to 2015) annual average (14.2).

Pedestrian involvement rate in traffic collisions in 2016 where a pedestrian:

- Is killed (1.0) has increased by 42% compared to 2015 (0.7) and by 18% compared to the previous five year average (0.8); and,
- Is injured (11.9) has increased by nearly 30% compared to 2015 (9.2), but has decreased by nearly 12% compared to the previous five year average (13.4).

In 2016, collisions involving pedestrians most frequently occur:

- In August and November (11% and 14% of pedestrian casualties, respectively); however, 6 of 13 pedestrians are killed between June and August;
- On weekdays (Monday to Friday), 81% of pedestrian casualties cumulatively; 8 of 13 pedestrians are killed on weekdays; and,
- Between noon and 6 p.m. (12:00-14:59 – 19% of pedestrian casualties; 15:00 to 17:59 – nearly 27% of pedestrian casualties).

Manitobans aged 20 to 24 have the highest pedestrian involvement rate (per 100,000 people) in traffic collisions at 17.5 in 2016 (21.9 in the previous five years), followed by those aged 55 to 64 at 16.7 (9.3 in the previous five years).

Where the actions of the pedestrian immediately prior to the collision are known, most pedestrian casualties in 2016 occur when the pedestrian is:

- At an intersection, crossing with the right of way (47% of pedestrian casualties);
- Between intersections (9% of pedestrian casualties); and,
- At an intersection with no traffic control (nearly 6% of pedestrian casualties).

For the 13 pedestrians killed in traffic collisions in 2016, 2 are killed at an intersection while crossing with the right of way, 1 is killed between intersections, and 1 is killed while lying on the roadway. No pedestrian action was recorded for 8 of the 13 pedestrians killed.

### Major Elements Examined

Counts of collisions in Manitoba for 2016 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 2011 to 2015. 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.).

## Section 6

## Pedestrian Victims

**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: 2006 to 2016

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		
2006	14	-	71	-	207	-	141	-	83	-	502	-	516	-
2007	16	14.3%	52	-26.8%	161	-22.2%	107	-24.1%	109	31.3%	429	-14.5%	445	-13.8%
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%
<b>2016</b>	<b>13</b>	<b>44.4%</b>	<b>27</b>	<b>50.0%</b>	<b>49</b>	<b>-3.9%</b>	<b>54</b>	<b>35.0%</b>	<b>29</b>	<b>141.7%</b>	<b>159</b>	<b>31.4%</b>	<b>172</b>	<b>32.3%</b>
2011-2015 Average*	11	22.6%	21	26.2%	78	-36.9%	41	31.7%	31	-7.6%	171	-7.2%	182	-5.5%

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

In 2016, there are 172 pedestrians killed or injured in traffic collisions. Of these:

- 13 are killed;
- 27 are seriously injured;
- 49 sustain minor injuries;
- 54 sustain minimal injuries; and
- 29 sustain injuries that are undefined in terms of severity.

The total number of pedestrians killed and injured in traffic collisions in 2016 has increased by 32% compared to 2015, but has decreased by nearly 6% compared to the previous five year (2011 to 2015) annual average. In 2016, the number of pedestrians:

- Killed has increased by 44% compared to 2015 and by 23% compared to the previous five years;
- Sustaining serious injuries has increased by 50% compared to 2015 and by 26% compared to the previous five years;
- Sustaining minor injuries has decreased by 4% compared to 2015 and by 37% compared to the previous five years;
- Sustaining minimal injuries has increased by 35% compared to 2015 and by 32% compared to the previous five years; and,
- Sustaining an unspecified injury has more than doubled compared to 2015, but has decreased by 8% 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 2016 is up compared to 2015 and to the previous five year (2011 to 2015) 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.

## Section 6

## Pedestrian Victims

**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: 2006 to 2016

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		
2006	1.2	-	6.0	-	17.6	-	12.0	-	7.0	-	42.6	-	43.8	-
2007	1.3	13.5%	4.4	-27.3%	13.6	-22.7%	9.0	-24.6%	9.2	30.4%	36.2	-15.1%	37.5	-14.3%
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%
<b>2016</b>	<b>1.0</b>	<b>42.4%</b>	<b>2.0</b>	<b>47.9%</b>	<b>3.7</b>	<b>-5.3%</b>	<b>4.0</b>	<b>33.1%</b>	<b>2.2</b>	<b>138.2%</b>	<b>11.9</b>	<b>29.5%</b>	<b>12.8</b>	<b>30.4%</b>
2011-2015 Average*	0.8	17.8%	1.7	21.1%	6.1	-39.7%	3.2	26.1%	2.5	-12.9%	13.4	-11.5%	14.2	-9.8%

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

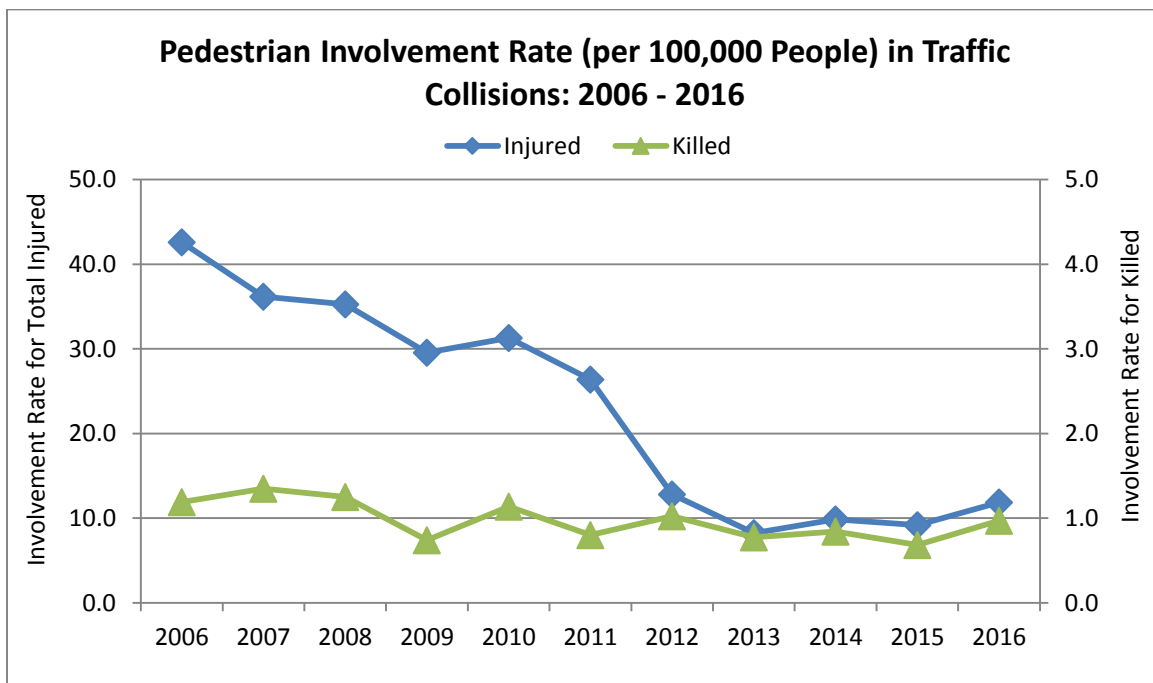


The involvement rate (per 100,000 people in the general population) of pedestrians in traffic collisions in 2016 (12.8) has increased by 30% compared to 2015 (9.8), but has decreased by 10% compared to the previous five year (2011 to 2015) annual average (14.2).

Pedestrian involvement rate in traffic collisions in 2016 where a pedestrian:

- Is killed (1.0) has increased by 42% compared to 2015 (0.7) and by 18% compared to the previous five year average (0.8);
- Is injured (11.9) has increased by nearly 30% compared to 2015 (9.2), but has decreased by nearly 12% compared to the previous five year average (13.4);
- Sustains serious injuries (2.0) has increased by 48% compared to 2015 and by 21% compared to the previous five years;
- Sustains minor injuries (3.7) has decreased by 5% compared to 2015 and by 40% compared to the previous five years;
- Sustains minimal injuries (4.0) has increased by 33% compared to 2015 and by 26% compared to the previous five years; and,
- Sustains an unspecified injury (2.2) has more than doubled compared to 2015, but has decreased by 13% 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 2006 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 2016 is in line with the pedestrian involvement rate for deaths recorded in the past eleven years.

## Section 6

## Pedestrian Victims

**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: 2016

Month of Occurrence	2016 Casualty Type												2016 Total Victims	% of 2016 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	0	-	2	7.4%	2	4.1%	4	7.4%	2	6.9%	10	6.3%	10	5.8%
February	0	-	1	3.7%	7	14.3%	4	7.4%	0	-	12	7.5%	12	7.0%
March	2	15.4%	3	11.1%	3	6.1%	6	11.1%	0	-	12	7.5%	14	8.1%
April	1	7.7%	1	3.7%	5	10.2%	5	9.3%	1	3.4%	12	7.5%	13	7.6%
May	0	-	1	3.7%	4	8.2%	4	7.4%	1	3.4%	10	6.3%	10	5.8%
June	1	7.7%	1	3.7%	6	12.2%	1	1.9%	4	13.8%	12	7.5%	13	7.6%
July	3	23.1%	1	3.7%	5	10.2%	3	5.6%	5	17.2%	14	8.8%	17	9.9%
August	2	15.4%	3	11.1%	3	6.1%	6	11.1%	5	17.2%	17	10.7%	19	11.0%
September	0	-	3	11.1%	2	4.1%	5	9.3%	4	13.8%	14	8.8%	14	8.1%
October	0	-	3	11.1%	4	8.2%	4	7.4%	3	10.3%	14	8.8%	14	8.1%
November	2	15.4%	6	22.2%	5	10.2%	8	14.8%	3	10.3%	22	13.8%	24	14.0%
December	2	15.4%	2	7.4%	3	6.1%	4	7.4%	1	3.4%	10	6.3%	12	7.0%
Total	13	100%	27	100%	49	100%	54	100%	29	100%	159	100%	172	100%

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

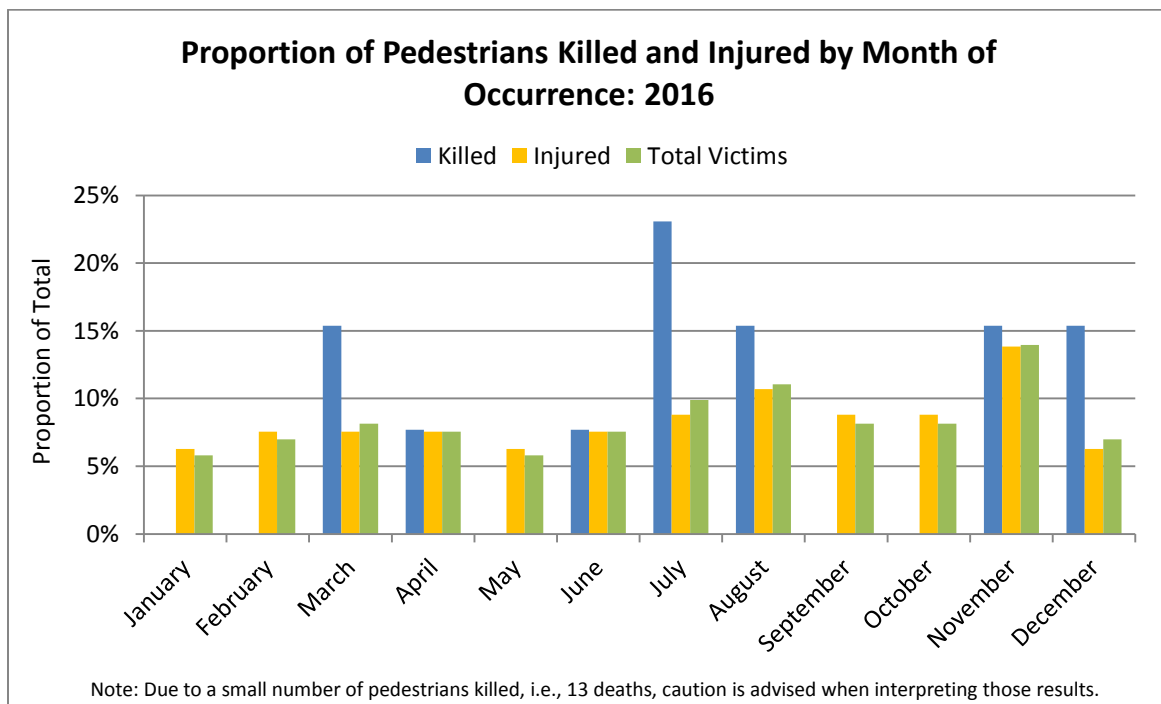
Table 6-3a  
Pedestrians Killed and Injured by Month of Occurrence and Casualty Type: 2011-2015 Average

Month of Occurrence	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
January	<1	2	8	4	2	16	17	9.1%
February	<1	2	5	3	4	15	15	8.5%
March	-	2	9	5	6	22	22	12.2%
April	2	<1	6	3	2	12	14	7.7%
May	<1	2	6	4	3	16	16	8.9%
June	1	1	5	4	4	14	15	8.2%
July	2	<1	6	2	2	10	12	6.8%
August	1	2	5	4	3	14	15	8.4%
September	1	2	8	2	2	15	16	8.7%
October	<1	3	7	4	<1	14	15	8.2%
November	<1	1	7	3	1	12	12	6.8%
December	1	1	6	3	<1	10	12	6.5%
Total	11	21	78	41	31	171	182	100%

Note: Counts of pedestrians in the 2011-2015 average may not add to the total due to rounding.

In 2016, 6 of 13 pedestrians killed in collisions on Manitoba roadways are killed between June and August. Pedestrians are most likely to be injured in August (11%) and November (14%). During the previous five year (2011 to 2015) annual average, March 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**



## Section 6

## Pedestrian Victims

**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: 2016

Day of the Week	2016 Casualty Type												2016 Total Victims	% of 2016 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	2	15.4%	0	-	3	6.1%	6	11.1%	4	13.8%	13	8.2%	15	8.7%
Monday	4	30.8%	6	22.2%	6	12.2%	12	22.2%	2	6.9%	26	16.4%	30	17.4%
Tuesday	2	15.4%	6	22.2%	10	20.4%	6	11.1%	2	6.9%	24	15.1%	26	15.1%
Wednesday	0	-	2	7.4%	11	22.4%	12	22.2%	6	20.7%	31	19.5%	31	18.0%
Thursday	1	7.7%	8	29.6%	7	14.3%	8	14.8%	2	6.9%	25	15.7%	26	15.1%
Friday	1	7.7%	3	11.1%	6	12.2%	7	13.0%	9	31.0%	25	15.7%	26	15.1%
Saturday	3	23.1%	2	7.4%	6	12.2%	3	5.6%	4	13.8%	15	9.4%	18	10.5%
Total	13	100%	27	100%	49	100%	54	100%	29	100%	159	100%	172	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: 2011-2015 Average

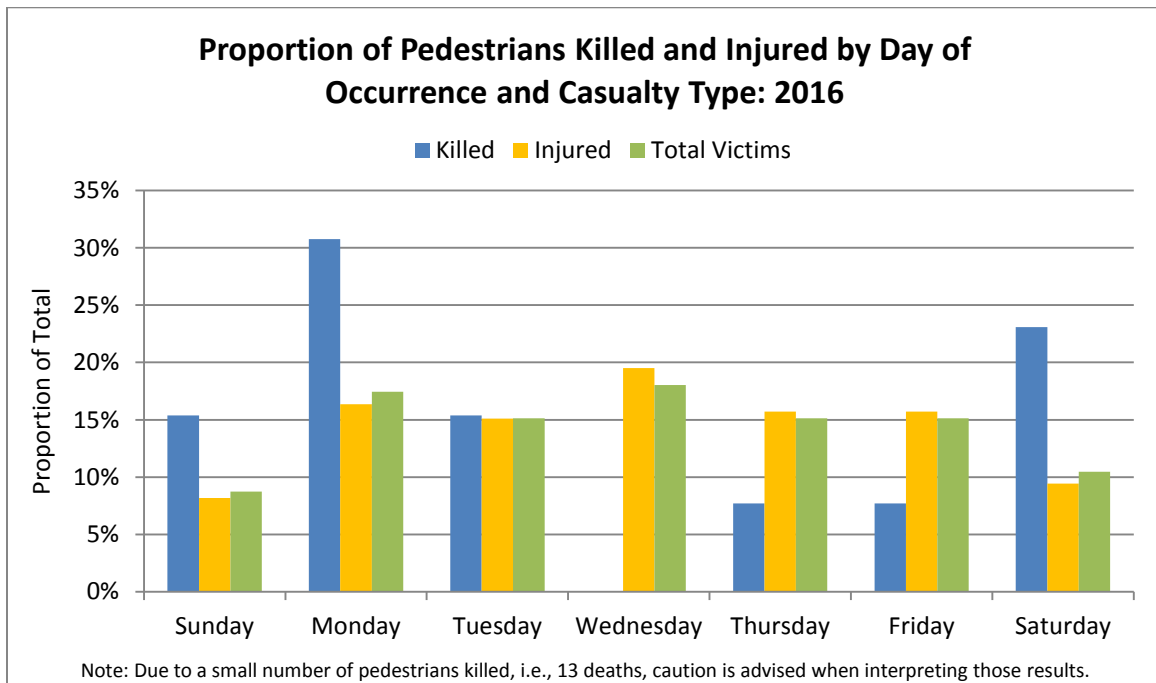
Day of the Week	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims
Sunday	2	2	6	3	2	12	14	7.5%
Monday	1	2	9	5	3	19	20	11.2%
Tuesday	1	3	14	6	4	27	28	15.6%
Wednesday	1	4	14	7	6	31	32	17.7%
Thursday	2	3	12	8	5	28	29	16.2%
Friday	1	3	14	9	7	34	35	19.3%
Saturday	2	3	9	4	4	20	23	12.5%
Total	11	21	78	41	31	171	182	100%

Note: Counts of pedestrians in the 2011-2015 average may not add to the total due to rounding.

In 2016, pedestrians involved in traffic collisions on weekdays (Monday to Friday) account for 81% of all casualties. This is very similar to the previous five year (2011 to 2015) annual average, where weekdays (Monday to Friday) account for 80% of all pedestrian casualties.

In 2016, 8 of 13 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 (2011 to 2015) annual average.

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



## Section 6

## Pedestrian Victims

**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: 2016

Time of the Day	2016 Casualty Type												2016 Total Victims	% of 2016 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	0	-	3	11.1%	1	2.1%	1	1.9%	5	17.2%	10	6.4%	10	5.9%
03:00 - 05:59	2	15.4%	0	-	0	-	0	-	0	-	0	-	2	1.2%
06:00 - 08:59	1	7.7%	1	3.7%	7	14.6%	6	11.3%	3	10.3%	17	10.8%	18	10.6%
09:00 - 11:59	1	7.7%	2	7.4%	6	12.5%	9	17.0%	3	10.3%	20	12.7%	21	12.4%
12:00 - 14:59	3	23.1%	3	11.1%	7	14.6%	11	20.8%	8	27.6%	29	18.5%	32	18.8%
15:00 - 17:59	1	7.7%	10	37.0%	11	22.9%	18	34.0%	5	17.2%	44	28.0%	45	26.5%
18:00 - 20:59	2	15.4%	5	18.5%	13	27.1%	4	7.5%	3	10.3%	25	15.9%	27	15.9%
21:00 - 23:59	3	23.1%	3	11.1%	3	6.3%	4	7.5%	2	6.9%	12	7.6%	15	8.8%
Not Stated	0	-	0	-	1	-	1	-	0	-	2	-	2	-
Total	13	100%	27	100%	49	100%	54	100%	29	100%	159	100%	172	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: 2011-2015 Average

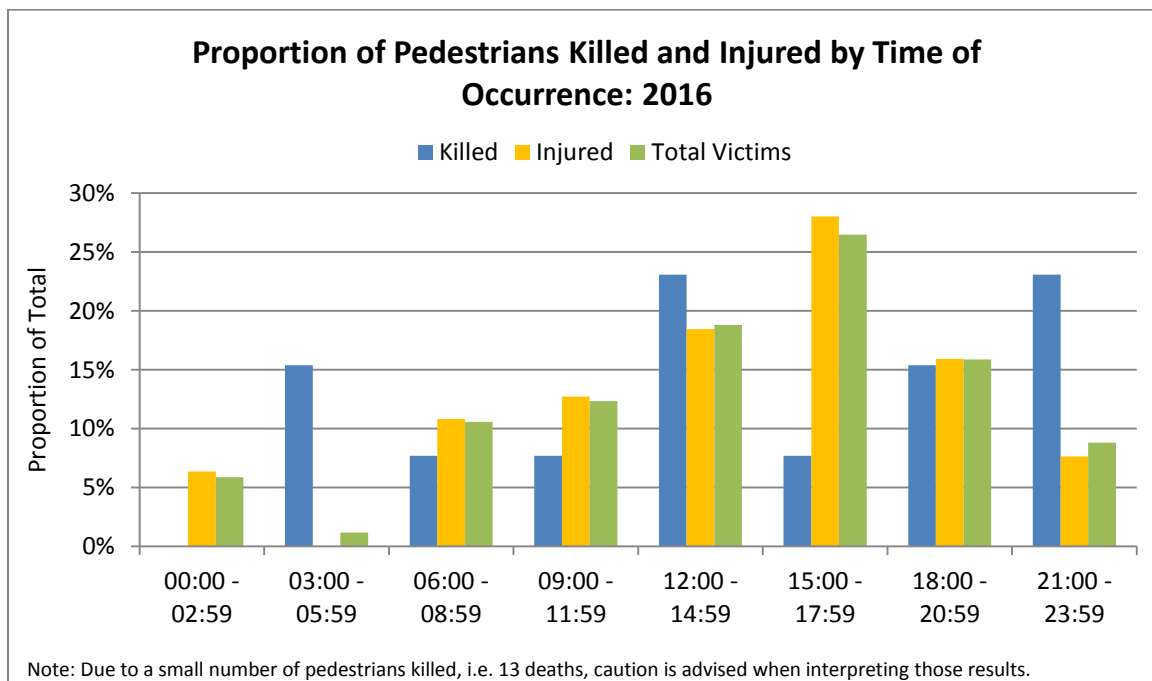
Time of the Day	2011-2015 Average Count of Victims							
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured	Total Victims	% of Total Victims*
00:00 - 02:59	<1	1	3	<1	1	6	7	3.7%
03:00 - 05:59	2	<1	2	1	<1	4	6	3.4%
06:00 - 08:59	<1	2	11	5	4	21	21	12.1%
09:00 - 11:59	<1	2	9	7	3	21	21	11.9%
12:00 - 14:59	1	5	15	10	7	36	37	21.1%
15:00 - 17:59	1	5	20	10	9	43	45	25.3%
18:00 - 20:59	2	3	10	4	3	21	22	12.7%
21:00 - 23:59	3	3	7	3	2	14	17	9.6%
Not Stated	<1	<1	2	1	2	5	6	-
<b>Total</b>	<b>11</b>	<b>21</b>	<b>78</b>	<b>41</b>	<b>31</b>	<b>171</b>	<b>182</b>	<b>100%</b>

Note: Counts of pedestrians in the 2011-2015 average may not add to the total due to rounding.  
\*Percentage of the total does not include the 'not stated' category.

In 2016, 19% of all pedestrian victims are involved in traffic collisions between noon and 3 p.m. (12:00-14:59) while nearly 27% 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 (2011 to 2015) annual average (12:00-14:59 – 21% of all pedestrian victims; 15:00 to 17:59 – 25%).

In 2016, 9 of 13 pedestrians are killed between noon and midnight. This is fairly consistent with the previous five year (2011 to 2015) annual average.

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



## Section 6

## Pedestrian Victims

**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: 2016

Age Group	2016 Casualty Type												2016 Total Victims	% of 2016 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	-	1	3.8%	1	2.1%	2	3.8%	1	4.3%	5	3.4%	5	3.1%
5-9	0	-	1	3.8%	3	6.3%	1	1.9%	1	4.3%	6	4.0%	6	3.7%
10-14	0	-	0	-	2	4.2%	0	-	0	-	2	1.3%	2	1.2%
15-19	2	15.4%	3	11.5%	2	4.2%	4	7.7%	2	8.7%	11	7.4%	13	8.0%
20-24	2	15.4%	3	11.5%	5	10.4%	5	9.6%	2	8.7%	15	10.1%	17	10.5%
25-34	3	23.1%	5	19.2%	7	14.6%	7	13.5%	4	17.4%	23	15.4%	26	16.0%
35-44	0	-	3	11.5%	4	8.3%	11	21.2%	2	8.7%	20	13.4%	20	12.3%
45-54	1	7.7%	3	11.5%	9	18.8%	12	23.1%	2	8.7%	26	17.4%	27	16.7%
55-64	1	7.7%	4	15.4%	11	22.9%	7	13.5%	5	21.7%	27	18.1%	28	17.3%
65+	4	30.8%	3	11.5%	4	8.3%	3	5.8%	4	17.4%	14	9.4%	18	11.1%
Not Stated	0	-	1	-	1	-	2	-	6	-	10	-	10	-
Total	13	100%	27	100%	49	100%	54	100%	29	100%	159	100%	172	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: 2011-2015 Average

Age Group	2011-2015 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	-	4	4	2.9%
5-9	-	<1	2	<1	<1	4	4	2.5%
10-14	<1	1	6	1	<1	8	9	6.3%
15-19	1	1	7	3	<1	12	14	9.6%
20-24	2	3	9	5	2	19	21	14.4%
25-34	1	2	11	6	2	21	22	15.3%
35-44	<1	3	10	6	1	20	21	14.6%
45-54	<1	2	8	4	<1	16	16	11.4%
55-64	<1	2	6	4	1	14	15	10.2%
65+	3	4	6	4	1	15	18	12.7%
Not Stated	-	2	9	7	21	39	39	-
Total	11	21	78	41	31	171	182	100%

Note: Counts of pedestrians in the 2011-2015 average may not add to the total due to rounding.

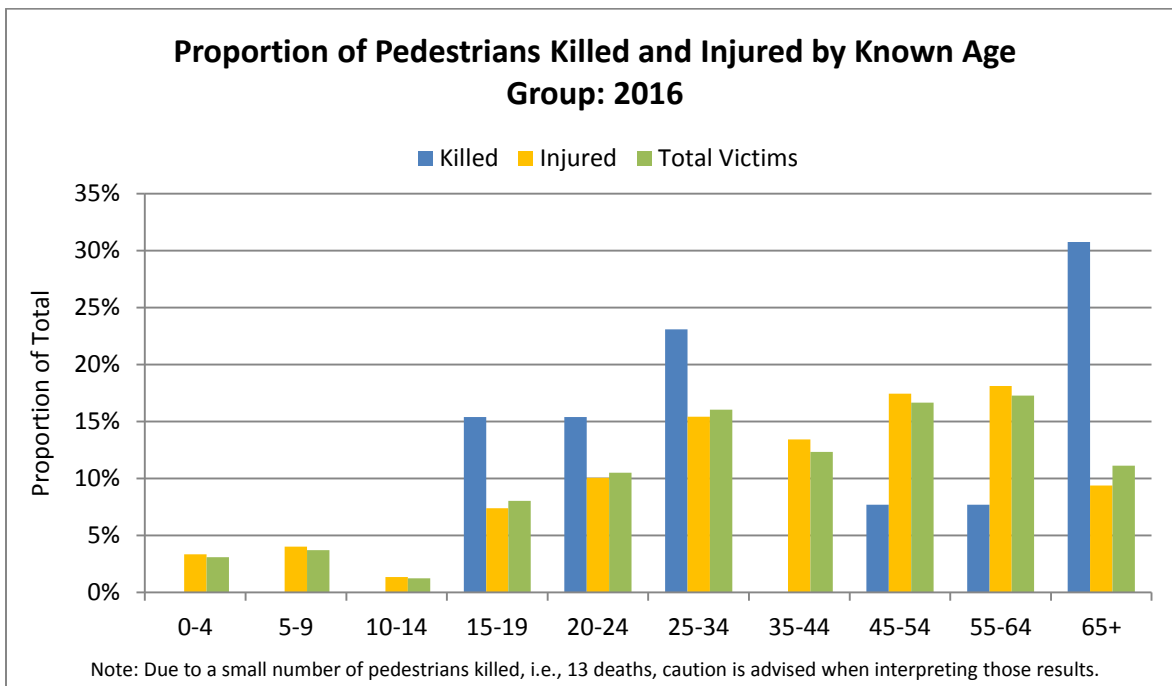
\*Percentage of the total does not include the 'Not Stated' category.

Note: The reader is cautioned that age is missing ('Not Stated') in several collisions - interpret with caution.

In 2016, 16% of pedestrian casualties are under the age of 20 (7% under age 10; 9% age 10 to 19), while nearly 27% are between the ages of 20 and 34, and 29% are between the ages of 35 and 54. Adults aged 55 and older account for 28% 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 (2011 to 2015) annual average, 21% of pedestrian victims are under the age of 20, 30% were age 20 to 34, 26% were age 35 to 54 and 23% were age 55 and older.

People aged 65 and older represent the largest proportion of pedestrians killed in 2016 (4 of 13 killed, 31%), followed by those aged 25 to 34 (23%). In the previous five year (2011 to 2015) annual average, 26% of pedestrians killed are aged 65 and older.

**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: 2016, 2011-2015 Average

Age Group	2016 Casualty Type						2016 Total Victims	2011-2015 Average Involvement Rate		
	Killed	Serious Injury	Minor Injury	Minimal Injury	Other Injury	Total Injured		Killed	Injured	Total Victims
0-4	-	1.2	1.2	2.3	1.2	5.9	<b>5.9</b>	0.2	4.9	5.1
5-9	-	1.2	3.5	1.2	1.2	7.0	<b>7.0</b>	-	4.5	4.5
10-14	-	-	2.5	-	-	2.5	<b>2.5</b>	0.7	10.5	11.2
15-19	2.3	3.5	2.3	4.7	2.3	12.8	<b>15.1</b>	1.6	14.1	15.7
20-24	2.1	3.1	5.1	5.1	2.1	15.4	<b>17.5</b>	2.1	19.8	21.9
25-34	1.6	2.7	3.7	3.7	2.1	12.2	<b>13.8</b>	0.7	11.9	12.6
35-44	-	1.7	2.3	6.4	1.2	11.7	<b>11.7</b>	0.5	12.2	12.7
45-54	0.6	1.7	5.1	6.8	1.1	14.7	<b>15.3</b>	0.4	8.6	9.0
55-64	0.6	2.4	6.6	4.2	3.0	16.1	<b>16.7</b>	0.5	8.8	9.3
65+	2.0	1.5	2.0	1.5	2.0	7.0	<b>9.0</b>	1.5	8.4	9.9
Total	1.0	2.0	3.7	4.0	2.2	11.9	<b>12.8</b>	0.8	13.3	14.1

Manitobans aged 20 to 24 have the highest pedestrian involvement rate (per 100,000 people) in traffic collisions, at 17.5 in 2016 (21.9 in the previous five years), followed by those aged 55 to 64 at 16.7 (9.3 in the previous five years).

Pedestrian involvement rates in traffic collisions have decreased slightly in 2016 compared to the previous five year (2011 to 2015) 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.

## Section 6

## Pedestrian Victims

Table 6-8 Pedestrian Action and Casualty Type

Table 6-8  
Pedestrian Action and Casualty Type: 2016

Pedestrian Action	2016 Casualty Type												2016 Total Victims	% of 2016 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	2	40.0%	8	44.4%	12	37.5%	28	59.6%	1	14.3%	49	47.1%	51	46.8%
At intersection, without right of way	0	-	0	-	1	3.1%	1	2.1%	1	14.3%	3	2.9%	3	2.8%
At intersection, no traffic control	0	-	0	-	2	6.3%	3	6.4%	1	14.3%	6	5.8%	6	5.5%
Between intersections	1	20.0%	3	16.7%	4	12.5%	1	2.1%	1	14.3%	9	8.7%	10	9.2%
Walking along roadway against traffic	0	-	1	5.6%	1	3.1%	1	2.1%	0	-	3	2.9%	3	2.8%
Walking along roadway with traffic	0	-	0	-	0	-	0	-	0	-	0	-	0	-
On sidewalk/median/safety zone	0	-	0	-	1	3.1%	2	4.3%	0	-	3	2.9%	3	2.8%
Walking on roadway (travelled portion)	0	-	0	-	2	6.3%	2	4.3%	0	-	4	3.8%	4	3.7%
From behind vehicle/object on roadside	0	-	1	5.6%	1	3.1%	0	-	0	-	2	1.9%	2	1.8%
Running into roadway	0	-	3	16.7%	0	-	1	2.1%	0	-	4	3.8%	4	3.7%
Getting on/off vehicle	0	-	1	5.6%	0	-	0	-	0	-	1	1.0%	1	0.9%
Pushing/working on vehicle	0	-	0	-	0	-	0	-	0	-	0	-	0	-
Playing on roadway	0	-	0	-	1	3.1%	0	-	0	-	1	1.0%	1	0.9%
Working on roadway	0	-	0	-	0	-	0	-	0	-	0	-	0	-
Lying on roadway	1	20.0%	0	-	0	-	0	-	0	-	0	-	1	0.9%
Other	1	20.0%	1	5.6%	7	21.9%	8	17.0%	3	42.9%	19	18.3%	20	18.3%
Unknown	8	-	9	-	17	-	7	-	22	-	55	-	63	-
Total	13	100%	27	100%	49	100%	54	100%	29	100%	159	100%	172	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: 2011-2015 Average

Pedestrian Action	2011-2015 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	1	3	26	10	8	48	49	41.4%
At intersection, without right of way	<1	2	3	1	2	8	8	7.0%
At intersection, no traffic control	-	<1	2	2	<1	5	5	3.9%
Between intersections	-	1	6	1	2	11	11	9.3%
Walking along roadway against traffic	<1	<1	1	<1	<1	2	3	2.2%
Walking along roadway with traffic	1	<1	1	1	<1	4	5	4.1%
On sidewalk/median/safety zone	<1	<1	2	2	<1	5	5	4.4%
Walking on roadway (travelled portion)	1	2	2	1	1	6	7	5.6%
From behind vehicle/object on roadside	-	<1	2	1	1	4	4	3.7%
Running into roadway	<1	1	2	1	2	7	7	6.1%
Getting on/off vehicle	-	-	<1	<1	-	1	1	0.7%
Pushing/working on vehicle	-	-	<1	-	-	0	0	0.2%
Playing on roadway	<1	<1	<1	<1	-	1	1	0.8%
Working on roadway	-	-	-	<1	-	0	0	0.2%
Lying on roadway	<1	<1	<1	-	<1	1	2	1.5%
Other	<1	1	4	4	<1	10	10	8.8%
Unknown	5	8	22	12	13	55	60	-
Total	11	20	76	40	31	167	178	100%

Note: Counts of pedestrians in the 2011-2015 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 2016 occur when the pedestrian is:

- At an intersection, crossing with the right of way (47% of pedestrian casualties);
- Between intersections (9% of pedestrian casualties); and
- At an intersection with no traffic control (nearly 6% of pedestrian casualties).

For the 13 pedestrians killed in traffic collisions in 2016, 2 are killed at an intersection while crossing with the right of way, 1 is killed between intersections, and 1 is killed while lying on the roadway. No pedestrian action was recorded for 8 of the 13 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 2016, there are 66,063 vehicles involved in traffic collisions. Of these:

- 143 are involved in fatal collisions;
- 16,927 are involved in injury collisions; and,
- 48,993 are involved in PDO collisions.

Vehicle involvement in traffic collisions per 10,000 registered vehicles (vehicle involvement rate) has increased in 2016 compared to 2015 and to the previous five year (2011 to 2015) annual average. The vehicle involvement rate in collisions in 2016 for:

- Total collisions is 738.4 – increased by nearly 6% from 2015 and by 4% from the previous five years;
- Fatal collisions is 1.6 – increased by 33% from 2015 and by 17% from the previous five years;
- Injury collisions is 189.2 – increased by 3% from 2015 and by 9% from the previous five years; and,
- PDO collisions is 547.6 – increased by 6% from 2015 and by 3% 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 2016, the same as 2015 and similar to the previous five year (2011 to 2015) annual average (96%). Commercial vehicles represent 3% of the vehicles involved (similar to the 4% in the previous five years) while motorcycles, scooters, and mopeds represent 0.4% of the vehicles involved (almost the same as in the previous five years).

### **Major Elements Examined**

Counts of vehicles involved in collisions in Manitoba for 2016 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 2011 to 2015. 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: 2006 to 2016

Year	Collision Severity						Total Collisions	% change to previous year
	Fatal	% change to previous year	Injury	% change to previous year	PDO	% change to previous year		
2006	151	-	11,312	-	40,157	-	51,620	-
2007	141	-6.6%	11,099	-1.9%	37,251	-7.2%	48,491	-6.1%
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%
<b>2016</b>	<b>143</b>	<b>34.9%</b>	<b>16,927</b>	<b>4.6%</b>	<b>48,993</b>	<b>7.9%</b>	<b>66,063</b>	<b>7.1%</b>
2011-2015 Average*	116	23.5%	14,768	14.6%	45,392	7.9%	60,275	9.6%

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

In 2016, there are 66,063 vehicles involved in traffic collisions. Of these:

- 143 are involved in fatal collisions;
- 16,927 are involved in injury collisions; and,
- 48,993 are involved in PDO collisions.

Overall, there are more vehicles involved in traffic collisions in 2016 (66,063) than in 2015 (61,711), and more than in the previous five year (2011 to 2015) annual average (60,275). In 2016, there are:

- 4,352 more vehicles involved in total collisions than in 2015 (a 7% increase) and 5,788 more than in the previous five year average (a 10% increase);
- 37 more vehicles involved in fatal collisions than in 2015 (a 35% increase) and 27 more than in the previous five years (a nearly 24% increase);
- 743 more vehicles involved in injury collisions compared to 2015 (a 5% increase) and 2,159 more than in the previous five years (a 15% increase); and,
- 3,572 more vehicles involved in PDO collisions compared to 2015 (an 8% increase) and 3,601 more than in the previous five years (an 8% 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: 2006 to 2016

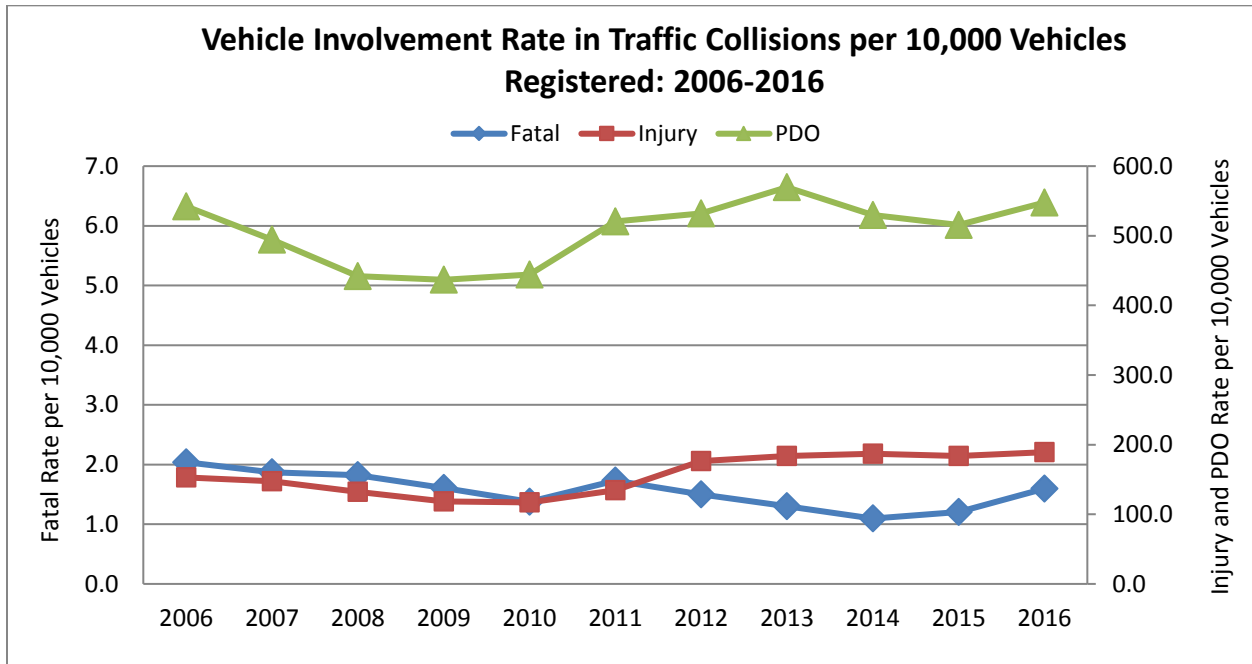
Year	Collision Severity						Total Collisions	% change to previous year
	Fatal	% change to previous year	Injury	% change to previous year	PDO	% change to previous year		
2006	2.0	-	152.7	-	542.2	-	697.0	-
2007	1.9	-8.2%	147.3	-3.6%	494.2	-8.8%	643.4	-7.7%
2008	1.8	-2.6%	132.1	-10.3%	442.0	-10.6%	575.9	-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%
<b>2016</b>	<b>1.6</b>	<b>32.9%</b>	<b>189.2</b>	<b>3.0%</b>	<b>547.6</b>	<b>6.3%</b>	<b>738.4</b>	<b>5.5%</b>
2011-2015 Average*	1.4	16.9%	173.1	9.3%	533.5	2.6%	708.0	4.3%

\* "% 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 2016 compared to 2015 and to the previous five year (2011 to 2015) annual average. The vehicle involvement rate in collisions in 2016 for:

- Total collisions is 738.4 – increased by nearly 6% from 2015 and by 4% from the previous five years;
- Fatal collisions is 1.6 – increased by 33% from 2015 and by 17% from the previous five years;
- Injury collisions is 189.2 – increased by 3% from 2015 and by 9% from the previous five years; and,
- PDO collisions is 547.6 – increased by 6% from 2015 and by 3% 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 in all severities of crashes is increased in 2016, reversing recent trends (from 2012 to 2015) that generally decreased. Vehicle involvement rates in 2016 are among the highest they have been in recent years, setting a high mark for injury crashes and near high marks for fatal and PDO crashes.

## Section 7

## Vehicle Involvement

**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: 2016, 2011-2015 Average

Vehicle Type	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 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)	73	51.0%	12,615	74.5%	34,126	69.7%	<b>46,814</b>	70.9%	51	10,638	30,947	41,636	69.1%
Mini/Multi-Purpose Van	7	4.9%	1,258	7.4%	3,582	7.3%	<b>4,847</b>	7.3%	10	1,363	4,104	5,477	9.1%
Van under 4500 kg	1	0.7%	152	0.9%	445	0.9%	<b>598</b>	0.9%	1	145	450	596	1.0%
Pick-up under 4500 kg	36	25.2%	2,166	12.8%	9,015	18.4%	<b>11,217</b>	17.0%	26	1,895	7,908	9,830	16.3%
Truck over 4500 kg (unit chassis)	2	1.4%	193	1.1%	905	1.8%	<b>1,100</b>	1.7%	6	170	795	972	1.6%
Power Unit for Semi-Trailer	13	9.1%	116	0.7%	367	0.7%	<b>496</b>	0.8%	8	108	354	470	0.8%
Truck/Camper	0	-	0	-	0	-	<b>0</b>	-	<1	1	6	7	<0.1%
Motor home	0	-	4	<0.1%	28	<0.1%	<b>32</b>	<0.1%	<1	3	17	19	<0.1%
Truck (other)	2	1.4%	29	0.2%	81	0.2%	<b>112</b>	0.2%	3	130	466	599	1.0%
School Bus	0	-	15	<0.1%	37	<0.1%	<b>52</b>	<0.1%	<1	3	8	11	<0.1%
Other School Vehicle	0	-	0	-	0	-	<b>0</b>	-	<1	<1	<1	0	<0.1%
Transit Bus – urban	0	-	42	0.2%	60	0.1%	<b>102</b>	0.2%	<1	37	62	100	0.2%
Para-transit Bus	0	-	5	<0.1%	5	<0.1%	<b>10</b>	<0.1%	<1	2	6	8	<0.1%
Intercity Bus	0	-	1	<0.1%	11	<0.1%	<b>12</b>	<0.1%	<1	4	7	11	<0.1%
Bus (other)	0	-	16	<0.1%	55	0.1%	<b>71</b>	0.1%	<1	24	85	110	0.2%
Motorcycle/Scooter	4	2.8%	162	1.0%	62	0.1%	<b>228</b>	0.3%	4	113	50	168	0.3%
Moped	0	-	13	<0.1%	2	<0.1%	<b>15</b>	<0.1%	<1	14	5	18	<0.1%
Bicycle	4	2.8%	121	0.7%	129	0.3%	<b>254</b>	0.4%	4	101	81	186	0.3%
Ambulance	0	-	2	<0.1%	14	<0.1%	<b>16</b>	<0.1%	<1	1	4	5	<0.1%
Fire	0	-	9	<0.1%	61	0.1%	<b>70</b>	0.1%	<1	<1	3	4	<0.1%
Police	0	-	0	-	0	-	<b>0</b>	-	<1	4	14	18	<0.1%
Mobility Vehicle	0	-	0	-	1	<0.1%	<b>1</b>	<0.1%	<1	<1	<1	0	-
Motorized Snow Vehicle HTA	0	-	0	-	0	-	<b>0</b>	-	<1	<1	<1	1	<0.1%
Farm Equipment	1	0.7%	0	-	0	-	<b>1</b>	<0.1%	<1	1	1	2	<0.1%
Construction Equipment	0	-	0	-	0	-	<b>0</b>	-	<1	2	12	14	<0.1%
Train/Other Rail Vehicle	0	-	0	-	0	-	<b>0</b>	-	<1	<1	<1	0	-
Off-Road Vehicles	0	-	8	<0.1%	7	<0.1%	<b>15</b>	<0.1%	<1	2	2	12	<0.1%
<b>Total</b>	<b>143</b>	<b>100%</b>	<b>16,927</b>	<b>100%</b>	<b>48,993</b>	<b>100%</b>	<b>66,063</b>	<b>100%</b>	<b>116</b>	<b>14,768</b>	<b>45,392</b>	<b>60,275</b>	<b>100%</b>

Note: Counts of vehicles in the 2011-2015 average may not add to the total due to rounding.

Section 7

Vehicle Involvement

**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: 2016, 2011-2015 Average

Vehicle Type	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 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	117	84.8%	16,191	96.4%	47,168	96.6%	<b>63,476</b>	96.5%	88	14,041	43,410	57,538	95.8%
Passenger vehicles	81	58.7%	14,025	83.5%	38,153	78.1%	<b>52,259</b>	79.5%	62	12,145	35,501	47,709	79.5%
Light trucks	36	26.1%	2,166	12.9%	9,015	18.5%	<b>11,217</b>	17.1%	26	1,895	7,908	9,830	16.4%
NSC Commercial Vehicles	17	12.3%	417	2.5%	1,521	3.1%	<b>1,955</b>	3.0%	17	479	1,783	2,281	3.8%
PSV Vehicles	0	-	11	<0.1%	75	0.2%	<b>86</b>	0.1%	0	5	21	28	<0.1%
Motorcycle/Moped/Scooter	4	2.9%	175	1.0%	64	0.1%	<b>243</b>	0.4%	4	127	55	186	0.3%
Off-Road vehicles	0	-	8	<0.1%	7	<0.1%	<b>15</b>	<0.1%	<1	2	2	12	<0.1%

Note: Counts of vehicles in the 2011-2015 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: 2016, 2011-2015 Average

Vehicle Type	2016 Collision Severity				2011-2015 Average			
	Fatal	Injury	PDO	2016 Total	Fatal	Injury	PDO	Total
Light Duty Vehicles	1.6	226.2	659.0	<b>886.8</b>	1.3	202.4	625.7	829.4
Passenger vehicles	1.4	248.1	674.9	<b>924.4</b>	1.1	222.8	651.3	875.3
Light trucks	2.4	144.0	599.4	<b>745.8</b>	1.7	127.4	531.8	660.9
NSC Commercial Vehicles	1.7	42.5	154.9	<b>199.1</b>	2.1	58.1	216.4	276.7
PSV Vehicles	0.0	7.5	51.2	<b>58.7</b>	0.0	4.8	18.8	24.3
Motorcycle/Moped/Scooter	2.7	119.6	43.7	<b>166.0</b>	3.0	100.8	43.8	147.6

Light duty vehicles, including passenger vehicles, minivans, and light trucks, represent nearly 97% of the vehicles involved in all traffic collisions in 2016, the same as 2015 and similar to the previous five year (2011 to 2015) annual average (96%). Commercial vehicles represent 3% of the vehicles involved (similar to the 4% in the previous five years) while motorcycles, scooters, and mopeds represent 0.4% of the vehicles involved (almost 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 886.8 in 2016 and 829.4 in the previous five year (2011 to 2015) annual average. NSC commercial vehicles have an involvement rate of 199.1 in 2016 and 276.7 in the previous five years.

Motorcycles (including scooters and mopeds) have the lowest rates of involvement in traffic collisions among all vehicle types examined. Motorcycles have a rate of involvement of 166.0 in 2016 and 147.6 for the previous five year (2011 to 2015) annual average.

Few PSV vehicles are recorded as being involved in traffic collisions in 2016 (only 86 in total). They had an involvement rate (per 10,000 registered vehicles) of 58.7 in 2016 and 24.3 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 2016, motorcycles have an involvement rate of 2.7 in fatal collisions, more than one-and-a-half times the involvement rate of light duty vehicles in fatal collisions (1.6). In the previous five year (2011 to 2015) annual average, motorcycles had a vehicle involvement rate of 3.0 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 2016, there are 63,839 drivers involved in traffic collisions. Of these:

- 138 are involved in fatal collisions;
- 16,753 are involved in injury collisions; and,
- 46,948 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 2016.

Young drivers have a much higher rate of involvement in traffic collisions than older drivers. In 2016, drivers aged 16 to 24 years old have an involvement rate (per 10,000 licensed drivers) in traffic collisions of 1,046.1. This is:

- 1.2 times that of drivers aged 25 to 34 (rate of 867.5);
- 1.3 times that of drivers aged 35 to 44 (rate of 779.1);
- 1.5 times that of drivers aged 45 to 54 (rate of 696.0);
- 1.9 times that of drivers aged 55 to 64 (rate of 551.0); and,
- More than two-and-a-half times that of drivers aged 65 and older (rate of 402.0).

The majority of drivers involved in traffic collisions are male. Among all drivers involved in traffic collisions in 2016 where the driver gender is known, nearly 61% are male and nearly 40% are female.

- Fatal collisions: 68% are male drivers, 32% are female drivers
- Injury collisions: nearly 54% are male drivers, nearly 47% are female drivers
- PDO collisions: 63% are male drivers, 37% are female drivers

The rate of involvement for men in traffic collisions in 2016 is 831.2, nearly one-and-a-half times that of females (581.9). Driver involvement rates in 2016:

- Fatal collisions: male rate – 2.0, female rate – 1.0
- Injury collisions: male rate – 193.2, female rate – 179.9
- PDO collisions: male rate – 636.0, female rate – 401.0

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.

### Major Elements Examined

Counts of drivers involved in collisions in Manitoba for 2016 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.

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. Changes to the reporting structure have resulted in significant improvements; only 0.2% of drivers are not identified by age in 2016 compared to 2% in the five year (2011 to 2015) annual average. Likewise, gender is not always captured for each driver involved in a traffic collision, although improvements have been made here as well. In 2016, only 0.2% of the drivers involved in traffic collisions are not identified by gender compared with 1.4% in the previous five year (2011 to 2015) annual average.

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 2011 to 2015. 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: 2006 to 2016

Year	Collision Severity						Total Collisions	% change to previous year
	Fatal	% change to previous year	Injury	% change to previous year	PDO	% change to previous year		
2006	145	-	10,827	-	35,408	-	46,380	-
2007	135	-6.9%	10,696	-1.2%	33,983	-4.0%	44,814	-3.4%
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%
<b>2016</b>	<b>138</b>	<b>34.0%</b>	<b>16,753</b>	<b>4.1%</b>	<b>46,948</b>	<b>7.9%</b>	<b>63,839</b>	<b>6.9%</b>
2011-2015 Average*	110	25.9%	14,617	14.6%	44,206	6.2%	58,933	8.3%

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

In 2016, there are 63,839 drivers involved in traffic collisions. Of these:

- 138 are involved in fatal collisions;
- 16,753 are involved in injury collisions; and,
- 46,948 are involved in PDO collisions.

Overall, the number of drivers involved in traffic collisions in 2016 increased from 2015 (up 7%) and from the previous five year (2011 to 2015) annual average (up 8%). In 2016, there are:

- 4,123 more drivers involved in total collisions than in 2015 and 4,906 more than in the previous five years;
- 35 more drivers involved in fatal collisions than in 2015 (a 34% increase) and 28 more than in the previous five years (a 26% increase);
- 665 more drivers involved in injury collisions compared to 2015 (a 4% increase) and 2,136 more than in the previous five years (a 15% increase); and,
- 3,423 more drivers involved in PDO collisions compared to 2015 (an 8% increase) and 2,742 more than in the previous five years (a 6% 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: 2006 to 2016

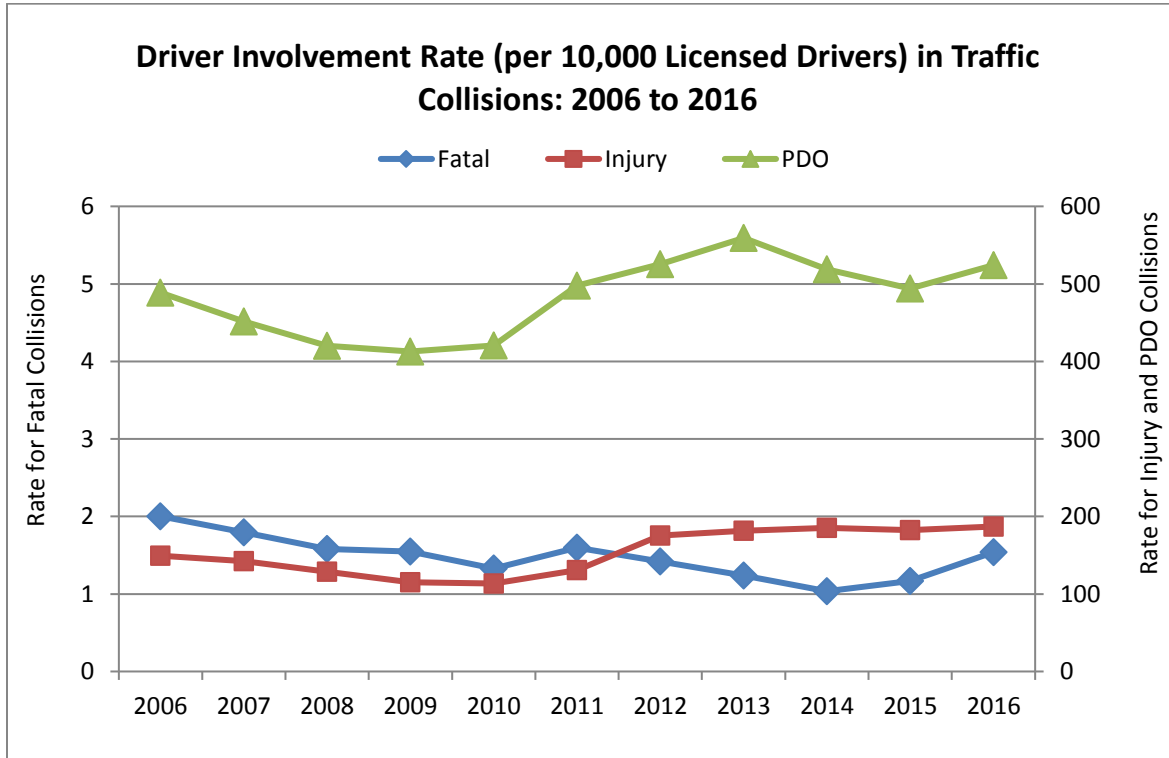
Year	Collision Severity						Total Collisions	% change to previous year
	Fatal	% change to previous year	Injury	% change to previous year	PDO	% change to previous year		
2006	2.0	-	149.5	-	488.8	-	640.3	-
2007	1.8	-10.4%	142.2	-4.9%	451.7	-7.6%	595.6	-7.0%
2008	1.6	-11.8%	128.8	-9.4%	420.2	-7.0%	550.6	-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%
<b>2016</b>	<b>1.5</b>	<b>31.8%</b>	<b>187.0</b>	<b>2.4%</b>	<b>524.0</b>	<b>6.1%</b>	<b>712.6</b>	<b>5.2%</b>
2011-2015 Average*	1.3	19.2%	171.1	9.3%	519.0	1.0%	691.4	3.1%

\* "% 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 2016 is 712.6, an increase of 5% compared to the rate in 2015 (677.6) and an increase of 3% from the previous five year (2011 to 2015) annual average (691.4). In 2016, driver involvement in:

- Fatal collisions (1.5) increased by 32% from 2015 and by 19% compared to the previous five years;
- Injury collisions (187.0) increased by 2% from 2015 and by 9% compared to the previous five years; and,
- PDO collisions (524.0) increased by 6% from 2015, and by 1% 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 2004 and 2008. 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 increasing again in 2016. The increased driver involvement rates in PDO collisions since 2011 (compared to 2006 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 through 2016, while the rate for fatal collisions had steadily decreased until increases in 2015 and 2016. 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.

## Section 8

## Driver Involvement

**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: 2016, 2011-2015 Average

Age Group	2016 Collision Severity						2016 Total Collisions	% of 2016 Total Collisions*	2011-2015 Average Count of Drivers				
	Fatal	% of Total Fatal*	Injury	% of Total Injury*	PDO	% of Total PDO*			Fatal	Injury	PDO	Total	% of Total Collisions*
<16	1	0.7%	53	0.3%	73	0.2%	127	0.2%	0	9	34	43	<0.1%
16-19	17	12.4%	1,231	7.4%	3,454	7.4%	4,702	7.4%	11	1,138	3,731	4,880	8.4%
20-24	17	12.4%	2,039	12.2%	6,014	12.8%	8,070	12.7%	14	1,779	5,672	7,465	12.9%
25-34	32	23.4%	3,696	22.1%	9,916	21.2%	13,644	21.4%	23	3,063	8,940	12,027	20.8%
35-44	20	14.6%	3,154	18.8%	8,380	17.9%	11,554	18.1%	14	2,746	7,647	10,406	18.0%
45-54	20	14.6%	2,880	17.2%	7,870	16.8%	10,770	16.9%	17	2,648	7,545	10,210	17.7%
55-64	16	11.7%	2,164	12.9%	6,077	13.0%	8,257	13.0%	12	1,770	5,447	7,229	12.5%
65+	14	10.2%	1,523	9.1%	5,041	10.8%	6,578	10.3%	17	1,259	4,272	5,548	9.6%
Not Stated	1	-	13	-	123	-	137	-	0	205	918	1,124	-
<b>Total*</b>	<b>138</b>	<b>100%</b>	<b>16,753</b>	<b>100%</b>	<b>46,948</b>	<b>100%</b>	<b>63,839</b>	<b>100%</b>	<b>110</b>	<b>14,617</b>	<b>44,206</b>	<b>58,933</b>	<b>100%</b>

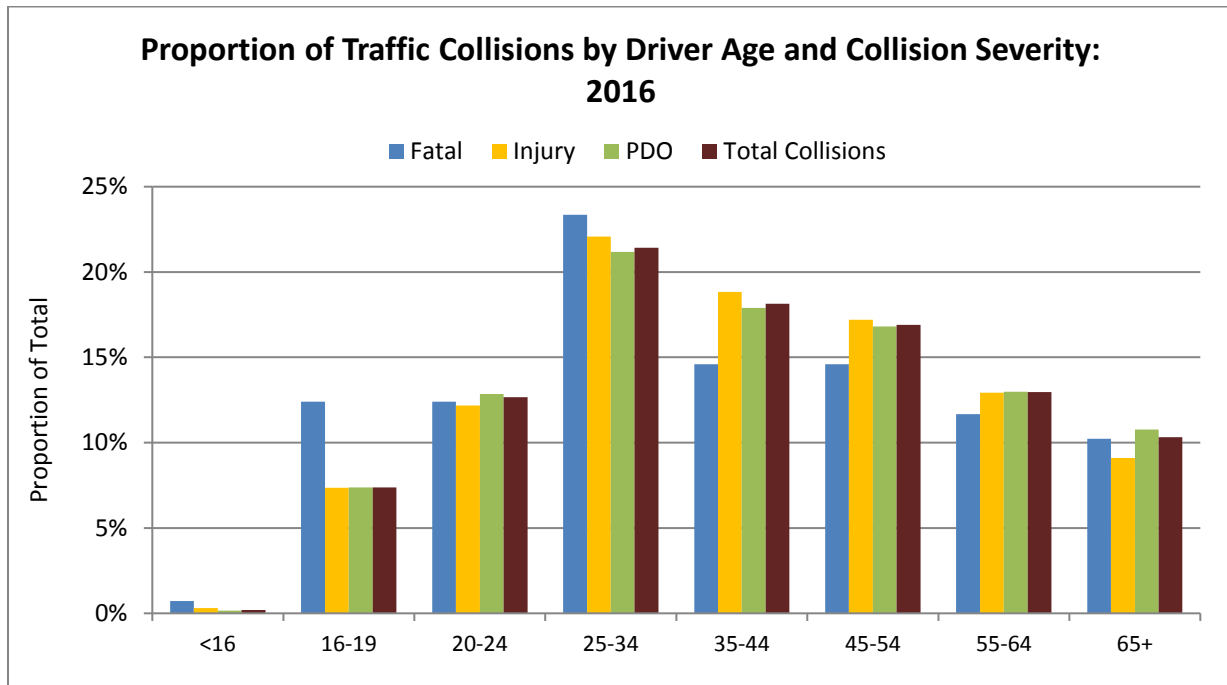
\*Percentage of the total does not include the 'not stated' category.

Note: Counts of drivers in the 2011-2015 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 2016. Overall, these proportions are very similar to previous years.

- Total collisions: aged 16 to 24 – 20%; aged 25 to 34 – 21%; aged 35 to 44 – 18%; aged 45 to 54 – 17%; aged 55 to 64 – 13%; aged 65 and older – 10%.
- Fatal collisions: aged 16 to 24 – 25%; aged 25 to 34 – 23%; aged 35 to 44 – 15%; aged 45 to 54 – 15%; aged 55 to 64 – 12%; aged 65 and older – 10%.
- Injury 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 – 9%.
- PDO collisions: aged 16 to 24 – 20%; aged 25 to 34 – 21%; aged 35 to 44 – 18%; aged 45 to 54 – 17%; 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: 2016, 2011-2015 Average

Age Group	2016 Collision Severity			2016 Total Collisions	2011-2015 Average			
	Fatal	Injury	PDO		Fatal	Injury	PDO	Total
<16	-	-	-	-	-	-	-	-
16-19	3.6	260.0	729.4	<b>993.0</b>	2.3	233.6	765.6	1,001.5
20-24	2.3	272.8	804.6	<b>1,079.7</b>	2.0	247.5	788.9	1,038.4
25-34	2.0	235.0	630.5	<b>867.5</b>	1.6	211.9	618.6	832.1
35-44	1.3	212.7	565.1	<b>779.1</b>	1.0	193.1	537.7	731.7
45-54	1.3	186.1	508.6	<b>696.0</b>	1.1	165.3	470.9	637.3
55-64	1.1	144.4	405.5	<b>551.0</b>	0.9	126.8	390.1	517.8
65+	0.9	93.1	308.1	<b>402.0</b>	1.2	87.1	295.7	384.0

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 2016, drivers aged 16 to 24 years old have an involvement rate (per 10,000 licensed drivers) in traffic collisions of 1,046.1. This is:

- 1.2 times that of drivers aged 25 to 34 (rate of 867.5);
- 1.3 times that of drivers aged 35 to 44 (rate of 779.1);
- 1.5 times that of drivers aged 45 to 54 (rate of 696.0);
- 1.9 times that of drivers aged 55 to 64 (rate of 551.0); and,
- More than two-and-a-half times that of drivers aged 65 and older (rate of 402.0).

## Section 8

## Driver Involvement

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

Table 8-5

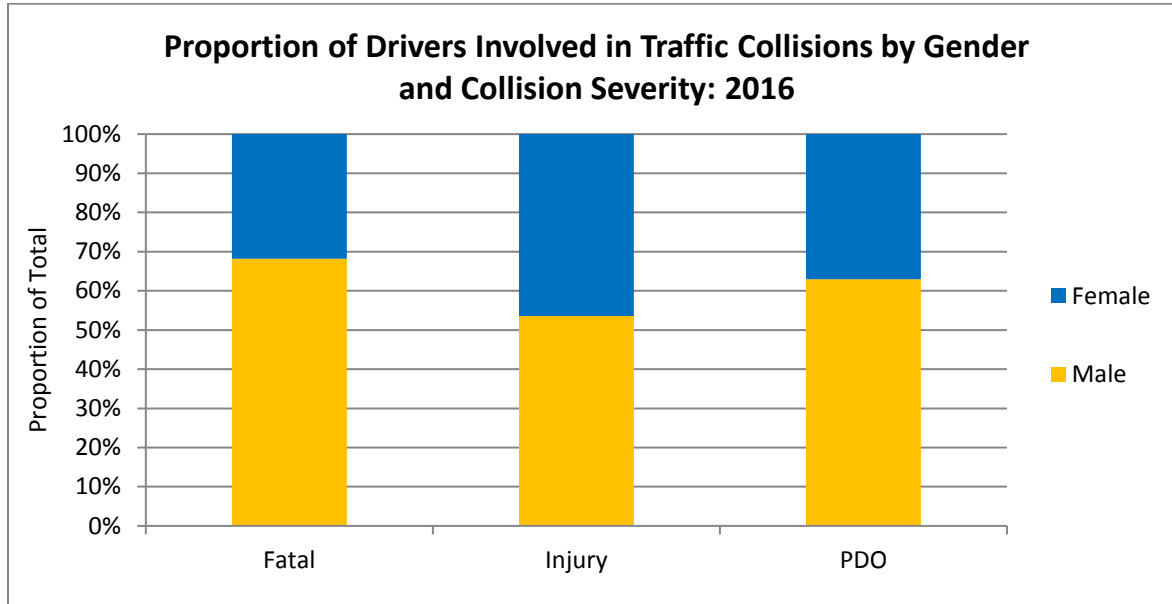
Total Drivers Involved in Traffic Collisions by Gender and Age Group and Collision Severity: 2016, 2011-2015 Average

Gender - Age Group		2016 Collision Severity						2016 Total Collisions	% of 2016 Total Collisions*	2011-2015 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	1	2.3%	8	0.1%	24	0.1%	33	0.1%	<1	4	15	19	<0.1%
	16-19	7	16.3%	554	7.1%	1,281	7.4%	1,842	7.3%	3	523	1,426	1,952	8.5%
	20-24	4	9.3%	966	12.4%	2,263	13.1%	3,233	12.9%	5	866	2,144	3,015	13.1%
	25-34	11	25.6%	1,748	22.5%	3,704	21.4%	5,463	21.7%	5	1,497	3,362	4,863	21.2%
	35-44	4	9.3%	1,571	20.2%	3,201	18.5%	4,776	19.0%	3	1,335	2,987	4,325	18.8%
	45-54	9	20.9%	1,335	17.2%	2,843	16.4%	4,187	16.7%	5	1,263	2,778	4,046	17.6%
	55-64	3	7.0%	953	12.3%	2,183	12.6%	3,139	12.5%	1	808	1,961	2,770	12.1%
	65+	4	9.3%	639	8.2%	1,821	10.5%	2,464	9.8%	5	512	1,479	1,996	8.7%
	Not Stated	0	-	1	-	8	-	9	-	<1	27	101	129	-
	<b>Total Female*</b>	<b>43</b>	<b>100%</b>	<b>7,775</b>	<b>100%</b>	<b>17,328</b>	<b>100%</b>	<b>25,146</b>	<b>100%</b>	<b>27</b>	<b>6,835</b>	<b>16,253</b>	<b>23,115</b>	<b>100%</b>
Male	<16	0	-	45	0.5%	48	0.2%	93	0.2%	<1	4	19	24	<0.1%
	16-19	10	10.9%	676	7.5%	2,167	7.4%	2,853	7.4%	8	615	2,303	2,926	8.4%
	20-24	12	13.0%	1,071	12.0%	3,741	12.7%	4,824	12.5%	10	912	3,523	4,445	12.8%
	25-34	20	21.7%	1,944	21.7%	6,208	21.1%	8,172	21.2%	18	1,565	5,573	7,156	20.6%
	35-44	16	17.4%	1,582	17.7%	5,176	17.6%	6,774	17.6%	11	1,409	4,656	6,076	17.5%
	45-54	11	12.0%	1,545	17.2%	5,025	17.0%	6,581	17.1%	12	1,384	4,763	6,159	17.7%
	55-64	13	14.1%	1,211	13.5%	3,894	13.2%	5,118	13.3%	11	962	3,484	4,456	12.8%
	65+	10	10.9%	884	9.9%	3,219	10.9%	4,113	10.7%	12	746	2,791	3,549	10.2%
	Not Stated	0	-	4	-	16	-	20	-	<1	43	178	221	-
	<b>Total Male*</b>	<b>92</b>	<b>100%</b>	<b>8,962</b>	<b>100%</b>	<b>29,494</b>	<b>100%</b>	<b>38,548</b>	<b>100%</b>	<b>82</b>	<b>7,639</b>	<b>27,290</b>	<b>35,011</b>	<b>100%</b>

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

Note: Counts of drivers in the 2011-2015 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 2016 where the driver gender is known, nearly 61% are male and nearly 40% are female.

- Fatal collisions: 68% are male drivers, 32% are female drivers
- Injury collisions: nearly 54% are male drivers, nearly 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 2016:

- Male drivers aged 16 to 24 account for 12% of all collisions, 16% of fatal collisions, 10% of injury collisions, and 13% of PDO collisions;
- Male drivers aged 25 to 34 account for 13% of all collisions, 15% of fatal collisions, 12% of injury collisions, and 13% of PDO collisions;
- Female drivers aged 16 to 24 account for 8% of all collisions, 8% of fatal collisions, 9% of injury collisions and 8% of PDO collisions; and,
- Female drivers aged 25 to 34 account for 9% of all collisions, 8% of fatal collisions, 10% of injury collisions and 8% of PDO collisions.

## Section 8

## Driver Involvement

**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: 2016, 2011-2015 Average

Age Group - Gender		2016 Collision Severity						2016 Total Collisions	% of 2016 Total Collisions*	2011-2015 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	1	0.7%	8	<0.1%	24	<0.1%	33	<0.1%	<1	4	15	19	<0.1%
	Male	0	-	45	0.3%	48	0.1%	93	0.1%	<1	4	19	24	<0.1%
16 to 24	Female	11	8.1%	1,520	9.1%	3,544	7.6%	5,075	8.0%	8	1,389	3,570	4,967	8.6%
	Male	22	16.3%	1,747	10.4%	5,908	12.6%	7,677	12.1%	18	1,527	5,826	7,370	12.8%
25 to 34	Female	11	8.1%	1,748	10.4%	3,704	7.9%	5,463	8.6%	5	1,497	3,362	4,863	8.4%
	Male	20	14.8%	1,944	11.6%	6,208	13.3%	8,172	12.8%	18	1,565	5,573	7,156	12.4%
35 to 44	Female	4	3.0%	1,571	9.4%	3,201	6.8%	4,776	7.5%	3	1,335	2,987	4,325	7.5%
	Male	16	11.9%	1,582	9.5%	5,176	11.1%	6,774	10.6%	11	1,409	4,656	6,076	10.5%
45 to 54	Female	9	6.7%	1,335	8.0%	2,843	6.1%	4,187	6.6%	5	1,263	2,778	4,046	7.0%
	Male	11	8.1%	1,545	9.2%	5,025	10.7%	6,581	10.3%	12	1,384	4,763	6,159	10.7%
55 to 64	Female	3	2.2%	953	5.7%	2,183	4.7%	3,139	4.9%	1	808	1,961	2,770	4.8%
	Male	13	9.6%	1,211	7.2%	3,894	8.3%	5,118	8.0%	11	962	3,484	4,456	7.7%
65 and older	Female	4	3.0%	639	3.8%	1,821	3.9%	2,464	3.9%	5	512	1,479	1,996	3.5%
	Male	10	7.4%	884	5.3%	3,219	6.9%	4,113	6.5%	12	746	2,791	3,549	6.1%
Not Stated	Female	0	-	1	-	8	-	9	-	<1	27	101	129	-
	Male	0	-	4	-	16	-	20	-	<1	43	178	221	-
Total	Female	43	31.9%	7,775	46.4%	17,328	37.0%	25,146	39.5%	27	6,835	16,253	23,115	39.8%
	Male	92	68.1%	8,962	53.5%	29,494	63.0%	38,548	60.5%	82	7,639	27,290	35,011	60.2%

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

Note: Counts of drivers in the 2011-2015 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: 2016, 2011-2015 Average

Gender - Age Group		2016 Collision Severity			2016 Total Collisions	2011-2015 Average			
		Fatal	Injury	PDO		Fatal	Injury	PDO	Total
Female	<16	-	-	-	-	-	-	-	-
	16-19	3.1	243.1	562.2	<b>808.4</b>	1.4	221.3	603.7	826.4
	20-24	1.1	269.7	631.8	<b>902.5</b>	1.3	249.2	616.6	867.2
	25-34	1.4	228.8	484.8	<b>715.0</b>	0.7	213.5	479.6	693.8
	35-44	0.6	217.6	443.3	<b>661.5</b>	0.4	193.3	432.7	626.4
	45-54	1.2	178.7	380.6	<b>560.5</b>	0.7	164.0	360.6	525.2
	55-64	0.4	132.0	302.4	<b>434.9</b>	0.2	119.8	290.9	410.9
	65+	0.5	81.9	233.4	<b>315.8</b>	0.7	75.0	216.5	292.2
	Total	1.0	179.9	401.0	<b>581.9</b>	0.7	166.6	396.1	563.4
Male	<16	-	-	-	-	-	-	-	-
	16-19	4.1	275.2	882.1	<b>1,161.4</b>	3.3	244.7	917.0	1,165.0
	20-24	3.1	275.2	961.1	<b>1,239.3</b>	2.6	245.6	948.9	1,197.2
	25-34	2.5	240.4	767.7	<b>1,010.6</b>	2.5	210.2	748.6	961.3
	35-44	2.1	207.9	680.2	<b>890.2</b>	1.5	192.6	636.2	830.3
	45-54	1.4	193.0	627.8	<b>822.2</b>	1.4	166.4	572.7	740.5
	55-64	1.7	155.9	501.4	<b>659.0</b>	1.5	133.2	482.6	617.3
	65+	1.2	103.3	376.1	<b>480.5</b>	1.6	98.0	366.4	465.9
	Total	2.0	193.2	636.0	<b>831.2</b>	1.9	173.1	618.2	793.2

The rate of involvement for men in traffic collisions in 2016 is 831.2, nearly one-and-a-half times that of women (581.9). Driver involvement rates in 2016:

- Fatal collisions: male rate – 2.0, female rate – 1.0
- Injury collisions: male rate – 193.2, female rate – 179.9
- PDO collisions: male rate – 636.0, female rate – 401.0

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 2016, 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 male drivers aged 35 and older.

Compared to the previous five year (2011 to 2015) annual average, driver involvement rates in 2016 for nearly all gender-age groups increased for overall traffic collisions, and traffic collisions of different severity levels.

Driver involvement rates in fatal collisions show some variations. Comparing 2016 to the previous five year (2011 to 2015) annual average:

- Female involvement rates in fatal collisions increased by 51% overall, and doubled or more in some age groups. However, the rates decreased for females age 20 to 24 and age 65 and older.
- Male involvement rates in fatal collisions increased nearly 7% overall. However, the rates among male drivers age 45 to 54 and age 65 and older decreased while all other age groups increased.

## 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 2016, 65% of all collisions have some at-fault contributing factor recorded (83% of fatal collisions; 74% of injury collisions). In 2016:

- A driver action is a contributing factor in 59% of all **collisions** (75% of fatal collisions; 71% of injury collisions; 56% of PDO collisions);
- A human condition is a contributing factor in 1% of all **collisions** (nearly 37% of fatal collisions; 1% of injury collisions; 0.5% of PDO collisions); and,
- Environmental conditions are contributing factors in 10% of all **collisions** (15% of fatal collisions; 7% of injury collisions; 11% of PDO collisions).

The most prevalent **contributing factors recorded for collisions** in 2016 include:

- Distracted driving – nearly 25% of all collisions (24% fatal; nearly 27% injury; 24% PDO);
- “Following too closely” – 15% of all collisions (1% fatal; 26% injury; 12% PDO);
- “Backing unsafely” – nearly 8% of all collisions (1% fatal; 2% injury; 9% PDO);
- Speed – nearly 7% of all collisions (27% fatal; nearly 8% injury; 6% PDO);
- “Turning improperly” – nearly 6% of all collisions (1% fatal; 8% injury; 5% PDO);
- “Fail to yield right-of-way” – 5% of all collisions (7% fatal; 8% injury; 4% PDO);
- “Changing lanes improperly” – 5% of all collisions (1% fatal; 4% injury; 5% PDO);
- The actions of a wild animal – 4% of all collisions (1% fatal; 1% injury; 5% PDO);
- “Slippery road surface” – 4% of all collisions (8% fatal; 4% injury; 4% PDO); and,
- “Lost control/Drive off the road” – 3% of all collisions (15% fatal; 4% injury; 3% PDO).

Considering the **victims from collisions** in 2016:

- Nearly 73% of all victims resulted from a collision where at least one driver is noted as having a driver action contributing to the collision (77% of people killed; 76% of people seriously injured);
- 2% of all victims resulted from a collision where at least one driver is noted as having a human condition contributing to the collision (39% of people killed; 11% of people seriously injured); and,
- 7% of all victims resulted from a collision where environmental conditions are noted as contributing to the collision (13% of people killed; nearly 12% of people seriously injured).

The most prevalent contributing factors recorded for collisions where **people are killed or seriously injured** in 2016 include:

- Impaired – nearly 36% of people killed and nearly 8% of people seriously injured;
- Speed – 31% of people killed and 15% of people seriously injured;
- Distracted driving – 27% of people killed and 29% of people seriously injured;
- “Lost control/Drive off the road” – 15% of people killed and 13% of people seriously injured;
- “Slippery road surface” – nearly 8% of the people killed and 5% of people seriously injured;
- “Disobey traffic control” – nearly 8% of people killed and 3% of people seriously injured;
- “Fail to yield right-of-way” – nearly 7% of people killed and 12% of people seriously injured;
- “Leave stop sign before safe to do so” – nearly 7% of people killed and nearly 8% of people seriously injured;
- “Drive wrong way on roadway” – 5% of people killed and 1 person seriously injured;
- “Pedestrian error/confusion” – 4% of people killed and 2% of people seriously injured;
- “Passing improperly” – 4% of people killed and 1% of people seriously injured;
- “Turning improperly” – 1% of people killed and 10% of people seriously injured; and,
- “Following too closely” – 1% of the people killed and 6% of people seriously injured.



In 2016, 51% of the **drivers involved in traffic collisions** were recorded as not being at-fault in the collision while 2% did not have any contributing factors identified.

- 35% of the drivers involved in a fatal collision were noted as not being at-fault.
- 55% of the drivers in an injury collision were noted as not being at-fault.
- 50% of the drivers in a PDO collision were noted as not being at-fault.

Driver actions were recorded for nearly 43% of the **drivers involved in traffic collisions** in 2016.

- 52% of the drivers involved in fatal collisions had a driver action recorded.
- 41% of the drivers involved in injury collisions had a driver action recorded.
- 43% of the drivers involved in PDO collisions had a driver action recorded.

Human conditions were recorded as contributing factors for 0.5% of the **drivers involved in traffic collisions** in 2016.

- 25% of the drivers involved in fatal collisions had a human condition recorded.
- 0.6% 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 7% of **drivers involved in traffic collisions** in 2016.

- 12% of the drivers involved in fatal collisions had some environmental condition recorded.
- 4% of the drivers involved in injury collisions had some environmental condition recorded.
- 8% of the drivers involved in PDO collisions had some environmental condition recorded.

In 2016, the **driver involvement rate** (per 10,000 licensed drivers) in traffic collisions where:

- Any driver action is a contributing factor is 302.7, increased by 15% from the previous five years (264.0);
- Any human condition is a contributing factor is 3.3, decreased by 55% from the previous five years (7.3);
- Environmental conditions are a contributing factor is 50.6, decreased by 35% from the previous five years (77.4);
- Distracted driving is a contributing factor is 123.8, increased 66% from the previous five years (74.6);
- Speed is a contributing factor is 33.0, increased by 16% from the previous five years (28.4); and,
- Impaired is a contributing factor is 1.5, decreased by 6% from the previous five years (1.6).

### Major Elements Examined

Counts of drivers involved in collisions in Manitoba for 2016 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. In 2016, 0.2% of drivers are not identified by age. In the five year annual average (2011 to 2015), 2% of drivers were not identified by age.

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 2011 to 2015. 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.

## Section 9

## Contributing Factors

**Table 9-1 Contributing Factors to a Collision by Collision Severity**Table 9-1  
Contributing Factors to a Collision by Collision Severity: 2016

Contributing Factor	2016 Collision Severity						2016 Total Collisions	% of 2016 Total Collisions
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Driver Action - Driving Properly and Human Condition - Apparently Normal	36	37.5%	8,051	84.0%	24,168	67.8%	32,255	71.2%
Driver Action - Driving properly	0	-	106	1.1%	323	0.9%	429	0.9%
Any Driver Action	72	75.0%	6,839	71.4%	19,948	56.0%	26,859	59.3%
Follow too closely	1	1.0%	2,493	26.0%	4,269	12.0%	6,763	14.9%
Turning improperly	1	1.0%	786	8.2%	1,699	4.8%	2,486	5.5%
Passing improperly	3	3.1%	41	0.4%	120	0.3%	164	0.4%
Changing lanes improperly	1	1.0%	355	3.7%	1,724	4.8%	2,080	4.6%
Fail to yield right-of-way	7	7.3%	809	8.4%	1,542	4.3%	2,358	5.2%
Disobey traffic control device/officer	7	7.3%	234	2.4%	286	0.8%	527	1.2%
Drive wrong way on roadway	3	3.1%	6	<0.1%	9	<0.1%	18	<0.1%
Passing a vehicle at pedestrian X-walk	0	-	0	-	0	-	0	-
Back unsafely	1	1.0%	222	2.3%	3,160	8.9%	3,383	7.5%
Parking improperly	1	1.0%	14	0.1%	166	0.5%	181	0.4%
Lost control/Drive off road	14	14.6%	345	3.6%	1,044	2.9%	1,403	3.1%
Driverless vehicle ran out of control	1	1.0%	13	0.1%	23	<0.1%	37	<0.1%
Leave stop sign before safe to do so	7	7.3%	314	3.3%	540	1.5%	861	1.9%
Failed to signal	0	-	6	<0.1%	11	<0.1%	17	<0.1%
Take avoiding action	0	-	94	1.0%	428	1.2%	522	1.2%
Driver inexperience	2	2.1%	45	0.5%	129	0.4%	176	0.4%
Pedestrian error/confusion	4	4.2%	27	0.3%	34	<0.1%	65	0.1%
NET Speed	26	27.1%	722	7.5%	2,216	6.2%	2,964	6.5%
Exceeding speed limit	17	17.7%	9	<0.1%	13	<0.1%	39	<0.1%
Driving too fast for conditions	6	6.3%	698	7.3%	2,186	6.1%	2,890	6.4%
Unsafe operating speed (Too fast or too slow)	6	6.3%	17	0.2%	19	<0.1%	42	<0.1%
NET Distracted driving	23	24.0%	2,535	26.5%	8,528	23.9%	11,086	24.5%
Careless Driving	17	17.7%	2,376	24.8%	8,167	22.9%	10,560	23.3%
Distraction/Inattention	9	9.4%	243	2.5%	535	1.5%	787	1.7%

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## Contributing Factors

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Contributing Factor	2016 Collision Severity						2016 Total Collisions	% of 2016 Total Collisions
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Driver Action - Driving Properly and Human Condition - Apparently Normal	36	37.5%	8,051	84.0%	24,168	67.8%	32,255	71.2%
Any Human Condition	35	36.5%	103	1.1%	163	0.5%	301	0.7%
Loss of consciousness/Blackout prior to collision	2	2.1%	20	0.2%	18	<0.1%	40	<0.1%
Extreme fatigue/Fell asleep	3	3.1%	19	0.2%	57	0.2%	79	0.2%
Defective eyesight	0	-	1	<0.1%	3	<0.1%	4	<0.1%
Defective hearing	0	-	0	-	2	<0.1%	2	<0.1%
Medical disability	0	-	5	<0.1%	6	<0.1%	11	<0.1%
Physical disability	0	-	1	<0.1%	3	<0.1%	4	<0.1%
Mental disability	0	-	2	<0.1%	2	<0.1%	4	<0.1%
Mental confusion/Inability to remember	0	-	8	<0.1%	16	<0.1%	24	<0.1%
Sudden illness	1	1.0%	9	<0.1%	2	<0.1%	12	<0.1%
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	0	-
NET Impaired	31	32.3%	49	0.5%	65	0.2%	145	0.3%
Ability impaired alcohol	21	21.9%	35	0.4%	54	0.2%	110	0.2%
Ability impaired drugs	6	6.3%	1	<0.1%	1	<0.1%	8	<0.1%
Had been drinking/Suspected alcohol use	9	9.4%	15	0.2%	10	<0.1%	34	<0.1%
No Apparent (Vehicle) Defect	41	42.7%	8,671	90.5%	30,048	84.3%	38,760	85.5%
Any Vehicle Defect	3	3.1%	37	0.4%	238	0.7%	278	0.6%
Defective brakes	0	-	7	<0.1%	23	<0.1%	30	<0.1%
Defective steering	0	-	0	-	2	<0.1%	2	<0.1%
Defective headlights	0	-	0	-	0	-	0	-
Defective brake lights	1	1.0%	3	<0.1%	6	<0.1%	10	<0.1%
Defective lighting (unspecified)	1	1.0%	1	<0.1%	0	-	2	<0.1%
Defective engine controls/drive train	0	-	1	<0.1%	8	<0.1%	9	<0.1%
Defective suspension/wheels	0	-	5	<0.1%	47	0.1%	52	0.1%
Defective tires	1	1.0%	9	<0.1%	60	0.2%	70	0.2%
Tow hitch/yoke defective	0	-	2	<0.1%	13	<0.1%	15	<0.1%
Defective exhaust system	0	-	0	-	0	-	0	-
Hood/tailgate/door/covering opened	1	1.0%	2	<0.1%	10	<0.1%	13	<0.1%
Defective glazing (obscured windows)	0	-	1	<0.1%	1	<0.1%	2	<0.1%
Vehicle modifications	0	-	0	-	1	<0.1%	1	<0.1%
Fire	0	-	1	<0.1%	2	<0.1%	3	<0.1%
Overloaded/oversized	0	-	0	-	4	<0.1%	4	<0.1%

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## Contributing Factors

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Contributing Factor	2016 Collision Severity						2016 Total Collisions	% of 2016 Total Collisions
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Load shifted/spilled	0	-	2	<0.1%	14	<0.1%	16	<0.1%
Jack-knife/trailer swing	0	-	1	<0.1%	50	0.1%	51	0.1%
Hydroplaning tires	0	-	2	<0.1%	4	<0.1%	6	<0.1%
Any Environmental Condition	14	14.6%	709	7.4%	3,833	10.8%	4,556	10.1%
Animal action - Wild	1	1.0%	86	0.9%	1,805	5.1%	1,892	4.2%
Animal action - Domestic	0	-	13	0.1%	38	0.1%	51	0.1%
Slippery road surface	8	8.3%	412	4.3%	1,280	3.6%	1,700	3.8%
Snow drift	1	1.0%	15	0.2%	80	0.2%	96	0.2%
Obstruction/debris on roadway	1	1.0%	19	0.2%	235	0.7%	255	0.6%
View obstructed/limited	2	2.1%	66	0.7%	117	0.3%	185	0.4%
Glare/reflection	0	-	14	0.1%	38	0.1%	52	0.1%
Construction zone	0	-	7	<0.1%	16	<0.1%	23	<0.1%
Defective driving surface	0	-	19	0.2%	102	0.3%	121	0.3%
Shoulders defective	0	-	1	<0.1%	7	<0.1%	8	<0.1%
Lane markings inadequate	0	-	3	<0.1%	4	<0.1%	7	<0.1%
Defective/inoperative traffic control device	0	-	6	<0.1%	7	<0.1%	13	<0.1%
Weather	2	2.1%	51	0.5%	145	0.4%	198	0.4%
Pedestrian corridor in use	0	-	7	<0.1%	19	<0.1%	26	<0.1%
Uninvolved vehicle	0	-	13	0.1%	19	<0.1%	32	<0.1%
Uninvolved pedestrian	0	-	6	<0.1%	2	<0.1%	8	<0.1%
Presence of prior accident	0	-	1	<0.1%	1	<0.1%	2	<0.1%
No Contributing Factor(s) Identified	7	7.3%	437	4.6%	1,019	2.9%	1,463	3.2%
Not Stated	0	-	17	0.2%	57	0.2%	74	0.2%
<b>Total</b>	<b>96</b>	<b>100%</b>	<b>9,582</b>	<b>100%</b>	<b>35,638</b>	<b>100%</b>	<b>45,316</b>	<b>100.0%</b>

\*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: 2011-2015 Average

Contributing Factor	2011-2015 Average Count				
	Fatal	Injury	PDO	Total Collisions	% of Total Collisions
Driver Action - Driving Properly and Human Condition - Apparently Normal	34	6,382	17,599	24,015	60.9%
Driver Action - Driving properly	3	254	728	985	2.5%
Any Driver Action	59	5,255	16,989	22,303	56.5%
Following too closely	2	1,895	3,687	5,584	14.2%
Turning improperly	2	498	1,349	1,849	4.7%
Passing improperly	2	26	118	146	0.4%
Changing lanes improperly	1	233	1,261	1,495	3.8%
Fail to yield right-of-way	8	578	1,271	1,857	4.7%
Disobey traffic control device/officer	5	181	265	452	1.1%
Drive wrong way on roadway	2	8	15	26	<0.1%
Passing a vehicle at pedestrian X-walk	0	1	0	1	<0.1%
Back unsafely	0	167	2,398	2,564	6.5%
Parking improperly	0	9	113	123	0.3%
Lost control/Drive off road	13	303	1,015	1,332	3.4%
Driverless vehicle ran out of control	0	3	19	22	<0.1%
Leave stop sign before safe to do so	3	233	470	705	1.8%
Failed to signal	0	5	11	16	<0.1%
Take avoiding action	2	67	358	427	1.1%
Driver inexperience	2	44	132	177	0.4%
Pedestrian error/confusion	4	25	19	48	0.1%
NET Speed	16	534	1,871	2,421	6.1%
Exceeding speed limit	4	9	19	32	<0.1%
Driving too fast for conditions	8	506	1,814	2,328	5.9%
Unsafe operating speed (Too fast or too slow)	4	22	42	68	0.2%
NET Distracted driving	24	1,370	4,973	6,367	16.1%
Careless Driving	16	1,232	4,635	5,883	14.9%
Distraction/Inattention	9	173	407	590	1.5%
Human Condition - Apparently Normal	17	1,281	4,150	5,448	13.8%
Any Human Condition	30	212	392	634	1.6%
Loss of consciousness/Blackout prior to collision	1	23	14	38	<0.1%
Extreme fatigue/Fell asleep	1	26	41	68	0.2%
Defective eyesight	0	2	3	6	<0.1%
Defective hearing	0	0	0	1	<0.1%
Medical disability	0	6	5	11	<0.1%
Physical disability	0	2	3	5	<0.1%
Mental disability	1	2	1	4	<0.1%
Mental confusion/Inability to remember	0	10	10	20	<0.1%
Sudden illness	1	4	4	8	<0.1%
Exceed hours of service (commercial drivers only)	0	0	0	0	<0.1%
NET Impaired	20	56	70	145	0.4%
Ability impaired alcohol	13	40	51	104	0.3%
Ability impaired drugs	1	2	3	6	<0.1%
Had been drinking/Suspected alcohol use	7	17	19	43	0.1%
No Apparent (Vehicle) Defect	49	6,614	18,694	25,357	64.3%
Any Vehicle Defect	2	27	202	232	0.6%
Defective brakes	0	6	17	23	<0.1%
Defective steering	0	2	7	9	<0.1%
Defective headlights	0	0	1	1	<0.1%
Defective brake lights	0	1	3	4	<0.1%
Defective lighting (unspecified)	0	1	1	2	<0.1%

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## Contributing Factors

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Contributing Factor	2011-2015 Average Count				
	Fatal	Injury	PDO	Total Collisions	% of Total Collisions
Defective engine controls/drive train	0	2	6	8	<0.1%
Defective suspension/wheels	0	3	31	34	<0.1%
Defective tires	1	5	46	52	0.1%
Tow hitch/yoke defective	0	0	16	17	<0.1%
Defective exhaust system	0	0	0	0	<0.1%
Hood/tailgate/door/covering opened	0	0	4	4	<0.1%
Defective glazing (obscured windows)	0	1	2	3	<0.1%
Vehicle modifications	0	1	1	2	<0.1%
Fire	0	1	2	2	<0.1%
Overloaded/oversized	0	0	2	2	<0.1%
Load shifted/spilled	0	2	17	19	<0.1%
Jack-knife/trailer swing	0	1	44	46	0.1%
Hydroplaning tires	0	2	5	7	<0.1%
Any Environmental Condition	10	693	5,863	6,566	16.6%
Animal action - Wild	1	192	3,875	4,068	10.3%
Animal action - Domestic	0	10	69	79	0.2%
Slippery road surface	4	331	1,308	1,643	4.2%
Snow drift	0	14	95	110	0.3%
Obstruction/debris on roadway	0	13	149	162	0.4%
View obstructed/limited	1	45	117	163	0.4%
Glare/reflection	0	14	29	43	0.1%
Construction zone	0	4	20	24	<0.1%
Defective driving surface	1	16	84	101	0.3%
Shoulders defective	0	4	7	11	<0.1%
Lane markings inadequate	0	1	5	7	<0.1%
Defective/inoperative traffic control device	0	4	7	11	<0.1%
Weather	3	59	162	224	0.6%
Pedestrian corridor in use	0	8	5	13	<0.1%
Uninvolved vehicle	0	6	21	27	<0.1%
Uninvolved pedestrian	0	3	5	8	<0.1%
Presence of prior accident	0	3	5	7	<0.1%
No Contributing Factor(s) Identified	10	1,104	2,811	3,925	9.9%
Not Stated	0	31	100	131	0.3%
Total	77	8,294	31,092	39,463	100%

Note: Counts of collisions in the 2011-2015 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 2016, 65% of **all collisions** have at least one driver noted as having an at-fault contributing factor<sup>2</sup>. Most fatal collisions (83%) have at least one driver with an at-fault contributing factor while 74% of injury collisions do. In the previous five year (2011 to 2015) annual average, 71% of all collisions have at least one driver noted as having an at-fault contributing factor, including nearly 87% of fatal collisions and 69% of injury collisions.

In 2016, 65% of all collisions have some at-fault contributing factor recorded (83% of fatal collisions; 74% of injury collisions). In 2016:

- A driver action is a contributing factor in 59% of all collisions (75% of fatal collisions; 71% of injury collisions; 56% of PDO collisions);
- A human condition is a contributing factor in 1% of all collisions (nearly 37% of fatal collisions; 1% of injury collisions; 0.5% of PDO collisions); and,
- Environmental conditions are contributing factors in 10% of all collisions (15% of fatal collisions; 7% of injury collisions; 11% of PDO collisions); and,
- Some vehicle defect is noted as contributing factor in 0.6% of all collisions, including 3 fatal collisions.

In the five year (2011 to 2015) annual average:

- Nearly 57% of all collisions have at least one driver noted as having a driver action (77% of fatal collisions; 63% of injury collisions; 55% of PDO collisions);
- 2% of all collisions have at least one driver noted as having a human condition (39% of fatal collisions; 3% of injury collisions; 1% of PDO collisions);
- 17% of all collisions have an environmental condition noted as contributing to the collision (nearly 13% of fatal collisions; 8% of injury collisions; 19% 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 2016 include:

- Distracted driving – nearly 25% of all collisions (24% fatal; nearly 27% injury; 24% PDO);
- “Following too closely” – 15% of all collisions (1% fatal; 26% injury; 12% PDO);
- “Backing unsafely” – nearly 8% of all collisions (1% fatal; 2% injury; 9% PDO);
- Speed – nearly 7% of all collisions (27% fatal; nearly 8% injury; 6% PDO);
- “Turning improperly” – nearly 6% of all collisions (1% fatal; 8% injury; 5% PDO);
- “Fail to yield right-of-way” – 5% of all collisions (7% fatal; 8% injury; 4% PDO);
- “Changing lanes improperly” – 5% of all collisions (1% fatal; 4% injury; 5% PDO);
- The actions of a wild animal – 4% of all collisions (1% fatal; 1% injury; 5% PDO);
- “Slippery road surface” – 4% of all collisions (8% fatal; 4% injury; 4% PDO); and,
- “Lost control/Drive off the road” – 3% of all collisions (15% fatal; 4% injury; 3% PDO).

NOTE: For a detailed count of contributing factors recorded for collisions occurring in each year from 2011 to 2016, please refer to “*Table 9-6 Historical Summary of Contributing Factors to a Collision*” at the end of this section.

<sup>2</sup> 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”.

## Section 9

## Contributing Factors

**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: 2016

Contributing Factor	2016 Casualty Type								2016 Total Casualties	% of 2016 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	39	36.4%	289	60.5%	10,398	86.2%	10,687	85.2%	10,726	84.8%
Driver Action - Driving properly	0	-	7	1.5%	140	1.2%	147	1.2%	147	1.2%
Any Driver Action	82	76.6%	364	76.2%	8,725	72.3%	9,089	72.4%	9,171	72.5%
Following too closely	1	0.9%	30	6.3%	3,271	27.1%	3,301	26.3%	3,302	26.1%
Turning improperly	1	0.9%	47	9.8%	1,049	8.7%	1,096	8.7%	1,097	8.7%
Passing improperly	4	3.7%	6	1.3%	53	0.4%	59	0.5%	63	0.5%
Changing lanes improperly	1	0.9%	8	1.7%	443	3.7%	451	3.6%	452	3.6%
Fail to yield right-of-way	7	6.5%	59	12.3%	1,054	8.7%	1,113	8.9%	1,120	8.9%
Disobey traffic control device/officer	8	7.5%	16	3.3%	349	2.9%	365	2.9%	373	2.9%
Drive wrong way on roadway	5	4.7%	1	0.2%	11	<0.1%	12	<0.1%	17	0.1%
Passing a vehicle at pedestrian X-walk	0	-	0	-	0	-	0	-	0	-
Back unsafely	1	0.9%	1	0.2%	257	2.1%	258	2.1%	259	2.0%
Parking improperly	1	0.9%	3	0.6%	15	0.1%	18	0.1%	19	0.2%
Lost control/Drive off road	16	15.0%	63	13.2%	360	3.0%	423	3.4%	439	3.5%
Driverless vehicle ran out of control	1	0.9%	1	0.2%	14	0.1%	15	0.1%	16	0.1%
Leave stop sign before safe to do so	7	6.5%	36	7.5%	398	3.3%	434	3.5%	441	3.5%
Failed to signal	0	-	0	-	8	<0.1%	8	<0.1%	8	<0.1%
Take avoiding action	0	-	5	1.0%	106	0.9%	111	0.9%	111	0.9%
Driver inexperience	3	2.8%	5	1.0%	54	0.4%	59	0.5%	62	0.5%
Pedestrian error/confusion	4	3.7%	9	1.9%	21	0.2%	30	0.2%	34	0.3%
NET Speed	33	30.8%	73	15.3%	871	7.2%	944	7.5%	977	7.7%
Exceeding speed limit	22	20.6%	17	3.6%	15	0.1%	32	0.3%	54	0.4%
Driving too fast for conditions	6	5.6%	53	11.1%	840	7.0%	893	7.1%	899	7.1%
Unsafe operating speed (Too fast or too slow)	8	7.5%	8	1.7%	18	0.1%	26	0.2%	34	0.3%
NET Distracted driving	29	27.1%	138	28.9%	3,200	26.5%	3,338	26.6%	3,367	26.6%
Careless Driving	23	21.5%	116	24.3%	3,003	24.9%	3,119	24.9%	3,142	24.8%
Distraction/Inattention	9	8.4%	28	5.9%	313	2.6%	341	2.7%	350	2.8%

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## Contributing Factors

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Contributing Factor	2016 Casualty Type								2016 Total Casualties	% of 2016 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	14	13.1%	29	6.1%	4,521	37.5%	4,550	36.3%	4,564	36.1%
Any Human Condition	42	39.3%	54	11.3%	110	0.9%	164	1.3%	206	1.6%
Loss of consciousness/Blackout prior to collision	2	1.9%	8	1.7%	14	0.1%	22	0.2%	24	0.2%
Extreme fatigue/Fell asleep	3	2.8%	4	0.8%	20	0.2%	24	0.2%	27	0.2%
Defective eyesight	0	-	1	0.2%	0	-	1	<0.1%	1	<0.1%
Defective hearing	0	-	0	-	0	-	0	-	0	-
Medical disability	0	-	3	0.6%	7	<0.1%	10	<0.1%	10	<0.1%
Physical disability	0	-	0	-	1	<0.1%	1	<0.1%	1	<0.1%
Mental disability	0	-	1	0.2%	1	<0.1%	2	<0.1%	2	<0.1%
Mental confusion/Inability to remember	0	-	1	0.2%	7	<0.1%	8	<0.1%	8	<0.1%
Sudden illness	1	0.9%	3	0.6%	6	<0.1%	9	<0.1%	10	<0.1%
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	0	-	0	-
NET Impaired	38	35.5%	36	7.5%	65	0.5%	101	0.8%	139	1.1%
Ability impaired alcohol	26	24.3%	26	5.4%	41	0.3%	67	0.5%	93	0.7%
Ability impaired drugs	7	6.5%	4	0.8%	5	<0.1%	9	<0.1%	16	0.1%
Had been drinking/Suspected alcohol use	12	11.2%	8	1.7%	21	0.2%	29	0.2%	41	0.3%
No Apparent (Vehicle) Defect	45	42.1%	287	60.0%	11,130	92.2%	11,417	91.0%	11,462	90.6%
Any Vehicle Defect	3	2.8%	4	0.8%	52	0.4%	56	0.4%	59	0.5%
Defective brakes	0	-	1	0.2%	8	<0.1%	9	<0.1%	9	<0.1%
Defective steering	0	-	0	-	0	-	0	-	0	-
Defective headlights	0	-	0	-	0	-	0	-	0	-
Defective brake lights	1	0.9%	1	0.2%	6	<0.1%	7	<0.1%	8	<0.1%
Defective lighting (unspecified)	1	0.9%	0	-	3	<0.1%	3	<0.1%	4	<0.1%
Defective engine controls/drive train	0	-	0	-	1	<0.1%	1	<0.1%	1	<0.1%
Defective suspension/wheels	0	-	0	-	7	<0.1%	7	<0.1%	7	<0.1%
Defective tires	1	0.9%	1	0.2%	13	0.1%	14	0.1%	15	0.1%
Tow hitch/yoke defective	0	-	0	-	2	<0.1%	2	<0.1%	2	<0.1%
Defective exhaust system	0	-	0	-	0	-	0	-	0	-
Hood/tailgate/door/covering opened	1	0.9%	0	-	3	<0.1%	3	<0.1%	4	<0.1%
Defective glazing (obscured windows)	0	-	0	-	2	<0.1%	2	<0.1%	2	<0.1%
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	-	2	<0.1%	2	<0.1%	2	<0.1%

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## Contributing Factors

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Contributing Factor	2016 Casualty Type								2016 Total Casualties	% of 2016 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	-	1	<0.1%	1	<0.1%	1	<0.1%
Hydroplaning tires	0	-	1	0.2%	2	<0.1%	3	<0.1%	3	<0.1%
Any Environmental Condition	14	13.1%	55	11.5%	873	7.2%	928	7.4%	942	7.4%
Animal action - Wild	1	0.9%	4	0.8%	95	0.8%	99	0.8%	100	0.8%
Animal action - Domestic	0	-	1	0.2%	13	0.1%	14	0.1%	14	0.1%
Slippery road surface	8	7.5%	26	5.4%	526	4.4%	552	4.4%	560	4.4%
Snow drift	1	0.9%	6	1.3%	17	0.1%	23	0.2%	24	0.2%
Obstruction/debris on roadway	1	0.9%	1	0.2%	23	0.2%	24	0.2%	25	0.2%
View obstructed/limited	2	1.9%	4	0.8%	90	0.7%	94	0.7%	96	0.8%
Glare/reflection	0	-	0	-	18	0.1%	18	0.1%	18	0.1%
Construction zone	0	-	1	0.2%	6	<0.1%	7	<0.1%	7	<0.1%
Defective driving surface	0	-	5	1.0%	17	0.1%	22	0.2%	22	0.2%
Shoulders defective	0	-	0	-	1	<0.1%	1	<0.1%	1	<0.1%
Lane markings inadequate	0	-	0	-	4	<0.1%	4	<0.1%	4	<0.1%
Defective/inoperative traffic control device	0	-	3	0.6%	12	<0.1%	15	0.1%	15	0.1%
Weather	2	1.9%	2	0.4%	68	0.6%	70	0.6%	72	0.6%
Pedestrian corridor in use	0	-	3	0.6%	4	<0.1%	7	<0.1%	7	<0.1%
Uninvolved vehicle	0	-	1	0.2%	12	<0.1%	13	0.1%	13	0.1%
Uninvolved pedestrian	0	-	0	-	7	<0.1%	7	<0.1%	7	<0.1%
Presence of prior accident	0	-	0	-	5	<0.1%	5	<0.1%	5	<0.1%
No Contributing Factor(s) Identified	7	6.5%	21	4.4%	561	4.6%	582	4.6%	589	4.7%
Not Stated	0	-	2	0.4%	16	0.1%	18	0.1%	18	0.1%
<b>Total</b>	<b>107</b>	<b>100%</b>	<b>478</b>	<b>100.0%</b>	<b>12,068</b>	<b>100.0%</b>	<b>12,546</b>	<b>100.0%</b>	<b>12,653</b>	<b>100.0%</b>

\*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: 2011-2015 Average

Contributing Factor	2011-2015 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	176	8,176	8,351	8,392	77.9%
Driver Action - Driving properly	4	14	346	360	364	3.4%
Any Driver Action	68	216	6,671	6,887	6,955	64.5%
Following too closely	2	17	2,414	2,431	2,433	22.6%
Turning improperly	2	21	655	676	678	6.3%
Passing improperly	3	4	35	38	41	0.4%
Changing lanes improperly	1	3	280	283	284	2.6%
Fail to yield right-of-way	9	29	788	817	827	7.7%
Disobey traffic control device/officer	6	13	261	273	279	2.6%
Drive wrong way on roadway	3	2	13	16	19	0.2%
Passing a vehicle at pedestrian X-walk	0	0	0	1	1	<0.1%
Back unsafely	0	1	189	190	190	1.8%
Parking improperly	0	0	10	10	11	<0.1%
Lost control/Drive off road	14	41	354	396	410	3.8%
Driverless vehicle ran out of control	0	0	4	4	4	<0.1%
Leave stop sign before safe to do so	3	14	314	328	331	3.1%
Failed to signal	0	0	6	6	6	<0.1%
Take avoiding action	2	4	78	82	84	0.8%
Driver inexperience	2	5	55	60	62	0.6%
Pedestrian error/confusion	4	4	25	29	33	0.3%
NET Speed	19	45	669	714	733	6.8%
Exceeding speed limit	4	6	12	18	22	0.2%
Driving too fast for conditions	10	33	632	665	675	6.3%
Unsafe operating speed (Too fast or too slow)	5	8	28	36	41	0.4%
NET Distracted driving	28	74	1,736	1,810	1,839	17.1%
Careless Driving	19	60	1,550	1,610	1,629	15.1%
Distraction/Inattention	10	19	232	251	262	2.4%
Human Condition - Apparently Normal	18	64	1,650	1,715	1,733	16.1%
Any Human Condition	34	54	262	315	349	3.2%
Loss of consciousness/Blackout prior to collision	2	8	20	28	30	0.3%
Extreme fatigue/Fell asleep	1	5	28	33	34	0.3%
Defective eyesight	1	1	3	4	4	<0.1%
Defective hearing	0	0	0	0	1	<0.1%
Medical disability	0	1	7	8	8	<0.1%
Physical disability	0	0	3	3	3	<0.1%
Mental disability	1	1	4	5	6	<0.1%
Mental confusion/Inability to remember	0	4	10	13	13	0.1%
Sudden illness	1	1	3	4	5	<0.1%
Exceed hours of service (commercial drivers only)	0	0	0	0	0	-
NET Impaired	23	28	80	108	130	1.2%
Ability impaired alcohol	14	21	54	76	90	0.8%
Ability impaired drugs	1	1	4	4	5	<0.1%
Had been drinking/Suspected alcohol use	9	7	27	35	43	0.4%
No Apparent (Vehicle) Defect	57	212	8,434	8,646	8,703	80.7%
Any Vehicle Defect	3	3	33	37	39	0.4%
Defective brakes	0	0	8	9	9	<0.1%
Defective steering	0	0	3	3	3	<0.1%
Defective headlights	0	0	0	0	0	<0.1%

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## Contributing Factors

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Contributing Factor	2011-2015 Average Count of Casualties					
	Killed	Serious Injury	Other Injuries	Total Injuries	Total Casualties	% of Total Casualties
Defective brake lights	0	0	1	1	1	<0.1%
Defective lighting (unspecified)	0	0	1	1	2	<0.1%
Defective engine controls/drive train	0	0	2	2	2	<0.1%
Defective suspension/wheels	0	0	4	4	4	<0.1%
Defective tires	1	1	8	9	10	<0.1%
Tow hitch/yoke defective	0	0	0	0	0	<0.1%
Defective exhaust system	1	0	0	0	1	<0.1%
Hood/tailgate/door/covering opened	0	0	0	0	0	<0.1%
Defective glazing (obscured windows)	0	0	1	1	1	<0.1%
Vehicle modifications	0	0	1	1	1	<0.1%
Fire	0	0	1	1	1	<0.1%
Overloaded/oversized	0	0	0	0	0	<0.1%
Load shifted/spilled	0	0	2	2	2	<0.1%
Jack-knife/trailer swing	0	0	2	2	2	<0.1%
Hydroplaning tires	0	0	2	2	2	<0.1%
Any Environmental Condition	12	42	850	892	903	8.4%
Animal action - Wild	1	7	220	227	228	2.1%
Animal action - Domestic	0	1	12	13	14	0.1%
Slippery road surface	4	18	424	442	446	4.1%
Snow drift	0	0	18	18	18	0.2%
Obstruction/debris on roadway	0	1	17	18	18	0.2%
View obstructed/limited	2	5	55	60	61	0.6%
Glare/reflection	0	1	17	18	18	0.2%
Construction zone	0	1	6	7	7	<0.1%
Defective driving surface	1	3	20	23	24	0.2%
Shoulders defective	0	1	4	4	5	<0.1%
Lane markings inadequate	0	1	2	2	2	<0.1%
Defective/inoperative traffic control device	0	0	6	6	6	<0.1%
Weather	4	7	73	80	84	0.8%
Pedestrian corridor in use	0	1	7	8	8	<0.1%
Uninvolved vehicle	0	0	8	8	8	<0.1%
Uninvolved pedestrian	0	0	3	3	3	<0.1%
Presence of prior accident	0	0	4	4	4	<0.1%
No Contributing Factor(s) Identified	10	59	1,374	1,433	1,443	13.4%
Not Stated	0	2	38	40	40	0.4%
Total	87	340	10,350	10,690	10,777	100%

Note: Counts of victims in the 2011-2015 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 2016, at-fault contributing factors are recorded for 75% of all **casualties**. At-fault contributing factors are recorded for:

- 85% of people killed;
- 82% of people seriously injured; and,
- 75% of victims with other injuries (including minor, minimal and undefined injuries).

In 2016, driver actions are recorded for nearly 73% of **all victims** (77% of people killed and 76% of people seriously injured) while human conditions are recorded for 2% of all victims (39% of people killed and 11% of people seriously injured). Environmental conditions are recorded as a contributing factor for 7% of all victims (13% of people killed and nearly 12% of people seriously injured).

In the previous five year (2011 to 2015) annual average, driver actions are recorded for nearly 65% of all victims (78% of people killed and nearly 64% of people seriously injured), while human conditions are recorded for 3% of all victims (38% of people killed and 16% of people seriously injured). Environmental conditions are recorded as a contributing factor for 8% of all victims (13% of people killed and 12% of people seriously injured).

The most prevalent contributing factors recorded for collisions where **people are killed or seriously injured** in 2016 include:

- Impaired – nearly 36% of people killed and nearly 8% of people seriously injured;
- Speed – 31% of people killed and 15% of people seriously injured;
- Distracted driving – 27% of people killed and 29% of people seriously injured;
- “Lost control/Drive off the road” – 15% of people killed and 13% of people seriously injured;
- “Slippery road surface” – nearly 8% of the people killed and 5% of people seriously injured;
- “Disobey traffic control” – nearly 8% of people killed and 3% of people seriously injured;
- “Fail to yield right-of-way” – nearly 7% of people killed and 12% of people seriously injured;
- “Leave stop sign before safe to do so” – nearly 7% of people killed and nearly 8% of people seriously injured;
- “Drive wrong way on roadway” – 5% of people killed and 1 person seriously injured;
- “Pedestrian error/confusion” – 4% of people killed and 2% of people seriously injured;
- “Passing improperly” – 4% of people killed and 1% of people seriously injured;
- “Turning improperly” – 1% of people killed and 10% of people seriously injured; and,
- “Following too closely” – 1% of the people killed and 6% of people seriously injured.

NOTE: For a detailed count of contributing factors recorded for collisions occurring in each year from 2011 to 2016, please refer to “*Table 9-7 Historical Summary of Contributing Factors Recorded for Victims of Collisions*” at the end of this section.

## Section 9

## Contributing Factors

**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: 2016

Contributing Factor	2016 Collision Severity						2016 Total Drivers	% of 2016 Total Drivers
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Driver Action - Driving Properly and Human Condition - Apparently Normal	43	31.2%	9,073	54.2%	23,482	50.0%	<b>32,598</b>	<b>51.1%</b>
Driver Action - Driving properly	0	-	102	0.6%	327	0.7%	<b>429</b>	<b>0.7%</b>
Any Driver Action	72	52.2%	6,899	41.2%	20,151	42.9%	<b>27,122</b>	<b>42.5%</b>
Following too closely	0	-	2,498	14.9%	4,278	9.1%	<b>6,776</b>	<b>10.6%</b>
Turning improperly	1	0.7%	787	4.7%	1,708	3.6%	<b>2,496</b>	<b>3.9%</b>
Passing improperly	3	2.2%	41	0.2%	121	0.3%	<b>165</b>	<b>0.3%</b>
Changing lanes improperly	1	0.7%	358	2.1%	1,762	3.8%	<b>2,121</b>	<b>3.3%</b>
Fail to yield right-of-way	5	3.6%	804	4.8%	1,559	3.3%	<b>2,368</b>	<b>3.7%</b>
Disobey traffic control device/officer	8	5.8%	229	1.4%	288	0.6%	<b>525</b>	<b>0.8%</b>
Drive wrong way on roadway	3	2.2%	6	<0.1%	9	<0.1%	<b>18</b>	<b>&lt;0.1%</b>
Passing a vehicle at pedestrian X-walk	0	-	0	-	0	-	<b>0</b>	<b>-</b>
Back unsafely	1	0.7%	235	1.4%	3,182	6.8%	<b>3,418</b>	<b>5.4%</b>
Parking improperly	1	0.7%	12	<0.1%	159	0.3%	<b>172</b>	<b>0.3%</b>
Lost control/Drive off road	14	10.1%	345	2.1%	1,043	2.2%	<b>1,402</b>	<b>2.2%</b>
Driverless vehicle ran out of control	1	0.7%	13	<0.1%	23	<0.1%	<b>37</b>	<b>&lt;0.1%</b>
Leave stop sign before safe to do so	7	5.1%	319	1.9%	544	1.2%	<b>870</b>	<b>1.4%</b>
Failed to signal	0	-	6	<0.1%	11	<0.1%	<b>17</b>	<b>&lt;0.1%</b>
Take avoiding action	0	-	93	0.6%	428	0.9%	<b>521</b>	<b>0.8%</b>
Driver inexperience	2	1.4%	46	0.3%	128	0.3%	<b>176</b>	<b>0.3%</b>
Pedestrian error/confusion	1	0.7%	9	<0.1%	31	<0.1%	<b>41</b>	<b>&lt;0.1%</b>
NET Speed	26	18.8%	719	4.3%	2,214	4.7%	<b>2,959</b>	<b>4.6%</b>
Exceeding speed limit	17	12.3%	8	<0.1%	13	<0.1%	<b>38</b>	<b>&lt;0.1%</b>
Driving too fast for conditions	6	4.3%	697	4.2%	2,184	4.7%	<b>2,887</b>	<b>4.5%</b>
Unsafe operating speed (Too fast or too slow)	6	4.3%	16	<0.1%	19	<0.1%	<b>41</b>	<b>&lt;0.1%</b>
NET Distracted driving	23	16.7%	2,544	15.2%	8,526	18.2%	<b>11,093</b>	<b>17.4%</b>
Careless Driving	17	12.3%	2,389	14.3%	8,167	17.4%	<b>10,573</b>	<b>16.6%</b>
Distraction/Inattention	9	6.5%	237	1.4%	530	1.1%	<b>776</b>	<b>1.2%</b>

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## Contributing Factors

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Contributing Factor	2016 Collision Severity						2016 Total Drivers	% of 2016 Total Drivers
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Human Condition - Apparently Normal	8	5.8%	3,438	20.5%	12,159	25.9%	15,605	24.4%
Any Human Condition	35	25.4%	100	0.6%	159	0.3%	294	0.5%
Loss of consciousness/Blackout prior to collision	2	1.4%	21	0.1%	18	<0.1%	41	<0.1%
Extreme fatigue/Fell asleep	3	2.2%	19	0.1%	57	0.1%	79	0.1%
Defective eyesight	0	-	1	<0.1%	3	<0.1%	4	<0.1%
Defective hearing	0	-	0	-	2	<0.1%	2	<0.1%
Medical disability	0	-	5	<0.1%	6	<0.1%	11	<0.1%
Physical disability	0	-	1	<0.1%	3	<0.1%	4	<0.1%
Mental disability	0	-	2	<0.1%	2	<0.1%	4	<0.1%
Mental confusion/Inability to remember	0	-	8	<0.1%	15	<0.1%	23	<0.1%
Sudden illness	1	0.7%	9	<0.1%	2	<0.1%	12	<0.1%
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	0	-
NET Impaired	31	22.5%	45	0.3%	62	0.1%	138	0.2%
Ability impaired alcohol	20	14.5%	32	0.2%	52	0.1%	104	0.2%
Ability impaired drugs	6	4.3%	0	-	1	<0.1%	7	<0.1%
Had been drinking/Suspected alcohol use	9	6.5%	14	<0.1%	9	<0.1%	32	<0.1%
No Apparent (Vehicle) Defect	52	37.7%	12,292	73.4%	34,702	73.9%	47,046	73.7%
Any Vehicle Defect	3	2.2%	36	0.2%	237	0.5%	276	0.4%
Defective brakes	0	-	6	<0.1%	23	<0.1%	29	<0.1%
Defective steering	0	-	0	-	2	<0.1%	2	<0.1%
Defective headlights	0	-	0	-	0	-	0	-
Defective brake lights	1	0.7%	3	<0.1%	6	<0.1%	10	<0.1%
Defective lighting (unspecified)	1	0.7%	1	<0.1%	0	-	2	<0.1%
Defective engine controls/drive train	0	-	1	<0.1%	8	<0.1%	9	<0.1%
Defective suspension/wheels	0	-	5	<0.1%	47	0.1%	52	<0.1%
Defective tires	1	0.7%	9	<0.1%	60	0.1%	70	0.1%
Tow hitch/yoke defective	0	-	2	<0.1%	13	<0.1%	15	<0.1%
Defective exhaust system	0	-	0	-	0	-	0	-
Hood/tailgate/door/covering opened	1	0.7%	2	<0.1%	10	<0.1%	13	<0.1%
Defective glazing (obscured windows)	0	-	1	<0.1%	1	<0.1%	2	<0.1%
Vehicle modifications	0	-	0	-	1	<0.1%	1	<0.1%
Fire	0	-	1	<0.1%	2	<0.1%	3	<0.1%
Overloaded/oversized	0	-	0	-	3	<0.1%	3	<0.1%
Load shifted/spilled	0	-	2	<0.1%	14	<0.1%	3	<0.1%

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## Section 9

## Contributing Factors

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Contributing Factor	2016 Collision Severity						2016 Total Drivers	% of 2016 Total Drivers
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Jack-knife/trailer swing	0	-	1	<0.1%	50	0.1%	51	<0.1%
Hydroplaning tires	0	-	2	<0.1%	4	<0.1%	6	<0.1%
Any Environmental Condition	16	11.6%	695	4.1%	3,824	8.1%	4,535	7.1%
Animal action - Wild	2	1.4%	86	0.5%	1,805	3.8%	1,893	3.0%
Animal action - Domestic	0	-	13	<0.1%	38	<0.1%	51	<0.1%
Slippery road surface	11	8.0%	413	2.5%	1,279	2.7%	1,703	2.7%
Snow drift	1	0.7%	15	<0.1%	80	0.2%	96	0.2%
Obstruction/debris on roadway	0	-	19	0.1%	235	0.5%	254	0.4%
View obstructed/limited	1	0.7%	61	0.4%	115	0.2%	177	0.3%
Glare/reflection	0	-	13	<0.1%	37	<0.1%	50	<0.1%
Construction zone	0	-	6	<0.1%	14	<0.1%	20	<0.1%
Defective driving surface	0	-	18	0.1%	102	0.2%	120	0.2%
Shoulders defective	0	-	0	-	7	<0.1%	7	<0.1%
Lane markings inadequate	0	-	3	<0.1%	5	<0.1%	8	<0.1%
Defective/inoperative traffic control device	0	-	6	<0.1%	7	<0.1%	13	<0.1%
Weather	2	1.4%	48	0.3%	142	0.3%	192	0.3%
Pedestrian corridor in use	0	-	4	<0.1%	14	<0.1%	18	<0.1%
Uninvolved vehicle	0	-	8	<0.1%	19	<0.1%	27	<0.1%
Uninvolved pedestrian	0	-	2	<0.1%	1	<0.1%	3	<0.1%
Presence of prior accident	0	-	1	<0.1%	1	<0.1%	2	<0.1%
No Contributing Factor(s) Identified	4	2.9%	392	2.3%	800	1.7%	1,196	1.9%
Not Stated	0	-	12	<0.1%	49	0.1%	61	<0.1%
<b>Total</b>	<b>138</b>	<b>100%</b>	<b>16,753</b>	<b>100.0%</b>	<b>46,948</b>	<b>100.0%</b>	<b>63,839</b>	<b>100.0%</b>

\*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: 2011-2015 Average

Contributing Factor	2011-2015 Average Count of Drivers				
	Fatal	Injury	PDO	Total Drivers	% of Total Drivers
Driver Action - Driving Properly and Human Condition - Apparently Normal	38	7,184	18,153	25,374	43.1%
Driver Action - Driving properly	3	257	722	983	1.7%
Any Driver Action	57	5,294	17,132	22,483	38.1%
Following too closely	2	1,906	3,704	5,611	9.5%
Turning improperly	2	499	1,354	1,855	3.1%
Passing improperly	2	26	118	147	0.2%
Changing lanes improperly	1	233	1,281	1,515	2.6%
Fail to yield right-of-way	7	576	1,277	1,860	3.2%
Disobey traffic control device/officer	4	181	266	451	0.8%
Drive wrong way on roadway	2	8	15	25	<0.1%
Passing a vehicle at pedestrian X-walk	0	1	0	1	<0.1%
Back unsafely	0	178	2,410	2,588	4.4%
Parking improperly	0	8	105	114	0.2%
Lost control/Drive off road	13	302	1,014	1,329	2.3%
Driverless vehicle ran out of control	0	3	17	20	<0.1%
Leave stop sign before safe to do so	3	233	474	709	1.2%
Failed to signal	0	5	11	16	<0.1%
Take avoiding action	2	67	359	428	0.7%
Driver inexperience	2	43	131	177	0.3%
Pedestrian error/confusion	2	10	15	27	<0.1%
NET Speed	16	533	1,871	2,420	4.1%
Exceeding speed limit	4	9	19	32	<0.1%
Driving too fast for conditions	9	506	1,815	2,329	4.0%
Unsafe operating speed (Too fast or too slow)	4	21	42	66	0.1%
NET Distracted driving	23	1,365	4,969	6,357	151.2%
Careless Driving	15	1,230	4,633	5,878	139.8%
Distraction/Inattention	8	169	405	582	13.8%
Human Condition - Apparently Normal	14	1,272	4,237	5,523	9.4%
Any Human Condition	26	205	391	622	1.1%
Loss of consciousness/Blackout prior to collision	1	23	14	38	<0.1%
Extreme fatigue/Fell asleep	1	26	41	68	0.1%
Defective eyesight	0	2	3	6	<0.1%
Defective hearing	0	0	0	1	<0.1%
Medical disability	0	6	5	12	<0.1%
Physical disability	0	2	3	5	<0.1%
Mental disability	1	2	1	3	<0.1%
Mental confusion/Inability to remember	0	10	10	20	<0.1%
Sudden illness	1	4	4	8	<0.1%
Exceed hours of service (commercial drivers only)	0	0	0	0	<0.1%
NET Impaired	17	53	69	139	0.2%
Ability impaired alcohol	12	38	50	100	0.2%
Ability impaired drugs	1	2	3	6	<0.1%
Had been drinking/Suspected alcohol use	5	16	19	41	<0.1%
No Apparent (Vehicle) Defect	61	8,227	21,036	29,324	49.8%
Any Vehicle Defect	2	27	201	230	0.4%
Defective brakes	0	6	17	23	<0.1%
Defective steering	0	2	7	9	<0.1%

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## Contributing Factors

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Contributing Factor	2011-2015 Average Count of Drivers				
	Fatal	Injury	PDO	Total Drivers	% of Total Drivers
Defective headlights	0	0	1	1	<0.1%
Defective brake lights	0	1	3	4	<0.1%
Defective lighting (unspecified)	0	1	1	2	<0.1%
Defective engine controls/drive train	0	2	6	8	<0.1%
Defective suspension/wheels	0	3	31	34	<0.1%
Defective tires	1	5	46	52	<0.1%
Tow hitch/yoke defective	0	0	16	17	<0.1%
Defective exhaust system	0	0	0	0	<0.1%
Hood/tailgate/door/covering opened	0	0	3	3	<0.1%
Defective glazing (obscured windows)	0	1	2	3	<0.1%
Vehicle modifications	0	1	1	2	<0.1%
Fire	0	1	2	2	<0.1%
Overloaded/oversized	0	0	2	2	<0.1%
Load shifted/spilled	0	2	17	19	<0.1%
Jack-knife/trailer swing	0	1	44	46	<0.1%
Hydroplaning tires	0	2	5	7	<0.1%
Any Environmental Condition	10	697	5,884	6,591	11.2%
Animal action - Wild	1	192	3,876	4,068	6.9%
Animal action - Domestic	0	10	69	79	11.2%
Slippery road surface	4	336	1,321	1,661	2.8%
Snow drift	0	15	97	111	0.2%
Obstruction/debris on roadway	0	13	149	162	0.3%
View obstructed/limited	1	44	119	164	0.3%
Glare/reflection	0	14	29	43	<0.1%
Construction zone	0	4	20	25	<0.1%
Defective driving surface	1	16	84	101	0.2%
Shoulders defective	0	4	7	11	<0.1%
Lane markings inadequate	0	1	5	7	<0.1%
Defective/inoperative traffic control device	0	4	7	11	<0.1%
Weather	3	59	164	227	0.4%
Pedestrian corridor in use	0	6	6	12	<0.1%
Uninvolved vehicle	0	6	22	28	<0.1%
Uninvolved pedestrian	0	2	5	7	<0.1%
Presence of prior accident	0	2	6	8	<0.1%
No Contributing Factor(s) Identified	5	1,148	3,053	4,205	7.1%
Not Stated	0	3	13	16	<0.1%
Total	110	14,617	44,206	58,933	100%

Note: Counts of drivers in the 2011-2015 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 2016, half of the **drivers involved in traffic collisions** (51%) are recorded as not being at-fault in the collision. Almost all of these drivers (51% overall) are noted in the traffic accident report (TAR) as both “driving properly” and being “apparently normal” at the time of a collision. Two percent of drivers have no contributing factors recorded for the collision.

- 35% of the drivers involved in a fatal collision are noted as not being at-fault.
- 55% of the drivers in an injury collision are noted as not being at-fault.
- 50% of the drivers in a PDO collision are noted as not being at-fault.

Driver actions are recorded for nearly 43% of the **drivers involved in traffic collisions** in 2016. This is an increase from the previous five year (2011 to 2015) annual average, where driver actions are recorded for 38% of the drivers involved. In 2016:

- 52% of the drivers involved in **fatal collisions** have a driver action recorded, including:
  - 19% who are speeding (including “exceeding speed limit”, “driving too fast for conditions” and “unsafe operating speed”);
  - 17% who are driving while distracted (including “careless driving” and “distraction/inattention”);
  - 10% who “lost control/ drive off road”;
  - 6% who “disobey traffic control”;
  - 5% who “leave stop sign before safe to do so”; and,
  - 4% who “fail to yield right-of-way”.
- 41% of the drivers involved in **injury collisions** have a driver action recorded, including:
  - 15% who are driving while distracted;
  - 15% who are “following too closely”;
  - 5% who “fail to yield right-of-way”;
  - 5% who are “turning improperly”; and,
  - 4% who are speeding.
- 43% of the drivers involved in **PDO collisions** have a driver action recorded, including:
  - 18% who are driving while distracted;
  - 9% who are “following too closely”;
  - 7% who are “back unsafely”;
  - 5% who are speeding;
  - 4% who are “changing lanes improperly”; and,
  - 4% who are “turning improperly”.

Human conditions are recorded for 0.5% of the **drivers involved in traffic collisions** in 2016, a decrease from the previous five year (2011 to 2015) annual average (1%). In 2016:

- 25% of the **drivers involved in fatal collisions** have a human condition recorded, including nearly 23% who are impaired (including “ability impaired by alcohol”, “ability impaired by drugs” and “had been drinking/suspected alcohol use”); and,
- 0.6% of the **drivers involved in injury collisions** have a human condition recorded, including 0.3% who are impaired.

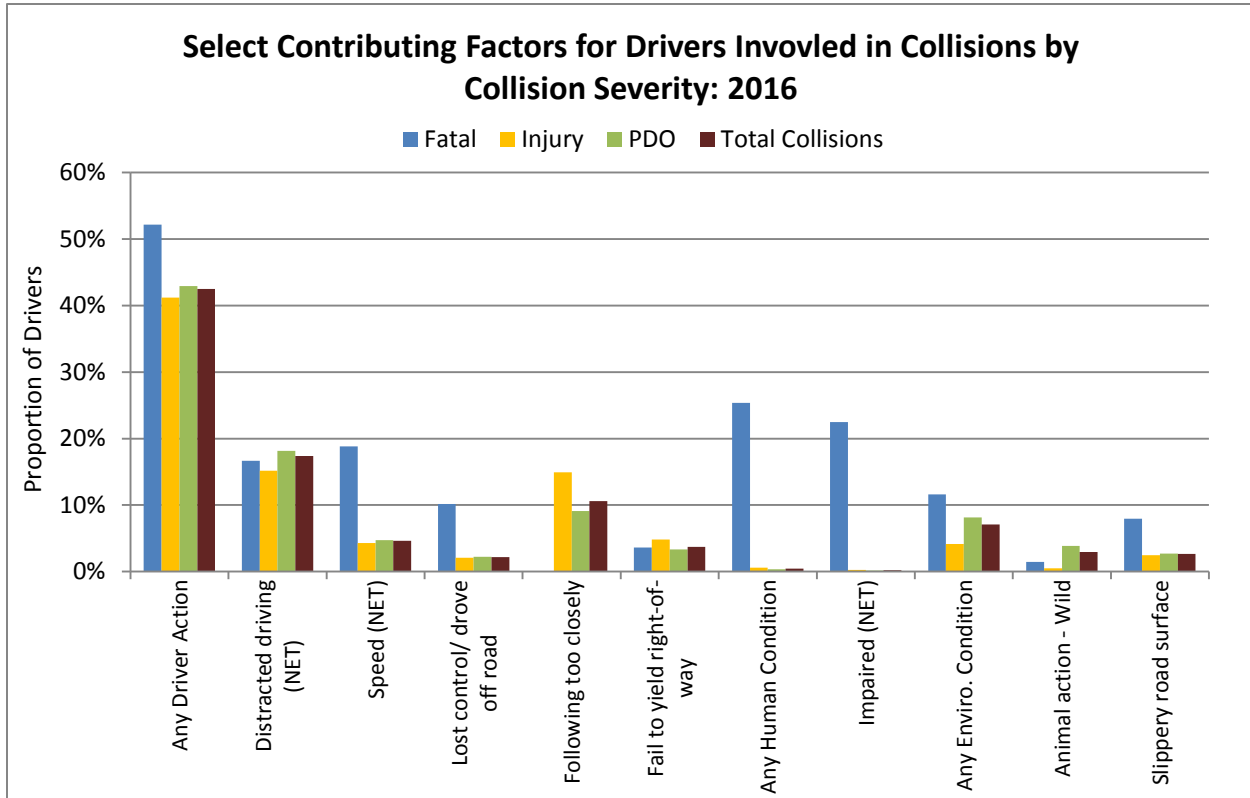
Some vehicle defect is recorded for 0.4% of drivers involved in traffic collisions in 2016 (0.4% in the previous five years, 2011 to 2015, annual average), including 3 drivers in a fatal collision.

Environmental conditions are recorded as contributing factors for 7% of **drivers involved in traffic collisions** (12% of fatal, 4% of injury, and 8% of PDO) in 2016; compared to 11% in the previous five year (2011 to 2015) annual average. In 2016:

- 3% of drivers have “animal action – wild” recorded as a contributing factor (two fatal; 0.5% of injury; 4% of PDO); and,
- 3% of drivers have “slippery road surface” recorded as a contributing factor (8% of fatal; nearly 3% of injury; 3% PDO).

NOTE: For a detailed count of contributing factors recorded for drivers involved in collisions occurring in each year from 2011 to 2016, 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 2016, driver actions and human conditions are most often recorded for fatal traffic collisions, with the most frequent of these being impaired driving, speeding, distracted driving, 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.

## Section 9

## Contributing Factors

**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: 2016, 2011-2015 Average

Contributing Factor	2016 Collision Severity			2016 Total	2011-2015 Average			
	Fatal	Injury	PDO		Fatal	Injury	PDO	Total
Any Driver Action	0.8	77.0	224.9	<b>302.7</b>	0.7	62.2	201.1	264.0
Following too closely	-	27.9	47.8	<b>75.6</b>	0.0	22.4	43.5	65.9
Turning improperly	<0.1	8.8	19.1	<b>27.9</b>	0.0	5.9	15.9	21.8
Passing improperly	<0.1	0.5	1.4	<b>1.8</b>	0.0	0.3	1.4	1.7
Changing lanes improperly	<0.1	4.0	19.7	<b>23.7</b>	0.0	2.7	15.0	17.8
Fail to yield right-of-way	<0.1	9.0	17.4	<b>26.4</b>	0.1	6.8	15.0	21.8
Disobey traffic control device/officer	<0.1	2.6	3.2	<b>5.9</b>	0.0	2.1	3.1	5.3
Drive wrong way on roadway	<0.1	<0.1	0.1	<b>0.2</b>	0.0	0.1	0.2	0.3
Passing a vehicle at pedestrian X-walk	-	-	-	-	0.0	0.0	0.0	0.0
Back unsafely	<0.1	2.6	35.5	<b>38.2</b>	0.0	2.1	28.3	30.4
Parking improperly	<0.1	0.1	1.8	<b>1.9</b>	0.0	0.1	1.2	1.3
Lost control/Drive off road	0.2	3.9	11.6	<b>15.6</b>	0.2	3.5	11.9	15.6
Driverless vehicle ran out of control	<0.1	0.1	0.3	<b>0.4</b>	0.0	0.0	0.2	0.2
Leave stop sign before safe to do so	<0.1	3.6	6.1	<b>9.7</b>	0.0	2.7	5.6	8.3
Failed to signal	-	<0.1	0.1	<b>0.2</b>	0.0	0.1	0.1	0.2
Take avoiding action	-	1.0	4.8	<b>5.8</b>	0.0	0.8	4.2	5.0
Driver inexperience	<0.1	0.5	1.4	<b>2.0</b>	0.0	0.5	1.5	2.1
Pedestrian error/confusion	<0.1	0.1	0.3	<b>0.5</b>	0.0	0.1	0.2	0.3
NET Speed	0.3	8.0	24.7	<b>33.0</b>	0.2	6.3	22.0	28.4
Exceeding speed limit	0.2	<0.1	0.1	<b>0.4</b>	0.1	0.1	0.2	0.4
Driving too fast for conditions	<0.1	7.8	24.4	<b>32.2</b>	0.1	5.9	21.3	27.3
Unsafe operating speed (Too fast or too slow)	<0.1	0.2	0.2	<b>0.5</b>	0.0	0.2	0.5	0.8
NET Distracted driving	0.3	28.4	95.2	<b>123.8</b>	0.3	16.0	58.3	74.6
Careless Driving	0.2	26.7	91.2	<b>118.0</b>	0.2	14.4	54.4	69.0
Distraction/Inattention	0.1	2.6	5.9	<b>8.7</b>	0.1	2.0	4.8	6.8

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## Contributing Factors

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Contributing Factor	2016 Collision Severity			2016 Total	2011-2015 Average			
	Fatal	Injury	PDO		Fatal	Injury	PDO	Total
Any Human Condition	0.4	1.1	1.8	<b>3.3</b>	0.3	2.4	4.6	7.3
Loss of consciousness/Blackout prior to collision	<0.1	0.2	0.2	<b>0.5</b>	0.0	0.3	0.2	0.4
Extreme fatigue/Fell asleep	<0.1	0.2	0.6	<b>0.9</b>	0.0	0.3	0.5	0.8
Defective eyesight	-	<0.1	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.0	0.1
Defective hearing	-	-	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.0	0.0
Medical disability	-	<0.1	<0.1	<b>0.1</b>	0.0	0.1	0.1	0.1
Physical disability	-	<0.1	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.0	0.1
Mental disability	-	<0.1	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.0	0.0
Mental confusion/Inability to remember	-	<0.1	0.2	<b>0.3</b>	0.0	0.1	0.1	0.2
Sudden illness	<0.1	0.1	<0.1	<b>0.1</b>	0.0	0.0	0.0	0.1
Exceed hours of service (commercial drivers only)	-	-	-	-	0.0	0.0	0.0	0.0
NET Impaired	0.3	0.5	0.7	<b>1.5</b>	0.2	0.6	0.8	1.6
Ability impaired alcohol	0.2	0.4	0.6	<b>1.2</b>	0.1	0.5	0.6	1.2
Ability impaired drugs	<0.1	-	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.0	0.1
Had been drinking/Suspected alcohol use	0.1	0.2	0.1	<b>0.4</b>	0.1	0.2	0.2	0.5
Any Vehicle Defect	<0.1	0.4	2.6	<b>3.1</b>	0.0	0.3	2.4	2.7
Defective brakes	-	<0.1	0.3	<b>0.3</b>	0.0	0.1	0.2	0.3
Defective steering	-	-	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.1	0.1
Defective headlights	-	-	-	-	0.0	0.0	0.0	0.0
Defective brake lights	<0.1	<0.1	<0.1	<b>0.1</b>	0.0	0.0	0.0	0.0
Defective lighting (unspecified)	<0.1	<0.1	-	<b>&lt;0.1</b>	0.0	0.0	0.0	0.0
Defective engine controls/drive train	-	<0.1	<0.1	<b>0.1</b>	0.0	0.0	0.1	0.1
Defective suspension/wheels	-	<0.1	0.5	<b>0.6</b>	0.0	0.0	0.4	0.4
Defective tires	<0.1	0.1	0.7	<b>0.8</b>	0.0	0.1	0.5	0.6
Tow hitch/yoke defective	-	<0.1	0.1	<b>0.2</b>	0.0	0.0	0.2	0.2
Defective exhaust system	-	-	-	-	0.0	0.0	0.0	0.0
Hood/tailgate/door/covering opened	<0.1	<0.1	0.1	<b>0.1</b>	0.0	0.0	0.0	0.0
Defective glazing (obscured windows)	-	<0.1	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.0	0.0
Vehicle modifications	-	-	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.0	0.0
Fire	-	<0.1	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.0	0.0
Overloaded/oversized	-	-	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.0	0.0

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Contributing Factor	2016 Collision Severity			2016 Total	2011-2015 Average			
	Fatal	Injury	PDO		Fatal	Injury	PDO	Total
Load shifted/spilled	-	<0.1	0.2	<b>&lt;0.1</b>	0.0	0.0	0.2	0.2
Jack-knife/trailer swing	-	<0.1	0.6	<b>0.6</b>	0.0	0.0	0.5	0.5
Hydroplaning tires	-	<0.1	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.1	0.1
Any Environmental Condition	0.2	7.8	42.7	<b>50.6</b>	0.1	8.2	69.1	77.4
Animal action - Wild	<0.1	1.0	20.1	<b>21.1</b>	0.0	2.3	45.5	47.8
Animal action - Domestic	-	0.1	0.4	<b>0.6</b>	0.0	0.1	0.8	0.9
Slippery road surface	0.1	4.6	14.3	<b>19.0</b>	0.0	3.9	15.5	19.5
Snow drift	<0.1	0.2	0.9	<b>1.1</b>	0.0	0.2	1.1	1.3
Obstruction/debris on roadway	-	0.2	2.6	<b>2.8</b>	0.0	0.2	1.7	1.9
View obstructed/limited	<0.1	0.7	1.3	<b>2.0</b>	0.0	0.5	1.4	1.9
Glare/reflection	-	0.1	0.4	<b>0.6</b>	0.0	0.2	0.3	0.5
Construction zone	-	<0.1	0.2	<b>0.2</b>	0.0	0.1	0.2	0.3
Defective driving surface	-	0.2	1.1	<b>1.3</b>	0.0	0.2	1.0	1.2
Shoulders defective	-	-	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.1	0.1
Lane markings inadequate	-	<0.1	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.1	0.1
Defective/inoperative traffic control device	-	<0.1	<0.1	<b>0.1</b>	0.0	0.1	0.1	0.1
Weather	<0.1	0.5	1.6	<b>2.1</b>	0.0	0.7	1.9	2.7
Pedestrian corridor in use	-	<0.1	0.2	<b>0.2</b>	0.0	0.1	0.1	0.1
Uninvolved vehicle	-	<0.1	0.2	<b>0.3</b>	0.0	0.1	0.3	0.3
Uninvolved pedestrian	-	<0.1	<0.1	<b>&lt;0.1</b>	0.0	0.0	0.1	0.1
Presence of prior accident	-	<0.1	<0.1	<b>&lt;0.1</b>	0.0	0.0	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 2016 compared to the previous five years (2011 to 2015) annual average.

In 2016, the **driver involvement rate** (per 10,000 licensed drivers) in traffic collisions where:

- Any driver action is a contributing factor is 302.7, increased by 15% from the previous five years (264.0);
- Any human condition is a contributing factor is 3.3, decreased by 55% from the previous five years (7.3);
- Some environmental condition is a contributing factor is 50.6, decreased by 35% from the previous five years (77.4);
- Distracted driving is a contributing factor is 123.8, increased 66% from the previous five years (74.6);
- "Following too closely" is a contributing factor is 75.6, increased by 15% from the previous five years (65.9);
- "Backing unsafely" is a contributing factor is 38.2, increased by nearly 26% from the previous five years (30.4);
- Speed is a contributing factor is 33.0, increased by 16% from the previous five years (28.4);
- "Turning improperly" is a contributing factor is 27.9, increased by 28% from the previous five years (21.8);
- "Fail to yield right-of-way" is a contributing factor is 26.4, increased by 21% from the previous five years (21.8);
- "Changing lanes improperly" is a contributing factor is 23.7, increased 33% from the previous five years (17.8);
- "Animal action - wild" is a contributing factor is 21.1, decreased by 56% from the previous five years (47.8);
- "Slippery road surface" is a contributing factor is 19.0, down slightly from the previous five years (19.5);
- "Lost control/Drove off road" is a contributing factor is 15.6, relatively the same as in the previous five years (15.6);
- "Leave stop sign before safe to do so" is a contributing factor is 9.7, increased by 17% from the previous five years (8.3); and,
- Impaired is a contributing factor is 1.5, decreased by 6% from the previous five years (1.6).

In 2016, the **driver involvement rate** (per 10,000 licensed drivers) in **fatal traffic collisions** where:

- A driver action is a contributing factor is 0.8, up 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 0.4, up from 0.3 in the previous five years;
- Speed is a contributing factor is 0.3, up from 0.2 in the previous five years;
- Impaired is a contributing factor is 0.3, up from 0.2 in the previous five years;
- An environmental condition is a contributing factor is 0.2, up from 0.1 in the previous five years; and,
- "Lost control/Drove off road" is a contributing factor is 0.2, relatively the same as in the previous five years (0.2).

**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: 2016

Contributing Factor	Age Group						
	16-19	20-24	25-34	35-44	45-54	55-64	65+
Any Driver Action	558.2	522.3	371.6	295.6	255.5	212.5	193.2
Following too closely	159.4	160.5	102.2	73.9	62.2	44.6	29.6
Turning improperly	49.0	47.1	34.8	24.2	22.7	20.0	21.2
Passing improperly	3.2	2.7	2.7	1.9	1.6	0.9	1.2
Changing lanes improperly	39.1	36.9	26.7	23.8	19.6	16.5	20.5
Fail to yield right-of-way	45.6	39.7	33.0	22.8	22.1	18.3	23.2
Disobey traffic control device/officer	8.4	11.4	7.1	5.3	5.4	3.6	4.5
Drive wrong way on roadway	0.0	0.1	0.4	0.1	0.1	0.3	0.2
Passing a vehicle at pedestrian X-walk	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Back unsafely	46.5	35.7	34.3	41.5	39.7	40.9	33.1
Parking improperly	1.9	1.7	2.0	2.3	1.6	1.5	2.3
Lost control/Drive off road	43.1	34.1	20.9	14.8	11.1	8.1	5.9
Driverless vehicle ran out of control	0.2	0.5	0.5	0.7	0.2	0.3	0.4
Leave stop sign before safe to do so	17.1	13.2	11.9	8.6	8.7	6.5	8.7
Failed to signal	0.8	0.1	0.2	0.1	0.1	0.1	0.2
Take avoiding action	10.3	13.5	8.8	5.7	4.5	2.8	2.1
Driver inexperience	14.8	3.9	1.8	1.0	0.5	0.9	0.4
Pedestrian error/confusion	1.1	0.7	0.4	0.6	0.3	0.4	0.3
NET Speed	77.5	68.4	45.9	33.6	26.2	18.6	10.6
Exceeding speed limit	0.8	1.1	0.6	0.7	0.2	0.1	0.0
Driving too fast for conditions	75.0	66.4	45.0	32.5	25.8	18.2	10.6
Unsafe operating speed (Too fast or too slow)	1.9	1.2	0.3	0.5	0.3	0.3	0.1
NET Distracted driving	218.2	208.7	152.8	119.4	105.1	88.4	82.8
Careless Driving	205.3	199.6	145.7	113.8	100.4	85.2	78.3
Distraction/Inattention	19.2	13.0	10.7	8.2	7.1	5.0	6.6
Any Human Condition	6.5	7.2	4.9	2.2	2.4	1.7	2.1
Loss of consciousness/Blackout prior to collision	0.8	0.5	0.3	0.3	0.7	0.3	0.5
Extreme fatigue/Fell asleep	3.0	2.0	1.7	0.4	0.6	0.3	0.2
Defective eyesight	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Defective hearing	0.2	0.0	0.0	0.0	0.0	0.0	0.1
Medical disability	0.0	0.4	0.1	0.1	0.1	0.1	0.1
Physical disability	0.0	0.0	0.1	0.1	0.0	0.1	0.0
Mental disability	0.0	0.1	0.1	0.1	0.0	0.1	0.0
Mental confusion/Inability to remember	0.0	0.3	0.0	0.1	0.2	0.0	1.0
Sudden illness	0.0	0.1	0.0	0.1	0.3	0.2	0.1
Exceed hours of service (commercial drivers only)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NET Impaired	2.5	4.1	2.7	1.4	0.8	0.9	0.3
Ability impaired alcohol	1.7	3.2	2.3	1.0	0.6	0.5	0.2
Ability impaired drugs	0.0	0.3	0.1	0.2	0.0	0.0	0.0
Had been drinking/Suspected alcohol use	0.8	0.9	0.4	0.3	0.1	0.3	0.1
Any Vehicle Defect	3.2	5.8	3.7	4.0	2.7	2.3	1.5
Defective brakes	0.2	0.5	0.6	0.4	0.3	0.2	0.1
Defective steering	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Defective headlights	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Defective brake lights	0.0	0.5	0.1	0.1	0.1	0.1	0.1
Defective lighting (unspecified)	0.0	0.0	0.1	0.0	0.1	0.0	0.0
Defective engine controls/drive train	0.0	0.5	0.1	0.3	0.0	0.0	0.0
Defective suspension/wheels	0.8	1.3	0.7	0.5	0.6	0.4	0.2
Defective tires	0.8	1.5	1.1	0.9	0.5	0.5	0.6
Tow hitch/yoke defective	0.2	0.1	0.1	0.5	0.1	0.1	0.0
Defective exhaust system	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hood/tailgate/door/covering opened	0.2	0.1	0.1	0.3	0.1	0.1	0.1

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## Section 9

## Contributing Factors

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Contributing Factor	Age Group						
	16-19	20-24	25-34	35-44	45-54	55-64	65+
Defective glazing (obscured windows)	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Vehicle modifications	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Fire	0.2	0.0	0.0	0.1	0.1	0.0	0.0
Overloaded/oversized	0.0	0.0	0.0	0.1	0.0	0.1	0.0
Load shifted/spilled	0.0	0.4	0.2	0.1	0.2	0.2	0.2
Jack-knife/trailer swing	0.2	0.4	0.6	0.9	0.6	0.6	0.3
Hydroplaning tires	0.4	0.3	0.0	0.1	0.1	0.0	0.0
Any Environmental Condition	84.9	87.0	62.6	53.3	49.4	37.1	23.3
Animal action - Wild	26.0	32.2	24.2	23.7	23.7	17.8	10.0
Animal action - Domestic	1.3	1.1	1.0	0.7	0.3	0.0	0.4
Slippery road surface	41.8	36.1	26.1	18.1	15.5	12.4	7.9
Snow drift	1.9	2.3	1.4	1.3	0.8	0.7	0.3
Obstruction/debris on roadway	4.0	4.3	3.2	2.9	2.8	2.7	1.5
View obstructed/limited	4.4	3.6	2.0	2.2	2.1	1.1	1.0
Glare/reflection	0.6	0.4	0.5	0.4	0.9	0.2	0.8
Construction zone	0.2	0.1	0.2	0.1	0.3	0.3	0.2
Defective driving surface	2.5	2.1	1.5	1.3	1.6	1.3	0.3
Shoulders defective	0.2	0.1	0.1	0.1	0.1	0.0	0.0
Lane markings inadequate	0.0	0.1	0.1	0.0	0.1	0.1	0.1
Defective/inoperative traffic control device	0.2	0.1	0.2	0.3	0.1	0.1	0.1
Weather	4.0	5.1	2.7	2.5	1.7	1.1	0.8
Pedestrian corridor in use	0.2	0.4	0.3	0.2	0.3	0.0	0.2
Uninvolved vehicle	0.6	0.4	0.3	0.5	0.2	0.1	0.3
Uninvolved pedestrian	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Presence of prior accident	0.0	0.0	0.1	0.0	0.1	0.0	0.0

**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:  
2011-2015 Average

Contributing Factor	Age Group						
	16-19	20-24	25-34	35-44	45-54	55-64	65+
Any Driver Action	495.4	454.7	321.1	254.4	215.1	180.0	161.4
Following too closely	132.2	130.7	88.5	64.4	51.8	38.3	27.2
Turning improperly	37.8	35.5	26.1	19.4	17.2	15.7	16.9
Passing improperly	3.2	2.8	2.1	1.4	1.4	1.3	1.2
Changing lanes improperly	28.2	28.6	20.2	15.8	14.1	13.9	14.6
Fail to yield right-of-way	38.9	32.2	24.4	20.6	17.9	16.2	17.4
Disobey traffic control device/officer	9.0	8.5	6.1	4.5	3.8	3.8	4.0
Drive wrong way on roadway	0.6	0.4	0.3	0.2	0.1	0.2	0.2
Passing a vehicle at pedestrian X-walk	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Back unsafely	35.9	30.3	29.5	31.3	31.7	29.5	25.3
Parking improperly	1.3	1.5	1.7	1.2	1.2	1.0	1.3
Lost control/Drive off road	45.0	34.4	20.6	15.1	10.8	7.6	5.4
Driverless vehicle ran out of control	0.3	0.4	0.3	0.2	0.2	0.2	0.2
Leave stop sign before safe to do so	15.2	11.9	8.2	7.5	6.7	6.5	8.0
Failed to signal	0.3	0.3	0.2	0.2	0.1	0.1	0.1
Take avoiding action	9.7	10.7	7.0	5.2	3.8	2.7	1.6
Driver inexperience	15.6	4.7	1.9	3.1	0.8	0.5	0.3
Pedestrian error/confusion	0.4	0.3	0.4	0.4	0.3	0.3	0.2
NET Speed	67.6	57.7	39.3	29.0	20.3	14.4	10.5
Exceeding speed limit	1.3	0.9	0.6	0.5	0.2	0.1	0.1
Driving too fast for conditions	63.8	55.7	37.8	27.9	19.7	14.1	10.1
Unsafe operating speed (Too fast or too slow)	2.8	1.4	1.1	0.7	0.5	0.2	0.3
NET Distracted driving	137.4	131.9	91.4	71.0	60.0	50.5	49.0
Careless Driving	125.0	122.2	84.5	66.0	55.8	47.1	45.1
Distraction/Inattention	15.1	12.0	8.3	6.1	4.9	4.4	4.8
Any Human Condition	17.1	13.9	9.1	6.4	4.8	4.1	5.1
Loss of consciousness/Blackout prior to collision	0.5	0.8	0.4	0.3	0.3	0.4	0.7
Extreme fatigue/Fell asleep	3.0	1.9	1.2	0.5	0.4	0.4	0.3
Defective eyesight	0.0	0.0	0.1	0.0	0.0	0.1	0.2
Defective hearing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Medical disability	0.0	0.1	0.1	0.0	0.1	0.2	0.3
Physical disability	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Mental disability	0.1	0.0	0.1	0.0	0.0	0.0	0.1
Mental confusion/Inability to remember	0.2	0.2	0.2	0.1	0.1	0.1	0.7
Sudden illness	0.0	0.1	0.0	0.0	0.1	0.1	0.2
Exceed hours of service (commercial drivers only)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NET Impaired	4.2	4.0	2.5	1.6	1.1	0.6	0.2
Ability impaired alcohol	3.0	2.6	1.7	1.3	0.8	0.5	0.1
Ability impaired drugs	0.2	0.1	0.1	0.1	0.1	0.0	0.0
Had been drinking/Suspected alcohol use	1.4	1.4	0.9	0.4	0.2	0.1	0.1
Any Vehicle Defect	4.1	4.5	2.9	2.4	2.8	2.4	1.5
Defective brakes	0.6	0.5	0.2	0.3	0.2	0.2	0.1
Defective steering	0.2	0.2	0.1	0.0	0.2	0.1	0.0
Defective headlights	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Defective brake lights	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Defective lighting (unspecified)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Defective engine controls/drive train	0.2	0.3	0.1	0.1	0.1	0.1	0.1
Defective suspension/wheels	0.9	0.5	0.5	0.3	0.5	0.3	0.2
Defective tires	1.4	1.3	0.7	0.6	0.5	0.4	0.2
Tow hitch/yoke defective	0.1	0.1	0.3	0.2	0.2	0.2	0.1
Defective exhaust system	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Contributing Factor	Age Group						
	16-19	20-24	25-34	35-44	45-54	55-64	65+
Hood/tailgate/door/covering opened	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Defective glazing (obscured windows)	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle modifications	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Fire	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Overloaded/oversized	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Load shifted/spilled	0.0	0.3	0.2	0.2	0.3	0.3	0.1
Jack-knife/trailer swing	0.3	0.7	0.5	0.6	0.5	0.5	0.5
Hydroplaning tires	0.2	0.3	0.1	0.1	0.0	0.0	0.0
Any Environmental Condition	111.3	119.1	92.2	75.6	79.1	59.5	36.4
Animal action - Wild	52.9	65.3	54.4	45.9	54.4	41.0	22.8
Animal action - Domestic	1.6	1.5	1.2	0.8	1.0	0.6	0.5
Slippery road surface	40.9	37.0	25.3	19.8	15.7	11.4	7.8
Snow drift	2.4	2.6	1.6	1.2	1.0	1.0	0.4
Obstruction/debris on roadway	2.3	2.8	2.2	1.9	1.7	1.6	1.3
View obstructed/limited	3.0	2.9	2.5	1.9	1.5	1.4	1.2
Glare/reflection	1.0	0.7	0.6	0.4	0.4	0.4	0.5
Construction zone	0.4	0.4	0.3	0.3	0.3	0.2	0.2
Defective driving surface	3.2	2.3	1.3	1.3	1.1	0.8	0.5
Shoulders defective	0.3	0.2	0.2	0.1	0.1	0.1	0.1
Lane markings inadequate	0.2	0.2	0.1	0.0	0.0	0.1	0.1
Defective/inoperative traffic control device	0.2	0.1	0.2	0.1	0.2	0.1	0.2
Weather	4.6	4.8	3.4	2.5	2.4	1.6	1.2
Pedestrian corridor in use	0.0	0.2	0.2	0.1	0.1	0.1	0.1
Uninvolved vehicle	0.6	0.7	0.4	0.4	0.2	0.3	0.2
Uninvolved pedestrian	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Presence of prior accident	0.1	0.3	0.1	0.1	0.1	0.1	0.0

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 2016, the involvement rate in collisions for drivers aged 16 to 19 with:

- Any at-fault contributing factor is:
  - 1.0 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,
  - 2.4 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;
  - 1.5 times that of drivers aged 25 to 34;
  - 1.9 times that of drivers aged 35 to 44; and,
  - 2.5 times that of drivers aged 45 and older.
- A human condition as a contributing factor is:
  - 0.9 times that of drivers aged 20 to 24;
  - 1.3 times that of drivers aged 25 to 34;
  - 2.9 times that of drivers aged 35 to 44; and,
  - 3.1 times that of drivers aged 45 and older.
- “Driver inexperience” as a contributing factor is:
  - 3.8 times that of drivers aged 20 to 24;
  - 8.3 times that of drivers aged 25 to 34;
  - 14.6 times that of drivers aged 35 to 44; and,
  - 25.3 times that of drivers aged 45 and older.

In 2016, 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;
  - 1.8 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:
  - 1.5 times that of drivers aged 25 to 34;
  - 3.2 times that of drivers aged 35 to 44; and,
  - 3.5 times that of drivers aged 45 and older.
- “Driver inexperience” as a contributing factor is:
  - 2.2 times that of drivers aged 25 to 34;
  - 3.8 times that of drivers aged 35 to 44; and,
  - 6.6 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 2016 to the previous five years (2011 to 2015) annual average while some experienced decreases.

## Section 9

## Contributing Factors

**Table 9-6 Historical Summary of Contributing Factors to a Collision Overall**

Table 9-6

Summary of Contributing Factors to a Collision: 2011 to 2016

Contributing Factor	2011 Total Collisions	% of 2011 Total Collisions	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
Driver Action - Driving Properly and Human Condition - Apparently Normal	17,016	49.6%	25,573	65.6%	25,005	59.8%	24,166	59.4%	28,316	68.2%	32,255	71.2%
Driver Action - Driving properly	1,907	5.6%	843	2.2%	858	2.1%	789	1.9%	530	1.3%	429	0.9%
Any Driver Action	12,785	37.3%	20,260	52.0%	25,859	61.8%	26,734	65.7%	25,877	62.3%	26,859	59.3%
Following too closely	2,945	8.6%	5,247	13.5%	6,190	14.8%	6,581	16.2%	6,958	16.7%	6,763	14.9%
Turning improperly	861	2.5%	1,527	3.9%	2,046	4.9%	2,247	5.5%	2,564	6.2%	2,486	5.5%
Passing improperly	134	0.4%	129	0.3%	169	0.4%	149	0.4%	151	0.4%	164	0.4%
Changing lanes improperly	823	2.4%	1,351	3.5%	1,615	3.9%	1,770	4.4%	1,914	4.6%	2,080	4.6%
Fail to yield right-of-way	1,400	4.1%	1,378	3.5%	2,062	4.9%	2,174	5.3%	2,272	5.5%	2,358	5.2%
Disobey traffic control device/officer	525	1.5%	357	0.9%	443	1.1%	433	1.1%	500	1.2%	527	1.2%
Drive wrong way on roadway	42	0.1%	9	<0.1%	12	<0.1%	38	<0.1%	28	<0.1%	18	<0.1%
Passing a vehicle at pedestrian X-walk	1	<0.1%	2	<0.1%	0	-	0	-	0	-	0	-
Back unsafely	1,417	4.1%	2,634	6.8%	2,800	6.7%	2,930	7.2%	3,040	7.3%	3,383	7.5%
Parking improperly	98	0.3%	104	0.3%	104	0.2%	155	0.4%	152	0.4%	181	0.4%
Lost control/Drive off road	992	2.9%	1,064	2.7%	1,598	3.8%	1,415	3.5%	1,589	3.8%	1,403	3.1%
Driverless vehicle ran out of control	11	<0.1%	18	<0.1%	12	<0.1%	33	<0.1%	38	<0.1%	37	<0.1%
Leave stop sign before safe to do so	438	1.3%	493	1.3%	745	1.8%	1,006	2.5%	844	2.0%	861	1.9%
Failed to signal	18	<0.1%	16	<0.1%	8	<0.1%	17	<0.1%	21	<0.1%	17	<0.1%
Take avoiding action	425	1.2%	356	0.9%	408	1.0%	458	1.1%	488	1.2%	522	1.2%
Driver inexperience	282	0.8%	161	0.4%	144	0.3%	122	0.3%	176	0.4%	176	0.4%
Pedestrian error/confusion	76	0.2%	29	<0.1%	31	<0.1%	49	0.1%	55	0.1%	65	0.1%
NET Speed	1,627	4.7%	1,891	4.9%	2,418	5.8%	3,076	7.6%	3,092	7.4%	2,964	6.5%
Exceeding speed limit	57	0.2%	16	<0.1%	14	<0.1%	26	<0.1%	48	0.1%	39	<0.1%
Driving too fast for conditions	1,443	4.2%	1,813	4.7%	2,362	5.6%	3,018	7.4%	3,005	7.2%	2,890	6.4%
Unsafe operating speed (Too fast or too slow)	143	0.4%	67	0.2%	45	0.1%	36	<0.1%	48	0.1%	42	<0.1%

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## Section 9

## Contributing Factors

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Contributing Factor	2011 Total Collisions	% of 2011 Total Collisions	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
NET Distracted driving	2,415	7.0%	4,780	12.3%	6,709	16.0%	8,468	20.8%	9,463	22.8%	11,086	24.5%
Careless Driving	1,451	4.2%	4,474	11.5%	6,409	15.3%	8,136	20.0%	8,943	21.5%	10,560	23.3%
Distraction/Inattention	1,038	3.0%	372	1.0%	359	0.9%	464	1.1%	716	1.7%	787	1.7%
Human Condition - Apparently Normal	5,894	17.2%	6,983	17.9%	2,990	7.1%	3,792	9.3%	7,580	18.2%	15,621	34.5%
Any Human Condition	1,429	4.2%	607	1.6%	599	1.4%	237	0.6%	297	0.7%	301	0.7%
Loss of consciousness/Blackout prior to collision	44	0.1%	33	<0.1%	34	<0.1%	37	<0.1%	43	0.1%	40	<0.1%
Extreme fatigue/Fell asleep	88	0.3%	63	0.2%	63	0.2%	59	0.1%	66	0.2%	79	0.2%
Defective eyesight	6	<0.1%	12	<0.1%	2	<0.1%	5	<0.1%	5	<0.1%	4	<0.1%
Defective hearing	2	<0.1%	1	<0.1%	0	-	0	-	1	<0.1%	2	<0.1%
Medical disability	11	<0.1%	6	<0.1%	10	<0.1%	10	<0.1%	20	<0.1%	11	<0.1%
Physical disability	16	<0.1%	1	<0.1%	3	<0.1%	1	<0.1%	5	<0.1%	4	<0.1%
Mental disability	6	<0.1%	2	<0.1%	4	<0.1%	4	<0.1%	5	<0.1%	4	<0.1%
Mental confusion/Inability to remember	21	<0.1%	13	<0.1%	22	<0.1%	15	<0.1%	28	<0.1%	24	<0.1%
Sudden illness	10	<0.1%	10	<0.1%	8	<0.1%	5	<0.1%	8	<0.1%	12	<0.1%
Exceed hours of service (commercial drivers only)	1	<0.1%	0	-	0	-	0	-	0	-	0	-
NET Impaired	230	0.7%	123	0.3%	119	0.3%	115	0.3%	140	0.3%	145	0.3%
Ability impaired alcohol	147	0.4%	97	0.2%	94	0.2%	75	0.2%	109	0.3%	110	0.2%
Ability impaired drugs	10	<0.1%	1	<0.1%	3	<0.1%	7	<0.1%	7	<0.1%	8	<0.1%
Had been drinking/Suspected alcohol use	80	0.2%	30	<0.1%	31	<0.1%	38	<0.1%	36	<0.1%	34	<0.1%
No Apparent (Vehicle) Defect	17,843	52.0%	26,336	67.6%	24,908	59.6%	25,414	62.5%	32,283	77.7%	38,760	85.5%
Any Vehicle Defect	223	0.7%	163	0.4%	189	0.5%	283	0.7%	300	0.7%	278	0.6%
Defective brakes	40	0.1%	17	<0.1%	14	<0.1%	23	<0.1%	22	<0.1%	30	<0.1%
Defective steering	13	<0.1%	3	<0.1%	4	<0.1%	10	<0.1%	15	<0.1%	2	<0.1%
Defective headlights	4	<0.1%	0	-	0	-	0	-	0	-	0	-
Defective brake lights	3	<0.1%	1	<0.1%	3	<0.1%	6	<0.1%	5	<0.1%	10	<0.1%
Defective lighting (unspecified)	5	<0.1%	0	-	3	<0.1%	3	<0.1%	0	-	2	<0.1%
Defective engine controls/drive train	13	<0.1%	6	<0.1%	8	<0.1%	7	<0.1%	6	<0.1%	9	<0.1%
Defective suspension/wheels	27	<0.1%	25	<0.1%	31	<0.1%	40	<0.1%	49	0.1%	52	0.1%
Defective tires	46	0.1%	27	<0.1%	35	<0.1%	80	0.2%	74	0.2%	70	0.2%
Tow hitch/yoke defective	18	<0.1%	14	<0.1%	15	<0.1%	12	<0.1%	25	<0.1%	15	<0.1%

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## Section 9

## Contributing Factors

(continued from previous page)

Contributing Factor	2011 Total Collisions	% of 2011 Total Collisions	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
Defective exhaust system	1	<0.1%	1	<0.1%	0	-	0	-	0	-	0	-
Hood/tailgate/door/covering opened	4	<0.1%	4	<0.1%	3	<0.1%	4	<0.1%	4	<0.1%	13	<0.1%
Defective glazing (obscured windows)	2	<0.1%	3	<0.1%	2	<0.1%	3	<0.1%	3	<0.1%	2	<0.1%
Vehicle modifications	2	<0.1%	2	<0.1%	1	<0.1%	1	<0.1%	2	<0.1%	1	<0.1%
Fire	0	-	2	<0.1%	3	<0.1%	6	<0.1%	1	<0.1%	3	<0.1%
Overloaded/oversized	5	<0.1%	2	<0.1%	0	-	1	<0.1%	4	<0.1%	4	<0.1%
Load shifted/spilled	19	<0.1%	15	<0.1%	16	<0.1%	21	<0.1%	23	<0.1%	16	<0.1%
Jack-knife/trailer swing	16	<0.1%	39	0.1%	44	0.1%	67	0.2%	63	0.2%	51	0.1%
Hydroplaning tires	6	<0.1%	4	<0.1%	10	<0.1%	3	<0.1%	12	<0.1%	6	<0.1%
<b>Any Environmental Condition</b>	<b>8,143</b>	<b>23.7%</b>	<b>6,631</b>	<b>17.0%</b>	<b>7,231</b>	<b>17.3%</b>	<b>6,823</b>	<b>16.8%</b>	<b>4,000</b>	<b>9.6%</b>	<b>4,556</b>	<b>10.1%</b>
Animal action - Wild	4,706	13.7%	4,967	12.7%	4,756	11.4%	4,017	9.9%	1,892	4.6%	1,892	4.2%
Animal action - Domestic	223	0.7%	41	0.1%	45	0.1%	52	0.1%	33	<0.1%	51	0.1%
Slippery road surface	2,111	6.2%	1,151	3.0%	1,737	4.2%	1,859	4.6%	1,357	3.3%	1,700	3.8%
Snow drift	207	0.6%	15	<0.1%	118	0.3%	163	0.4%	45	0.1%	96	0.2%
Obstruction/debris on roadway	149	0.4%	116	0.3%	152	0.4%	202	0.5%	191	0.5%	255	0.6%
View obstructed/limited	296	0.9%	66	0.2%	106	0.3%	190	0.5%	155	0.4%	185	0.4%
Glare/reflection	84	0.2%	26	<0.1%	36	<0.1%	27	<0.1%	41	<0.1%	52	0.1%
Construction zone	49	0.1%	27	<0.1%	11	<0.1%	19	<0.1%	15	<0.1%	23	<0.1%
Defective driving surface	199	0.6%	45	0.1%	60	0.1%	118	0.3%	82	0.2%	121	0.3%
Shoulders defective	22	<0.1%	4	<0.1%	10	<0.1%	10	<0.1%	9	<0.1%	8	<0.1%
Lane markings inadequate	7	<0.1%	6	<0.1%	10	<0.1%	6	<0.1%	4	<0.1%	7	<0.1%
Defective/inoperative traffic control device	11	<0.1%	6	<0.1%	12	<0.1%	10	<0.1%	18	<0.1%	13	<0.1%
Weather	353	1.0%	158	0.4%	214	0.5%	189	0.5%	205	0.5%	198	0.4%
Pedestrian corridor in use	15	<0.1%	16	<0.1%	7	<0.1%	16	<0.1%	11	<0.1%	26	<0.1%
Uninvolved vehicle	58	0.2%	14	<0.1%	20	<0.1%	18	<0.1%	27	<0.1%	32	<0.1%
Uninvolved pedestrian	15	<0.1%	8	<0.1%	8	<0.1%	3	<0.1%	4	<0.1%	8	<0.1%
Presence of prior accident	20	<0.1%	4	<0.1%	9	<0.1%	1	<0.1%	3	<0.1%	2	<0.1%
No Contributing Factor(s) Identified	9,276	27.0%	3,507	9.0%	3,126	7.5%	2,144	5.3%	1,572	3.8%	1,463	3.2%
Not Stated	570	1.7%	0	-	0	-	14	<0.1%	73	0.2%	74	0.2%
<b>Total</b>	<b>34,302</b>	<b>100%</b>	<b>38,972</b>	<b>100%</b>	<b>41,819</b>	<b>100%</b>	<b>40,672</b>	<b>100%</b>	<b>41,548</b>	<b>100%</b>	<b>45,316</b>	<b>100%</b>

\*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 9

## Contributing Factors

**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: 2011 to 2016

Contributing Factor	2011 Total Victims	% of 2011 Total Victims	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
Driver Action - Driving Properly and Human Condition - Apparently Normal	4,990	59.9%	8,678	81.7%	8,886	79.1%	9,367	80.2%	10,041	83.6%	<b>10,726</b>	<b>84.8%</b>
Driver Action - Driving properly	486	5.8%	348	3.3%	364	3.2%	366	3.1%	255	2.1%	<b>147</b>	<b>1.2%</b>
Any Driver Action	3,717	44.6%	5,866	55.2%	7,636	68.0%	8,625	73.9%	8,932	74.3%	<b>9,171</b>	<b>72.5%</b>
Following too closely	950	11.4%	2,191	20.6%	2,578	22.9%	3,061	26.2%	3,386	28.2%	<b>3,302</b>	<b>26.1%</b>
Turning improperly	284	3.4%	434	4.1%	717	6.4%	875	7.5%	1,081	9.0%	<b>1,097</b>	<b>8.7%</b>
Passing improperly	41	0.5%	53	0.5%	44	0.4%	32	0.3%	37	0.3%	<b>63</b>	<b>0.5%</b>
Changing lanes improperly	123	1.5%	270	2.5%	269	2.4%	366	3.1%	391	3.3%	<b>452</b>	<b>3.6%</b>
Fail to yield right-of-way	518	6.2%	550	5.2%	842	7.5%	1,081	9.3%	1,142	9.5%	<b>1,120</b>	<b>8.9%</b>
Disobey traffic control device/officer	258	3.1%	194	1.8%	245	2.2%	307	2.6%	393	3.3%	<b>373</b>	<b>2.9%</b>
Drive wrong way on roadway	25	0.3%	17	0.2%	8	<0.1%	21	0.2%	22	0.2%	<b>17</b>	<b>0.1%</b>
Passing a vehicle at pedestrian X-walk	1	<0.1%	2	<0.1%	0	-	0	-	0	-	<b>0</b>	<b>-</b>
Back unsafely	68	0.8%	184	1.7%	214	1.9%	252	2.2%	231	1.9%	<b>259</b>	<b>2.0%</b>
Parking improperly	11	0.1%	8	<0.1%	10	<0.1%	12	0.1%	12	<0.1%	<b>19</b>	<b>0.2%</b>
Lost control/Drive off road	366	4.4%	324	3.0%	459	4.1%	421	3.6%	480	4.0%	<b>439</b>	<b>3.5%</b>
Driverless vehicle ran out of control	1	<0.1%	2	<0.1%	6	<0.1%	1	<0.1%	11	<0.1%	<b>16</b>	<b>0.1%</b>
Leave stop sign before safe to do so	211	2.5%	202	1.9%	301	2.7%	490	4.2%	450	3.7%	<b>441</b>	<b>3.5%</b>
Failed to signal	4	<0.1%	7	<0.1%	4	<0.1%	5	<0.1%	11	<0.1%	<b>8</b>	<b>&lt;0.1%</b>
Take avoiding action	91	1.1%	67	0.6%	80	0.7%	92	0.8%	92	0.8%	<b>111</b>	<b>0.9%</b>
Driver inexperience	92	1.1%	56	0.5%	60	0.5%	46	0.4%	58	0.5%	<b>62</b>	<b>0.5%</b>
Pedestrian error/confusion	64	0.8%	25	0.2%	27	0.2%	25	0.2%	26	0.2%	<b>34</b>	<b>0.3%</b>
NET Speed	553	6.6%	543	5.1%	696	6.2%	881	7.5%	993	8.3%	<b>977</b>	<b>7.7%</b>
Exceeding speed limit	27	0.3%	15	0.1%	26	0.2%	19	0.2%	24	0.2%	<b>54</b>	<b>0.4%</b>
Driving too fast for conditions	448	5.4%	492	4.6%	646	5.8%	834	7.1%	953	7.9%	<b>899</b>	<b>7.1%</b>
Unsafe operating speed (Too fast or too slow)	85	1.0%	37	0.3%	29	0.3%	30	0.3%	24	0.2%	<b>34</b>	<b>0.3%</b>
NET Distracted driving	715	8.6%	1,249	11.8%	1,759	15.7%	2,369	20.3%	3,101	25.8%	<b>3,367</b>	<b>26.6%</b>
Careless Driving	403	4.8%	1,111	10.5%	1,621	14.4%	2,173	18.6%	2,838	23.6%	<b>3,142</b>	<b>24.8%</b>
Distraction/Inattention	348	4.2%	164	1.5%	161	1.4%	270	2.3%	365	3.0%	<b>350</b>	<b>2.8%</b>

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## Section 9

## Contributing Factors

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Contributing Factor	2011 Total Victims	% of 2011 Total Victims	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
Human Condition - Apparently Normal	1,665	20.0%	2,264	21.3%	1,123	10.0%	1,394	11.9%	2,217	18.4%	4,564	36.1%
Any Human Condition	642	7.7%	315	3.0%	353	3.1%	208	1.8%	226	1.9%	206	1.6%
Loss of consciousness/Blackout prior to collision	28	0.3%	20	0.2%	26	0.2%	36	0.3%	39	0.3%	24	0.2%
Extreme fatigue/Fell asleep	51	0.6%	26	0.2%	39	0.3%	26	0.2%	28	0.2%	27	0.2%
Defective eyesight	3	<0.1%	5	<0.1%	0	-	9	<0.1%	4	<0.1%	1	<0.1%
Defective hearing	1	<0.1%	0	-	0	-	0	-	2	<0.1%	0	-
Medical disability	11	0.1%	5	<0.1%	2	<0.1%	7	<0.1%	14	0.1%	10	<0.1%
Physical disability	9	0.1%	0	-	4	<0.1%	0	-	4	<0.1%	1	<0.1%
Mental disability	9	0.1%	3	<0.1%	4	<0.1%	10	<0.1%	4	<0.1%	2	<0.1%
Mental confusion/Inability to remember	9	0.1%	7	<0.1%	12	0.1%	12	0.1%	27	0.2%	8	<0.1%
Sudden illness	9	0.1%	5	<0.1%	6	<0.1%	2	<0.1%	4	<0.1%	10	<0.1%
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	0	-	0	-	0	-
NET Impaired	190	2.3%	106	1.0%	118	1.1%	116	1.0%	121	1.0%	139	1.1%
Ability impaired alcohol	122	1.5%	76	0.7%	87	0.8%	68	0.6%	97	0.8%	93	0.7%
Ability impaired drugs	5	<0.1%	1	<0.1%	1	<0.1%	10	<0.1%	9	<0.1%	16	0.1%
Had been drinking/Suspected alcohol use	68	0.8%	34	0.3%	44	0.4%	44	0.4%	27	0.2%	41	0.3%
No Apparent (Vehicle) Defect	5,341	64.1%	9,009	84.8%	9,011	80.2%	9,664	82.8%	10,488	87.3%	11,462	90.6%
Any Vehicle Defect	49	0.6%	23	0.2%	45	0.4%	44	0.4%	35	0.3%	59	0.5%
Defective brakes	8	<0.1%	9	<0.1%	10	<0.1%	10	<0.1%	8	<0.1%	9	<0.1%
Defective steering	4	<0.1%	0	-	1	<0.1%	7	<0.1%	2	<0.1%	0	-
Defective headlights	2	<0.1%	0	-	0	-	0	-	0	-	0	-
Defective brake lights	0	-	3	<0.1%	0	-	2	<0.1%	0	-	8	<0.1%
Defective lighting (unspecified)	3	<0.1%	0	-	4	<0.1%	1	<0.1%	0	-	4	<0.1%
Defective engine controls/drive train	3	<0.1%	0	-	2	<0.1%	2	<0.1%	2	<0.1%	1	<0.1%
Defective suspension/wheels	3	<0.1%	0	-	11	<0.1%	4	<0.1%	4	<0.1%	7	<0.1%
Defective tires	23	0.3%	3	<0.1%	8	<0.1%	7	<0.1%	8	<0.1%	15	0.1%
Tow hitch/yoke defective	1	<0.1%	1	<0.1%	0	-	0	-	0	-	2	<0.1%
Defective exhaust system	0	-	3	<0.1%	0	-	0	-	0	-	0	-
Hood/tailgate/door/covering opened	0	-	0	-	0	-	0	-	1	<0.1%	4	<0.1%
Defective glazing (obscured windows)	0	-	2	<0.1%	0	-	2	<0.1%	0	-	2	<0.1%
Vehicle modifications	1	<0.1%	0	-	1	<0.1%	1	<0.1%	0	-	0	-

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## Section 9

## Contributing Factors

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Contributing Factor	2011 Total Victims	% of 2011 Total Victims	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
Fire	0	-	0	-	1	<0.1%	2	<0.1%	1	<0.1%	2	<0.1%
Overloaded/oversized	0	-	0	-	0	-	0	-	1	<0.1%	0	-
Load shifted/spilled	0	-	1	<0.1%	3	<0.1%	3	<0.1%	2	<0.1%	2	<0.1%
Jack-knife/trailer swing	0	-	0	-	4	<0.1%	3	<0.1%	3	<0.1%	1	<0.1%
Hydroplaning tires	2	<0.1%	1	<0.1%	5	<0.1%	0	-	3	<0.1%	3	<0.1%
Any Environmental Condition	1,172	14.1%	713	6.7%	911	8.1%	957	8.2%	764	6.4%	942	7.4%
Animal action - Wild	275	3.3%	274	2.6%	240	2.1%	219	1.9%	130	1.1%	100	0.8%
Animal action - Domestic	39	0.5%	1	<0.1%	7	<0.1%	9	<0.1%	12	<0.1%	14	0.1%
Slippery road surface	558	6.7%	290	2.7%	475	4.2%	495	4.2%	412	3.4%	560	4.4%
Snow drift	39	0.5%	1	<0.1%	16	0.1%	27	0.2%	6	<0.1%	24	0.2%
Obstruction/debris on roadway	29	0.3%	10	<0.1%	12	0.1%	14	0.1%	24	0.2%	25	0.2%
View obstructed/limited	89	1.1%	22	0.2%	44	0.4%	77	0.7%	75	0.6%	96	0.8%
Glare/reflection	32	0.4%	17	0.2%	13	0.1%	15	0.1%	15	0.1%	18	0.1%
Construction zone	5	<0.1%	9	<0.1%	9	<0.1%	6	<0.1%	5	<0.1%	7	<0.1%
Defective driving surface	58	0.7%	16	0.2%	18	0.2%	15	0.1%	12	<0.1%	22	0.2%
Shoulders defective	7	<0.1%	1	<0.1%	6	<0.1%	7	<0.1%	2	<0.1%	1	<0.1%
Lane markings inadequate	5	<0.1%	1	<0.1%	1	<0.1%	3	<0.1%	2	<0.1%	4	<0.1%
Defective/inoperative traffic control device	5	<0.1%	1	<0.1%	10	<0.1%	6	<0.1%	9	<0.1%	15	0.1%
Weather	120	1.4%	69	0.6%	74	0.7%	74	0.6%	81	0.7%	72	0.6%
Pedestrian corridor in use	11	0.1%	11	0.1%	3	<0.1%	9	<0.1%	6	<0.1%	7	<0.1%
Uninvolved vehicle	14	0.2%	3	<0.1%	7	<0.1%	5	<0.1%	11	<0.1%	13	0.1%
Uninvolved pedestrian	7	<0.1%	5	<0.1%	2	<0.1%	0	-	2	<0.1%	7	<0.1%
Presence of prior accident	13	0.2%	0	-	4	<0.1%	2	<0.1%	1	<0.1%	5	<0.1%
No Contributing Factor(s) Identified	2,605	31.2%	1,605	15.1%	1,386	12.3%	971	8.3%	650	5.4%	589	4.7%
Not Stated	178	2.1%	0	-	0	-	4	<0.1%	16	0.1%	18	0.1%
<b>Total</b>	<b>8,337</b>	<b>100%</b>	<b>10,623</b>	<b>100%</b>	<b>11,234</b>	<b>100%</b>	<b>11,676</b>	<b>100%</b>	<b>12,017</b>	<b>100%</b>	<b>12,653</b>	<b>100%</b>

\*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.

## Section 9

## Contributing Factors

**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: 2011 to 2016

Contributing Factor	2011 Total Drivers	% of 2011 Total Drivers	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
Driver Action - Driving Properly and Human Condition - Apparently Normal	18,204	35.5%	29,010	49.3%	26,101	41.1%	25,040	40.9%	28,516	47.8%	<b>32,598</b>	<b>51.1%</b>
Driver Action - Driving properly	1,882	3.7%	843	1.4%	863	1.4%	790	1.3%	535	0.9%	<b>429</b>	<b>0.7%</b>
Any Driver Action	12,805	25.0%	20,397	34.6%	26,087	41.1%	26,978	44.0%	26,147	43.8%	<b>27,122</b>	<b>42.5%</b>
Following too closely	2,973	5.8%	5,269	8.9%	6,207	9.8%	6,607	10.8%	6,999	11.7%	<b>6,776</b>	<b>10.6%</b>
Turning improperly	859	1.7%	1,528	2.6%	2,053	3.2%	2,258	3.7%	2,577	4.3%	<b>2,496</b>	<b>3.9%</b>
Passing improperly	131	0.3%	129	0.2%	173	0.3%	150	0.2%	152	0.3%	<b>165</b>	<b>0.3%</b>
Changing lanes improperly	821	1.6%	1,363	2.3%	1,642	2.6%	1,794	2.9%	1,953	3.3%	<b>2,121</b>	<b>3.3%</b>
Fail to yield right-of-way	1,393	2.7%	1,370	2.3%	2,070	3.3%	2,188	3.6%	2,278	3.8%	<b>2,368</b>	<b>3.7%</b>
Disobey traffic control device/officer	521	1.0%	356	0.6%	442	0.7%	437	0.7%	499	0.8%	<b>525</b>	<b>0.8%</b>
Drive wrong way on roadway	40	<0.1%	9	<0.1%	11	<0.1%	38	<0.1%	27	<0.1%	<b>18</b>	<b>&lt;0.1%</b>
Passing a vehicle at pedestrian X-walk	1	<0.1%	2	<0.1%	0	-	0	-	0	-	<b>0</b>	<b>-</b>
Back unsafely	1,406	2.7%	2,665	4.5%	2,827	4.5%	2,960	4.8%	3,083	5.2%	<b>3,418</b>	<b>5.4%</b>
Parking improperly	80	0.2%	101	0.2%	96	0.2%	147	0.2%	146	0.2%	<b>172</b>	<b>0.3%</b>
Lost control/Drive off road	986	1.9%	1,062	1.8%	1,597	2.5%	1,414	2.3%	1,587	2.7%	<b>1,402</b>	<b>2.2%</b>
Driverless vehicle ran out of control	7	<0.1%	16	<0.1%	12	<0.1%	28	<0.1%	37	<0.1%	<b>37</b>	<b>&lt;0.1%</b>
Leave stop sign before safe to do so	440	0.9%	495	0.8%	750	1.2%	1,013	1.7%	849	1.4%	<b>870</b>	<b>1.4%</b>
Failed to signal	18	<0.1%	16	<0.1%	8	<0.1%	17	<0.1%	21	<0.1%	<b>17</b>	<b>&lt;0.1%</b>
Take avoiding action	433	0.8%	353	0.6%	408	0.6%	458	0.7%	488	0.8%	<b>521</b>	<b>0.8%</b>
Driver inexperience	281	0.5%	161	0.3%	145	0.2%	122	0.2%	174	0.3%	<b>176</b>	<b>0.3%</b>
Pedestrian error/confusion	20	<0.1%	26	<0.1%	17	<0.1%	28	<0.1%	45	<0.1%	<b>41</b>	<b>&lt;0.1%</b>
NET Speed	1,621	3.2%	1,890	3.2%	2,420	3.8%	3,081	5.0%	3,090	5.2%	<b>2,959</b>	<b>4.6%</b>
Exceeding speed limit	56	0.1%	16	<0.1%	15	<0.1%	26	<0.1%	48	<0.1%	<b>38</b>	<b>&lt;0.1%</b>
Driving too fast for conditions	1,441	2.8%	1,813	3.1%	2,363	3.7%	3,024	4.9%	3,005	5.0%	<b>2,887</b>	<b>4.5%</b>
Unsafe operating speed (Too fast or too slow)	139	0.3%	66	0.1%	45	<0.1%	34	<0.1%	46	<0.1%	<b>41</b>	<b>&lt;0.1%</b>

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## Section 9

## Contributing Factors

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Contributing Factor	2011 Total Drivers	% of 2011 Total Drivers	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
NET Distracted driving	2,382	4.6%	4,767	8.1%	6,702	10.6%	8,471	13.8%	9,462	15.8%	11,093	17.4%
Careless Driving	1,437	2.8%	4,461	7.6%	6,407	10.1%	8,140	13.3%	8,947	15.0%	10,573	16.6%
Distraction/Inattention	1,018	2.0%	372	0.6%	354	0.6%	460	0.8%	706	1.2%	776	1.2%
Human Condition - Apparently Normal	6,111	11.9%	7,037	12.0%	3,048	4.8%	3,826	6.2%	7,594	12.7%	15,605	24.4%
Any Human Condition	1,397	2.7%	602	1.0%	592	0.9%	230	0.4%	291	0.5%	294	0.5%
Loss of consciousness/Blackout prior to collision	44	<0.1%	33	<0.1%	34	<0.1%	36	<0.1%	43	<0.1%	41	<0.1%
Extreme fatigue/Fell asleep	87	0.2%	63	0.1%	63	<0.1%	59	<0.1%	66	0.1%	79	0.1%
Defective eyesight	6	<0.1%	12	<0.1%	2	<0.1%	4	<0.1%	5	<0.1%	4	<0.1%
Defective hearing	2	<0.1%	1	<0.1%	0	-	0	-	0	-	2	<0.1%
Medical disability	12	<0.1%	6	<0.1%	10	<0.1%	10	<0.1%	20	<0.1%	11	<0.1%
Physical disability	16	<0.1%	1	<0.1%	2	<0.1%	1	<0.1%	4	<0.1%	4	<0.1%
Mental disability	2	<0.1%	2	<0.1%	4	<0.1%	4	<0.1%	5	<0.1%	4	<0.1%
Mental confusion/Inability to remember	20	<0.1%	13	<0.1%	22	<0.1%	15	<0.1%	28	<0.1%	23	<0.1%
Sudden illness	10	<0.1%	10	<0.1%	8	<0.1%	5	<0.1%	8	<0.1%	12	<0.1%
Exceed hours of service (commercial drivers only)	1	<0.1%	0	-	0	-	0	-	0	-	0	-
NET Impaired	217	0.4%	118	0.2%	117	0.2%	110	0.2%	135	0.2%	138	0.2%
Ability impaired alcohol	139	0.3%	93	0.2%	93	0.1%	72	0.1%	105	0.2%	104	0.2%
Ability impaired drugs	10	<0.1%	1	<0.1%	3	<0.1%	7	<0.1%	7	<0.1%	7	<0.1%
Had been drinking/Suspected alcohol use	75	0.1%	29	<0.1%	30	<0.1%	36	<0.1%	35	<0.1%	32	<0.1%
No Apparent (Vehicle) Defect	21,567	42.1%	33,658	57.2%	26,885	42.3%	28,156	45.9%	36,356	60.9%	47,046	73.7%
Any Vehicle Defect	216	0.4%	163	0.3%	188	0.3%	282	0.5%	299	0.5%	276	0.4%
Defective brakes	39	<0.1%	17	<0.1%	14	<0.1%	22	<0.1%	22	<0.1%	29	<0.1%
Defective steering	13	<0.1%	3	<0.1%	4	<0.1%	10	<0.1%	14	<0.1%	2	<0.1%
Defective headlights	3	<0.1%	0	-	0	-	0	-	0	-	0	-
Defective brake lights	3	<0.1%	1	<0.1%	3	<0.1%	6	<0.1%	5	<0.1%	10	<0.1%
Defective lighting (unspecified)	4	<0.1%	0	-	3	<0.1%	3	<0.1%	0	-	2	<0.1%
Defective engine controls/drive train	13	<0.1%	6	<0.1%	8	<0.1%	7	<0.1%	6	<0.1%	9	<0.1%
Defective suspension/wheels	27	<0.1%	25	<0.1%	31	<0.1%	40	<0.1%	49	<0.1%	52	<0.1%
Defective tires	46	<0.1%	27	<0.1%	35	<0.1%	80	0.1%	74	0.1%	70	0.1%
Tow hitch/yoke defective	17	<0.1%	14	<0.1%	15	<0.1%	12	<0.1%	25	<0.1%	15	<0.1%

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## Section 9

## Contributing Factors

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Contributing Factor	2011 Total Drivers	% of 2011 Total Drivers	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
Defective exhaust system	1	<0.1%	1	<0.1%	0	-	0	-	0	-	0	-
Hood/tailgate/door/covering opened	2	<0.1%	4	<0.1%	3	<0.1%	4	<0.1%	4	<0.1%	13	<0.1%
Defective glazing (obscured windows)	2	<0.1%	3	<0.1%	2	<0.1%	3	<0.1%	3	<0.1%	2	<0.1%
Vehicle modifications	2	<0.1%	2	<0.1%	1	<0.1%	1	<0.1%	2	<0.1%	1	<0.1%
Fire	0	-	2	<0.1%	3	<0.1%	6	<0.1%	1	<0.1%	3	<0.1%
Overloaded/oversized	4	<0.1%	2	<0.1%	0	-	1	<0.1%	4	<0.1%	3	<0.1%
Load shifted/spilled	19	<0.1%	15	<0.1%	16	<0.1%	21	<0.1%	23	<0.1%	16	<0.1%
Jack-knife/trailer swing	16	<0.1%	39	<0.1%	43	<0.1%	67	0.1%	63	0.1%	51	<0.1%
Hydroplaning tires	6	<0.1%	4	<0.1%	10	<0.1%	3	<0.1%	12	<0.1%	6	<0.1%
Any Environmental Condition	8,256	16.1%	6,630	11.3%	7,240	11.4%	6,829	11.1%	4,000	6.7%	4,535	7.1%
Animal action - Wild	4,708	9.2%	4,969	8.4%	4,757	7.5%	4,017	6.6%	1,891	3.2%	1,893	3.0%
Animal action - Domestic	226	0.4%	41	<0.1%	45	<0.1%	52	<0.1%	33	<0.1%	51	<0.1%
Slippery road surface	2,190	4.3%	1,152	2.0%	1,740	2.7%	1,862	3.0%	1,361	2.3%	1,703	2.7%
Snow drift	215	0.4%	15	<0.1%	118	0.2%	164	0.3%	45	<0.1%	96	0.2%
Obstruction/debris on roadway	147	0.3%	116	0.2%	153	0.2%	202	0.3%	190	0.3%	254	0.4%
View obstructed/limited	305	0.6%	65	0.1%	104	0.2%	191	0.3%	155	0.3%	177	0.3%
Glare/reflection	84	0.2%	26	<0.1%	36	<0.1%	27	<0.1%	41	<0.1%	50	<0.1%
Construction zone	51	<0.1%	27	<0.1%	11	<0.1%	20	<0.1%	15	<0.1%	20	<0.1%
Defective driving surface	198	0.4%	45	<0.1%	60	<0.1%	118	0.2%	82	0.1%	120	0.2%
Shoulders defective	22	<0.1%	4	<0.1%	10	<0.1%	11	<0.1%	9	<0.1%	7	<0.1%
Lane markings inadequate	8	<0.1%	6	<0.1%	10	<0.1%	6	<0.1%	4	<0.1%	8	<0.1%
Defective/inoperative traffic control device	12	<0.1%	6	<0.1%	12	<0.1%	10	<0.1%	17	<0.1%	13	<0.1%
Weather	364	0.7%	159	0.3%	215	0.3%	191	0.3%	204	0.3%	192	0.3%
Pedestrian corridor in use	14	<0.1%	14	<0.1%	7	<0.1%	13	<0.1%	10	<0.1%	18	<0.1%
Uninvolved vehicle	61	0.1%	13	<0.1%	20	<0.1%	18	<0.1%	27	<0.1%	27	<0.1%
Uninvolved pedestrian	14	<0.1%	7	<0.1%	7	<0.1%	2	<0.1%	3	<0.1%	3	<0.1%
Presence of prior accident	23	<0.1%	4	<0.1%	9	<0.1%	1	<0.1%	3	<0.1%	2	<0.1%
No Contributing Factor(s) Identified	11,540	22.5%	3,304	5.6%	2,969	4.7%	1,953	3.2%	1,260	2.1%	1,196	1.9%
Not Stated	0	-	0	-	0	-	13	<0.1%	68	0.1%	61	<0.1%
<b>Total</b>	<b>51,279</b>	<b>100%</b>	<b>58,877</b>	<b>100%</b>	<b>63,501</b>	<b>100%</b>	<b>61,294</b>	<b>100%</b>	<b>59,716</b>	<b>100%</b>	<b>63,839</b>	<b>100%</b>

\*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: 2011 to 2016

		2011	2012	2013	2014	2015	2011-2015 average	2016
<b>NET Speed ('Exceeding speed limit', 'Driving too fast for conditions' and 'Unsafe operating speed (too fast or too slow)' combined)</b>								
Collisions	All collisions	1,627 4.7%	1,891 4.9%	2,418 5.8%	3,076 7.6%	3,092 7.4%	2,421 6.1%	<b>2,964</b> <b>6.5%</b>
	Fatal collisions	30 31.9%	17 19.1%	10 14.5%	11 17.2%	13 18.8%	16 21.0%	<b>26</b> <b>27.1%</b>
	Injury collisions	348 5.5%	393 4.7%	499 5.7%	683 7.6%	745 8.2%	534 6.4%	<b>722</b> <b>7.5%</b>
Victims	All victims (killed or injured)	553 6.6%	543 5.1%	696 6.2%	881 7.5%	993 8.3%	733 6.8%	<b>977</b> <b>7.7%</b>
	People killed	37 33.6%	19 19.8%	14 16.5%	12 17.6%	13 16.7%	19 21.7%	<b>33</b> <b>30.8%</b>
	People seriously injured	56 16.6%	35 10.3%	38 12.4%	36 11.9%	60 14.5%	45 13.2%	<b>73</b> <b>15.3%</b>
Driver Involvement (/10,000 drivers)	All collisions	20.0	22.6	28.3	35.4	35.1	28.4	<b>33.0</b>
	Fatal collisions	0.4	0.2	0.1	0.1	0.1	0.2	<b>0.3</b>
	Injury collisions	4.3	4.7	5.8	7.9	8.5	6.3	<b>8.0</b>
<b>NET Distracted driving ('Distraction/ inattention' and 'Careless driving' combined)</b>								
Collisions	All collisions	2,415 7.0%	4,780 12.3%	6,709 16.0%	8,468 20.8%	9,463 22.8%	6,367 16.1%	<b>11,086</b> <b>24.5%</b>
	Fatal collisions	24 25.5%	35 39.3%	18 26.1%	17 26.6%	25 36.2%	24 30.9%	<b>23</b> <b>24.0%</b>
	Injury collisions	477 7.6%	948 11.4%	1,357 15.5%	1,810 20.1%	2,260 24.8%	1,370 16.5%	<b>2,535</b> <b>26.5%</b>
Victims	All victims (killed or injured)	715 8.6%	1,249 11.8%	1,759 15.7%	2,369 20.3%	3,101 25.8%	1,839 17.1%	<b>3,367</b> <b>26.6%</b>
	People killed	30 27.3%	37 38.5%	28 32.9%	18 26.5%	28 35.9%	28 32.3%	<b>29</b> <b>27.1%</b>
	People seriously injured	46 13.6%	45 13.3%	64 20.8%	84 27.7%	133 32.0%	74 21.9%	<b>138</b> <b>28.9%</b>
Driver Involvement (/10,000 drivers)	All collisions	29.7	57.0	78.4	97.4	107.4	74.6	<b>123.8</b>
	Fatal collisions	0.3	0.4	0.2	0.2	0.3	0.3	<b>0.3</b>
	Injury collisions	5.9	11.3	15.9	20.8	25.6	16.0	<b>28.4</b>
<b>NET Impaired ('Impaired by alcohol', 'Impaired by drugs' and 'Had been drinking/Suspected alcohol use' combined)</b>								
Collisions	All collisions	230 0.7%	123 0.3%	119 0.3%	115 0.3%	140 0.3%	145 0.4%	<b>145</b> <b>0.3%</b>
	Fatal collisions	21 22.3%	28 31.5%	15 21.7%	19 29.7%	15 21.7%	20 25.5%	<b>31</b> <b>32.3%</b>
	Injury collisions	88 1.4%	36 0.4%	50 0.6%	45 0.5%	61 0.7%	56 0.7%	<b>49</b> <b>0.5%</b>
Victims	All victims (killed or injured)	190 2.3%	106 1.0%	118 1.1%	116 1.0%	121 1.0%	130 1.2%	<b>139</b> <b>1.1%</b>
	People killed	27 24.5%	32 33.3%	19 22.4%	19 27.9%	16 20.5%	23 25.9%	<b>38</b> <b>35.5%</b>
	People seriously injured	38 11.3%	23 6.8%	32 10.4%	22 7.3%	24 5.8%	28 8.2%	<b>36</b> <b>7.5%</b>
Driver Involvement (/10,000 drivers)	All collisions	2.8	1.5	1.4	1.3	1.6	1.6	<b>1.5</b>
	Fatal collisions	0.3	0.3	0.2	0.2	0.2	0.2	<b>0.3</b>
	Injury collisions	1.1	0.4	0.6	0.5	0.7	0.6	<b>0.5</b>

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 2016, there are 1,955 commercial vehicles involved in traffic collisions. Of these:

- 17 are involved in fatal collisions;
- 417 are involved in injury collisions; and,
- 1,521 are involved in PDO collisions.

Traffic collisions where at least one commercial vehicle is involved resulted in a total of 553 victims in 2016, including:

- 18 people killed;
- 36 people seriously injured; and,
- 499 people where the injury is minor, minimal or unspecified.

### **Major Elements Examined**

Counts of NSC commercial vehicles involved in collisions in Manitoba for 2016 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 2011 to 2015. 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.

## Section 10

## NSC Monitoring Report

**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: 2016, 2011-2015 Average

Vehicle Category	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 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	2	11.8%	193	46.3%	905	59.5%	1,100	56.3%	6	170	795	972	42.6%
Power Unit (Semi-Trailer)	13	76.5%	116	27.8%	367	24.1%	496	25.4%	8	108	354	470	20.6%
Truck - Other	2	11.8%	29	7.0%	81	5.3%	112	5.7%	3	130	466	599	26.2%
School Bus	0	-	15	3.6%	37	2.4%	52	2.7%	<1	3	8	11	0.5%
Transit Bus - Urban	0	-	42	10.1%	60	3.9%	102	5.2%	<1	37	62	100	4.4%
Para-Transit Bus	0	-	5	1.2%	5	0.3%	10	0.5%	-	2	6	8	0.4%
Inter-City Bus	0	-	1	0.2%	11	0.7%	12	0.6%	-	4	7	11	0.5%
Bus - Other	0	-	16	3.8%	55	3.6%	71	3.6%	<1	24	85	110	4.8%
<b>Total</b>	17	100%	417	100%	1,521	100%	1,955	100%	18	479	1,783	2,281	100%

Note: Counts of vehicles in the 2011-2015 average may not add to the total due to rounding.

In 2016, there are 1,955 commercial vehicles involved in traffic collisions. Of these:

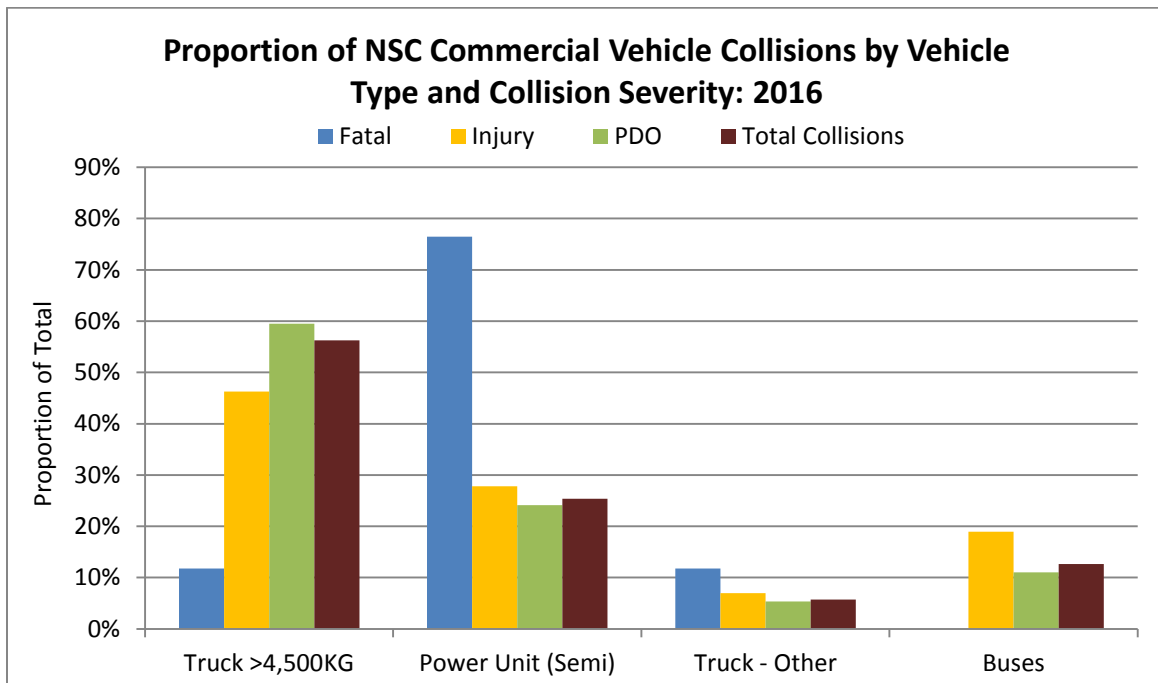
- 17 are involved in fatal collisions;
- 417 are involved in injury collisions; and,
- 1,521 are involved in PDO collisions.

The number of NSC commercial vehicles involved in collisions in 2016 has decreased by 14% (a count of 326) compared to the previous five year (2011 to 2015) annual average. Compared to the previous five years, the number of NSC commercial vehicles in 2016 involved in:

- Fatal collisions decreased by a count of 1;
- Injury collisions decreased by 13% (a count of 62); and,
- PDO collisions decreased by 15% (a count of 262).

NOTE: For a detailed historical count of NSC Commercial Vehicles involved in traffic collisions occurring in each year from 2011 to 2016, 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 2016, trucks with a unit chassis greater than 4,500 kilograms and power units for semi-trailers combined account for 82% of the commercial vehicles involved in traffic collisions.

- Power units for semi-trailers account for 13 of the 17 commercial vehicles involved in fatal collisions; and,
- Trucks with unit chassis greater than 4,500 kilograms account for 2 of the 17 commercial vehicles involved in fatal collisions.



## Section 10

## NSC Monitoring Report

**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: 2016

Vehicle Type	2016 Casualty Type												2016 Total Victims	% of 2016 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	2	11.1%	14	38.9%	77	47.5%	158	47.6%	0	-	249	46.5%	251	45.4%
Power Unit (Semi-Trailer)	14	77.8%	12	33.3%	56	34.6%	80	24.1%	1	20.0%	149	27.9%	163	29.5%
Truck - Other	2	11.1%	7	19.4%	7	4.3%	23	6.9%	3	60.0%	40	7.5%	42	7.6%
School Bus	0	-	1	2.8%	5	3.1%	13	3.9%	0	-	19	3.6%	19	3.4%
Transit Bus - Urban	0	-	1	2.8%	14	8.6%	35	10.5%	0	-	50	9.3%	50	9.0%
Para-Transit Bus	0	-	0	-	1	0.6%	5	1.5%	0	-	6	1.1%	6	1.1%
Inter-City Bus	0	-	0	-	0	-	3	0.9%	0	-	3	0.6%	3	0.5%
Bus - Other	0	-	1	2.8%	2	1.2%	15	4.5%	1	20.0%	19	3.6%	19	3.4%
Total	18	100%	36	100%	162	100%	332	100%	5	100%	535	100%	553	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: 2011-2015 Average

Vehicle Type	2011-2015 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	6	9	51	147	6	214	220	35.1%
Power Unit (Semi-Trailer)	9	13	48	68	6	135	144	23.0%
Truck - Other	3	6	47	81	29	162	166	26.5%
School Bus	1	<1	3	3	<1	6	7	1.2%
Transit Bus - Urban	<1	2	13	29	3	47	48	7.6%
Para-Transit Bus	-	<1	<1	2	<1	3	3	0.4%
Inter-City Bus	-	<1	2	2	<1	5	5	0.7%
Bus - Other	<1	2	12	20	<1	34	34	5.5%
Total	21	32	176	353	45	606	627	100%

Note: Counts of victims in the 2011-2015 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 553 victims in 2016, including:

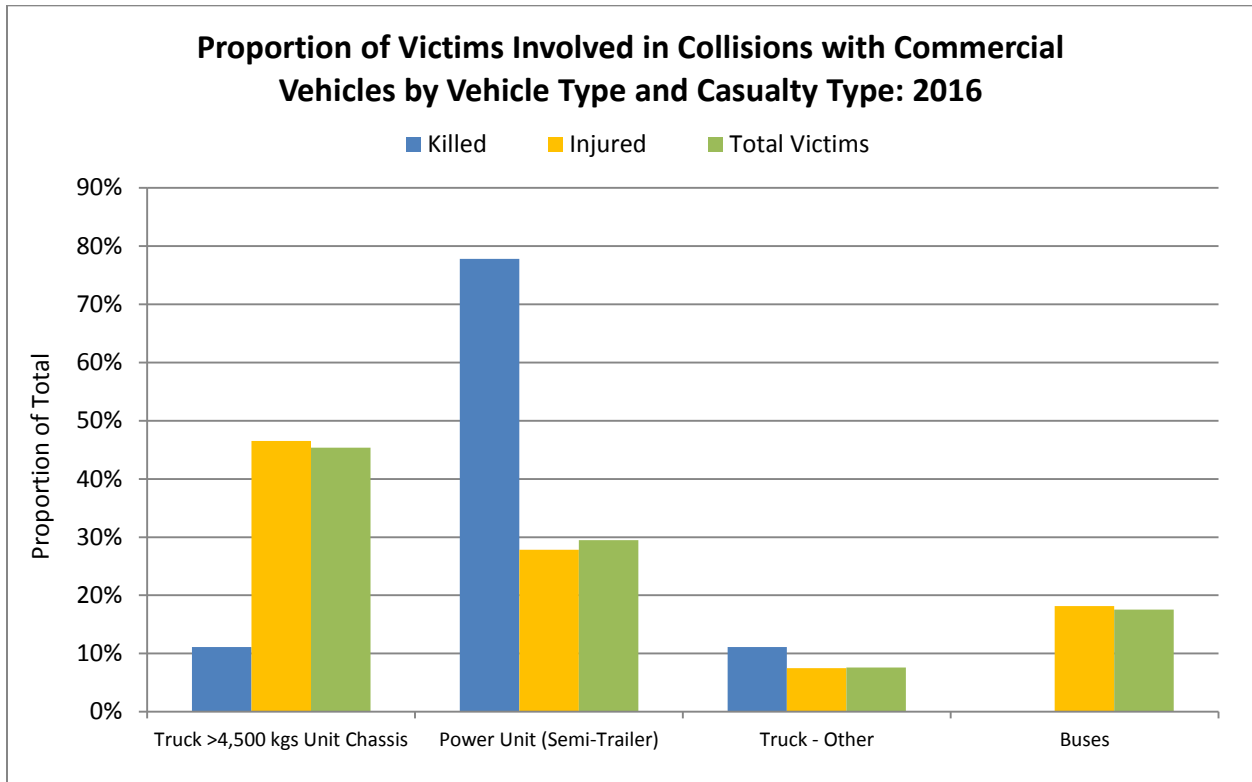
- 18 people killed;
- 36 people seriously injured; and,
- 499 people where the injury is minor, minimal or unspecified.

Collisions involving commercial vehicles in 2016 resulted in fewer people injured overall when compared to the previous five year (2011 to 2015) annual average. In 2016:

- The number of people killed decreased by a count of 3 compared to the previous five years;
- The number of people seriously injured increased by a count of 4 (an 11% increase) compared to the previous five years; and,
- The number of people injured overall decreased by a count of 71 (a 12% decrease) 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 2011 to 2016, 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 2016, 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 (16 of 18 people killed) or seriously injured (72%).

## Section 10

## NSC Monitoring Report

**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: 2016, 2011-2015 Average

Pre-Collision Activity	2016 Collision Severity						2016 Total	% of 2016 Total	2011-2015 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	10	58.8%	139	33.3%	555	36.5%	<b>704</b>	36.0%	12	173	622	806	35.3%
Turning Left	3	17.6%	15	3.6%	53	3.5%	<b>71</b>	3.6%	<1	27	88	115	5.1%
Turning Right	1	5.9%	7	1.7%	45	3.0%	<b>53</b>	2.7%	1	12	66	79	3.5%
Making U Turn	0	-	0	-	7	0.5%	<b>7</b>	0.4%	-	1	5	7	0.3%
Changing Lanes – Left	1	5.9%	3	0.7%	18	1.2%	<b>22</b>	1.1%	-	4	23	27	1.2%
Changing Lanes – Right	0	-	9	2.2%	21	1.4%	<b>30</b>	1.5%	-	6	23	29	1.3%
Merging	0	-	0	-	3	0.2%	<b>3</b>	0.2%	<1	2	12	14	0.6%
Reversing	0	-	8	1.9%	111	7.3%	<b>119</b>	6.1%	-	4	109	113	5.0%
Overtaking	0	-	0	-	2	0.1%	<b>2</b>	0.1%	<1	1	4	5	0.2%
Slowing/Stopping on Roadway	0	-	16	3.8%	41	2.7%	<b>57</b>	2.9%	<1	17	52	70	3.1%
Stopped in Traffic	0	-	30	7.2%	80	5.3%	<b>110</b>	5.6%	<1	37	124	161	7.1%
Starting in Traffic	0	-	6	1.4%	13	0.9%	<b>19</b>	1.0%	<1	7	16	23	1.0%
Leave Parking Position/Roadside	0	-	0	-	6	0.4%	<b>6</b>	0.3%	-	1	5	6	0.3%
Enter Parking Position/Roadside	0	-	1	0.2%	3	0.2%	<b>4</b>	0.2%	-	1	8	10	0.4%
Parked Legally	0	-	0	-	40	2.6%	<b>40</b>	2.0%	<1	3	40	43	1.9%
Parked Illegally	0	-	0	-	0	-	<b>0</b>	-	-	<1	<1	1	<0.1%
Swerving	0	-	3	0.7%	7	0.5%	<b>10</b>	0.5%	<1	3	7	11	0.5%
Other	1	5.9%	7	1.7%	34	2.2%	<b>42</b>	2.1%	<1	3	20	24	1.1%
Not Applicable/Unknown	1	5.9%	173	41.5%	482	31.7%	<b>656</b>	33.6%	3	175	559	737	32.3%
<b>Total</b>	<b>17</b>	<b>100%</b>	<b>417</b>	<b>100%</b>	<b>1,521</b>	<b>100%</b>	<b>1,955</b>	<b>100%</b>	<b>18</b>	<b>479</b>	<b>1,783</b>	<b>2,281</b>	<b>100%</b>

Note: Counts of vehicles in the 2011-2015 average may not add to the total due to rounding.

In 2016, most NSC commercial vehicles involved in a collision were “going straight ahead” when the collision occurred (36% of NSC vehicles involved in collisions; 59% of NSC vehicles involved in fatal collisions; 33% of NSC vehicles involved in injury collisions; and nearly 37% of NSC vehicles involved in PDO collisions). In the previous five year (2011 to 2015) annual average, “going straight ahead” was noted as the pre-collision action for 35% of all commercial vehicles involved in a collision.

Other noteworthy pre-collision actions for commercial vehicles involved in collisions in 2016 include:

- Stopped or stopping (“stopped in traffic” and “slowing/stopping on roadway” combined) – nearly 9%;
- Turning (“turning left” and “turning right” combined) – 6%; and,
- Reversing – 6% of all collisions.

Considering fatal collisions, there are very few pre-collision actions noted in 2016. “Going straight ahead” was noted for 10 of 17 NSC vehicles (59%) involved in a fatal collision. Turning (“turning left” and “turning right” combined) was noted for 4 of 17 NSC vehicles (nearly 24%) involved in a fatal crash, while one NSC vehicle was “Changing lanes – left”.

Commercial vehicles involved in injury collisions in 2016 were noted most often as “going straight ahead” (33%). Other pre-collision actions of commercial vehicles involved in injury collisions include:

- Stopped or stopping (“stopped in traffic” and “slowing/stopping on roadway” combined) – 11%;
- Turning (“turning left” and “turning right” combined) – 5%;
- Changing lanes (left or right) – 3 %;
- Reversing – 2%; and,
- Starting in traffic – 1%.

## Section 10

## NSC Monitoring Report

**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: 2016

Contributing Factor	2016 Collision Severity						2016 Total	% of 2016 Total
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Driver Action - Driving Properly and Human Condition - Apparently Normal	6	35.3%	176	42.2%	761	50.0%	943	48.2%
Driver Action - Driving properly	0	-	4	1.0%	24	1.6%	28	1.4%
Any Driver Action	8	47.1%	167	40.0%	489	32.1%	664	34.0%
Follow too closely	0	-	53	12.7%	62	4.1%	115	5.9%
Turning improperly	0	-	16	3.8%	42	2.8%	58	3.0%
Passing improperly	0	-	3	0.7%	6	0.4%	9	0.5%
Changing lanes improperly	0	-	17	4.1%	42	2.8%	59	3.0%
Fail to yield right of way	1	5.9%	12	2.9%	31	2.0%	44	2.3%
Disobey traffic control device/officer	2	11.8%	6	1.4%	3	0.2%	11	0.6%
Drive wrong way on roadway	0	-	0	-	0	-	0	-
Passing a vehicle at pedestrian X-walk	0	-	0	-	0	-	0	-
Back unsafely	0	-	7	1.7%	120	7.9%	127	6.5%
Parking improperly	0	-	0	-	6	0.4%	6	0.3%
Lost control/Drive off road	1	5.9%	9	2.2%	19	1.2%	29	1.5%
Driverless vehicle ran out of control	0	-	0	-	0	-	0	-
Leave stop sign before safe to do so	4	23.5%	4	1.0%	12	0.8%	20	1.0%
Failed to signal	0	-	0	-	0	-	0	-
Take avoiding action	0	-	1	0.2%	7	0.5%	8	0.4%
Driver inexperience	0	-	1	0.2%	5	0.3%	6	0.3%
Pedestrian error/confusion	1	5.9%	0	-	2	0.1%	3	0.2%
NET Speed	0	-	16	3.8%	51	3.4%	67	3.4%
Exceeding speed limit	0	-	0	-	0	-	0	-
Driving too fast for conditions	0	-	15	3.6%	50	3.3%	65	3.3%
Unsafe operating speed (Too fast or too slow)	0	-	1	0.2%	1	<0.1%	2	0.1%
NET Distracted driving	1	5.9%	53	12.7%	199	13.1%	253	12.9%
Careless Driving	1	5.9%	46	11.0%	180	11.8%	227	11.6%
Distraction/Inattention	0	-	9	2.2%	23	1.5%	32	1.6%

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Contributing Factor	2016 Collision Severity						2016 Total	% of 2016 Total
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Human Condition - Apparently Normal	1	5.9%	88	21.1%	341	22.4%	430	22.0%
Any Human Condition	1	5.9%	2	0.5%	2	0.1%	5	0.3%
Loss of consciousness/Blackout prior to collision	0	-	0	-	1	<0.1%	1	<0.1%
Extreme fatigue/Fell asleep	0	-	2	0.5%	1	<0.1%	3	0.2%
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%	0	-	0	-	1	<0.1%
Ability impaired alcohol	1	5.9%	0	-	0	-	1	<0.1%
Ability impaired drugs	0	-	0	-	0	-	0	-
Had been drinking/Suspected alcohol use	0	-	0	-	0	-	0	-
No apparent (vehicle) defect	6	35.3%	253	60.7%	1,003	65.9%	1,262	64.6%
Any Vehicle Defect	1	5.9%	2	0.5%	27	1.8%	30	1.5%
Defective brakes	0	-	1	0.2%	1	<0.1%	2	0.1%
Defective steering	0	-	0	-	0	-	0	-
Defective headlights	0	-	0	-	0	-	0	-
Defective brakelights	1	5.9%	0	-	0	-	1	<0.1%
Defective lighting (unspecified)	1	5.9%	0	-	0	-	1	<0.1%
Defective engine controls/drive train	0	-	0	-	2	0.1%	2	0.1%
Defective suspension/wheels	0	-	0	-	2	0.1%	2	0.1%
Defective tires	0	-	0	-	7	0.5%	7	0.4%
Tow hitch/yoke defective	0	-	0	-	0	-	0	-
Defective exhaust system	0	-	0	-	0	-	0	-
Hood/tailgate/door/covering opened	0	-	0	-	2	0.1%	2	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	-	3	0.2%	3	0.2%

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Contributing Factor	2016 Collision Severity						2016 Total	% of 2016 Total
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Load shifted/spilled	0	-	0	-	1	<0.1%	1	<0.1%
Jack-knife/trailer swing	0	-	0	-	8	0.5%	8	0.4%
Hydroplaning tires	0	-	1	0.2%	1	<0.1%	2	0.1%
Any Environmental Condition	2	11.8%	22	5.3%	101	6.6%	125	6.4%
Animal action - Wild	0	-	2	0.5%	48	3.2%	50	2.6%
Animal action - Domestic	0	-	0	-	0	-	0	-
Slippery road surface	2	11.8%	13	3.1%	23	1.5%	38	1.9%
Snow drift	0	-	0	-	1	<0.1%	1	<0.1%
Obstruction/debris on roadway	0	-	0	-	9	0.6%	9	0.5%
View obstructed/limited	0	-	2	0.5%	4	0.3%	6	0.3%
Glare/reflection	0	-	1	0.2%	2	0.1%	3	0.2%
Construction zone	0	-	0	-	1	<0.1%	1	<0.1%
Defective driving surface	0	-	0	-	7	0.5%	7	0.4%
Shoulders defective	0	-	0	-	1	<0.1%	1	<0.1%
Lane markings inadequate	0	-	0	-	0	-	0	-
Defective/inoperative traffic control device	0	-	0	-	0	-	0	-
Weather	0	-	3	0.7%	6	0.4%	9	0.5%
Pedestrian corridor in use	0	-	0	-	0	-	0	-
Uninvolved vehicle	0	-	1	0.2%	2	0.1%	3	0.2%
Uninvolved pedestrian	0	-	0	-	0	-	0	-
Presence of prior accident	0	-	0	-	0	-	0	-
No Contributing Factor(s) Identified	0	-	55	13.2%	124	8.2%	179	9.2%
Not Applicable/Not Stated	0	-	1	0.2%	5	0.3%	6	0.3%
<b>Total</b>	<b>17</b>	<b>100.0%</b>	<b>417</b>	<b>100.0%</b>	<b>1,521</b>	<b>100%</b>	<b>1,955</b>	<b>100.0%</b>

\*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: 2011-2015 Average

Contributing Factor	2011-2015 Average Count of Vehicles				
	Fatal	Injury	PDO	Total Vehicles	% of Total Vehicles
Driver Action - Driving Properly and Human Condition - Apparently Normal	9	192	682	883	38.7%
Driver Action - Driving properly	<1	10	48	59	2.6%
Any Driver Action	6	123	471	600	26.3%
Follow too closely	<1	39	75	114	5.0%
Turning improperly	<1	9	48	57	2.5%
Passing improperly	<1	2	7	9	0.4%
Changing lanes improperly	-	7	43	50	2.2%
Fail to yield right of way	<1	15	33	48	2.1%
Disobey traffic control device/officer	<1	4	9	13	0.6%
Drive wrong way on roadway	<1	<1	<1	1	<0.1%
Passing a vehicle at pedestrian X-walk	-	-	-	-	-
Back unsafely	-	5	101	106	4.7%
Parking improperly	-	<1	3	3	0.1%
Lost control/Drive off road	1	8	22	31	1.4%
Driverless vehicle ran out of control	-	-	<1	<1	<0.1%
Leave stop sign before safe to do so	<1	5	9	15	0.6%
Failed to signal	-	-	<1	<1	<0.1%
Take avoiding action	<1	2	11	14	0.6%
Driver inexperience	<1	<1	5	6	0.2%
Pedestrian error/confusion	<1	-	<1	1	<0.1%
NET Speed	2	14	43	58	2.6%
Exceeding speed limit	<1	<1	<1	1	<0.1%
Driving too fast for conditions	1	11	39	51	2.3%
Unsafe operating speed (Too fast or too slow)	<1	3	3	6	0.3%
NET Distracted driving	2	28	123	153	6.7%
Careless Driving	1	22	100	123	5.4%
Distraction/Inattention	<1	6	25	31	1.4%
Human Condition - Apparently Normal	3	48	197	248	10.9%
Any Human Condition	1	8	24	33	1.5%
Loss of consciousness/Blackout prior to collision	-	1	<1	2	<0.1%
Extreme fatigue/Fell asleep	-	1	1	3	0.1%
Defective eyesight	-	-	-	-	-
Defective hearing	-	-	-	-	-
Medical disability	-	<1	<1	<1	<0.1%
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	3	5	0.2%
Ability impaired alcohol	<1	<1	2	3	0.1%
Ability impaired drugs	-	-	<1	<1	<0.1%
Had been drinking/Suspected alcohol use	<1	<1	<1	1	<0.1%

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## Section 10

## NSC Monitoring Report

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Contributing Factor	2011-2015 Average Count of Vehicles				
	Fatal	Injury	PDO	Total Vehicles	% of Total Vehicles
No apparent (vehicle) defect	12	227	787	1,026	45.0%
Any Vehicle Defect	<1	4	30	34	1.5%
Defective brakes	<1	<1	2	3	0.1%
Defective steering	-	<1	<1	<1	<0.1%
Defective headlights	-	-	-	-	-
Defective brakelights	-	-	<1	<1	<0.1%
Defective lighting (unspecified)	-	<1	-	<1	<0.1%
Defective engine controls/drive train	-	<1	<1	<1	<0.1%
Defective suspension/wheels	-	-	2	2	<0.1%
Defective tires	-	<1	5	6	0.3%
Tow hitch/yoke defective	-	-	3	3	0.1%
Defective exhaust system	-	-	<1	<1	<0.1%
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	5	7	0.3%
Jack-knife/trailer swing	<1	<1	9	10	0.4%
Hydroplaning tires	-	-	<1	<1	<0.1%
Any Environmental Condition	1	22	189	213	9.3%
Animal action - Wild	-	2	113	116	5.1%
Animal action - Domestic	-	<1	4	4	0.2%
Slippery road surface	<1	13	41	55	2.4%
Snow drift	-	<1	5	5	0.2%
Obstruction/debris on roadway	-	<1	6	6	0.3%
View obstructed/limited	<1	2	9	11	0.5%
Glare/reflection	-	<1	1	2	<0.1%
Construction zone	-	-	1	1	<0.1%
Defective driving surface	-	1	3	4	0.2%
Shoulders defective	-	<1	<1	1	<0.1%
Lane markings inadequate	-	-	<1	<1	<0.1%
Defective/inoperative traffic control device	<1	<1	-	<1	<0.1%
Weather	<1	3	11	14	0.6%
Pedestrian corridor in use	-	<1	<1	<1	<0.1%
Uninvolved vehicle	-	<1	2	3	0.1%
Uninvolved pedestrian	-	-	<1	<1	<0.1%
Presence of prior accident	-	<1	<1	<1	<0.1%
No Contributing Factor(s) Identified	<1	124	350	475	20.8%
Not Applicable/Not Stated	-	<1	1	1	<0.1%
Total	18	479	1,783	2,281	100%

Note: Counts of vehicles in the 2011-2015 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 2016, seven in ten drivers of NSC vehicles involved in a collision are noted as driving properly and being in a normal human condition, including 48% as both "driving properly" and "apparently normal", 1% as "driving properly" and 22% as "apparently normal" human condition. Over the previous five year (2011 to 2015) annual average, half (52%) of commercial drivers involved in collisions are noted as driving properly and being in a normal human condition.

A driver action is recorded for 34% of the drivers of NSC commercial vehicles involved in traffic collisions in 2016, an increase from the previous five year (2011 to 2015) annual average (26%). Specific driver actions noted most often as contributing factors for drivers of NSC commercial vehicles involved a traffic collision in 2016 include:

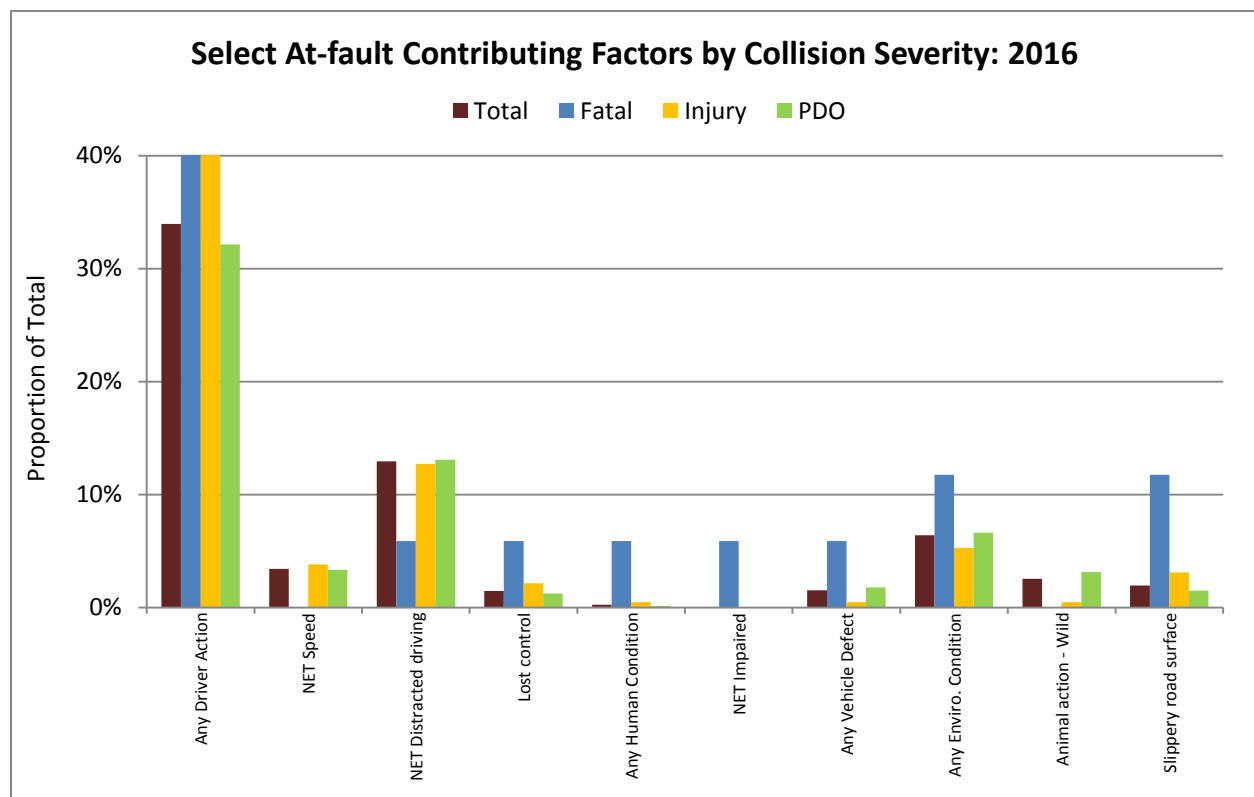
- Distracted driving (including “careless driving” and “distraction/inattention”) – 13%;
- “Back unsafely” – nearly 7%;
- “Following too closely” – 6%;
- Speed (including “exceeding speed limit” “driving too fast for conditions” and “unsafe operating speed (too fast or too slow)”) – 3%;
- “Change lanes improperly” – 3%;
- “Turning improperly” – 3%;
- “Fail to yield right of way” – 2%; and,
- “Lost control/drive off road” – nearly 2%.

Human conditions are not often noted for commercial vehicle drivers. In 2016, one driver is noted as being “impaired by alcohol”, one is noted as experiencing “loss of consciousness/blackout prior to collision”, and three are 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 nearly 2% of the commercial vehicles involved in a traffic collision in 2016. This is consistent with the previous five year (2011 to 2015) annual average.

Environmental conditions are recorded as a contributing factor for 6% of the commercial vehicles involved in traffic collisions in 2016 (down from 2011 to 2015 annual average of 9%). The two most common environmental conditions recorded for commercial vehicles involved in a traffic collision in 2016 are “the action of a wild animal” (3%) 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: 2011 to 2016

Vehicle Category	2011 Total	% of 2011 Total	2012 Total	% of 2012 Total	2013 Total	% of 2013 Total	2014 Total	% of 2014 Total	2015 Total	% of 2015 Total	<b>2016 Total</b>	<b>% of 2016 Total</b>
Truck >4,500 kgs Unit Chassis	721	17.4%	932	55.6%	1,097	57.4%	1,082	57.0%	1,026	57.7%	<b>1,100</b>	<b>56.3%</b>
Power Unit (Semi-Trailer)	546	13.2%	419	25.0%	471	24.7%	500	26.4%	415	23.4%	<b>496</b>	<b>25.4%</b>
Truck - Other	2,654	64.0%	88	5.3%	95	5.0%	80	4.2%	76	4.3%	<b>112</b>	<b>5.7%</b>
School Bus	44	1.1%	0	-	1	<0.1%	1	<0.1%	10	0.6%	<b>52</b>	<b>2.7%</b>
Transit Bus - Urban	90	2.2%	101	6.0%	102	5.3%	98	5.2%	110	6.2%	<b>102</b>	<b>5.2%</b>
Para-Transit Bus	8	0.2%	8	0.5%	6	0.3%	5	0.3%	13	0.7%	<b>10</b>	<b>0.5%</b>
Inter-City Bus	23	0.6%	8	0.5%	7	0.4%	10	0.5%	7	0.4%	<b>12</b>	<b>0.6%</b>
Bus - Other	58	1.4%	120	7.2%	131	6.9%	121	6.4%	120	6.8%	<b>71</b>	<b>3.6%</b>
<b>Total</b>	<b>4,144</b>	<b>100%</b>	<b>1,676</b>	<b>100%</b>	<b>1,910</b>	<b>100%</b>	<b>1,897</b>	<b>100%</b>	<b>1,777</b>	<b>100%</b>	<b>1,955</b>	<b>100%</b>

**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: 2011 to 2016

Vehicle Category	2011 Total	% of 2011 Total	2012 Total	% of 2012 Total	2013 Total	% of 2013 Total	2014 Total	% of 2014 Total	2015 Total	% of 2015 Total	<b>2016 Total</b>	<b>% of 2016 Total</b>
Truck >4,500 kgs Unit Chassis	147	14.0%	196	42.7%	265	49.4%	260	48.6%	232	41.7%	<b>251</b>	<b>45.4%</b>
Power Unit (Semi-Trailer)	113	10.8%	155	33.8%	143	26.7%	162	30.3%	148	26.6%	<b>163</b>	<b>29.5%</b>
Truck - Other	702	67.0%	22	4.8%	33	6.2%	35	6.5%	37	6.6%	<b>42</b>	<b>7.6%</b>
School Bus	17	1.6%	0	-	5	0.9%	1	0.2%	14	2.5%	<b>19</b>	<b>3.4%</b>
Transit Bus - Urban	41	3.9%	55	12.0%	46	8.6%	38	7.1%	58	10.4%	<b>50</b>	<b>9.0%</b>
Para-Transit Bus	2	0.2%	5	1.1%	2	0.4%	1	0.2%	4	0.7%	<b>6</b>	<b>1.1%</b>
Inter-City Bus	13	1.2%	3	0.7%	2	0.4%	1	0.2%	4	0.7%	<b>3</b>	<b>0.5%</b>
Bus - Other	12	1.1%	23	5.0%	40	7.5%	37	6.9%	60	10.8%	<b>19</b>	<b>3.4%</b>
<b>Total</b>	<b>1,047</b>	<b>100%</b>	<b>459</b>	<b>100%</b>	<b>536</b>	<b>100%</b>	<b>535</b>	<b>100%</b>	<b>557</b>	<b>100%</b>	<b>553</b>	<b>100%</b>

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 five year period 2012 to 2016 is presented. Details are provided for 2016 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 2016, there are 268 off-road vehicle collisions, involving 94 victims, 297 vehicles and 295 drivers. Of these:

- 18 are fatal collisions, involving 19 vehicles and 19 drivers, resulting in 20 people killed and 1 person injured;
- 66 are injury collisions, involving 77 vehicles and 76 drivers, resulting in 73 people injured; and,
- 184 are PDO collisions, involving 201 vehicles and 200 drivers.

In 2016, ORV collisions occur most often:

- During the months of December, January, February and March, representing 150 of 268 collisions (56%).
- On weekends (Friday, Saturday and Sunday), representing 177 of 268 (66%) collisions.
- During daylight, representing 164 of 268 (61%) collisions.
- In the Eastern Region of Manitoba, representing 140 of 268 (52%) collisions.
- With drivers under the age of 45, 186 of 279 drivers (where age is known) involved in ORV collisions (67%).

Notwithstanding the overall collision trends, **fatal** ORV collisions in 2016 occur most often:

- On weekends (Friday, Saturday and Sunday), representing 10 of 18 fatal collisions (56%).
- Between noon and midnight, 11 of 18 fatal collisions (61%).
- On public roadway, accounting for 9 of 18 fatal collisions (50%).

### Major Elements Examined

Counts of off-road vehicle (ORV) collisions in Manitoba for 2016 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 2016. The remainder of this section explores ORV collisions occurring in 2016 and provides average counts of collisions for the time period of 2012 to 2015 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, other types of vehicles, and driverless vehicles. 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 2015. 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 2016

	2012	2013	2014	2015	2016	2012-2015 Average
Total Collisions	409	391	295	269	<b>268</b>	341
Fatal	9	13	11	7	<b>18</b>	10
Injury	87	59	49	53	<b>66</b>	62
PDO	313	319	235	209	<b>184</b>	269
Total Victims	108	76	69	67	<b>94</b>	80
Killed	10	13	14	7	<b>20</b>	11
Injured	98	63	55	60	<b>74</b>	69
Total Vehicles Involved	439	424	327	303	<b>297</b>	373
Fatal	10	14	16	8	<b>19</b>	12
Injury	91	63	57	63	<b>77</b>	69
PDO	338	347	254	232	<b>201</b>	293
Total Drivers Involved	439	422	325	300	<b>295</b>	372
Fatal	10	14	16	8	<b>19</b>	12
Injury	91	63	57	63	<b>76</b>	69
PDO	338	345	252	229	<b>200</b>	291

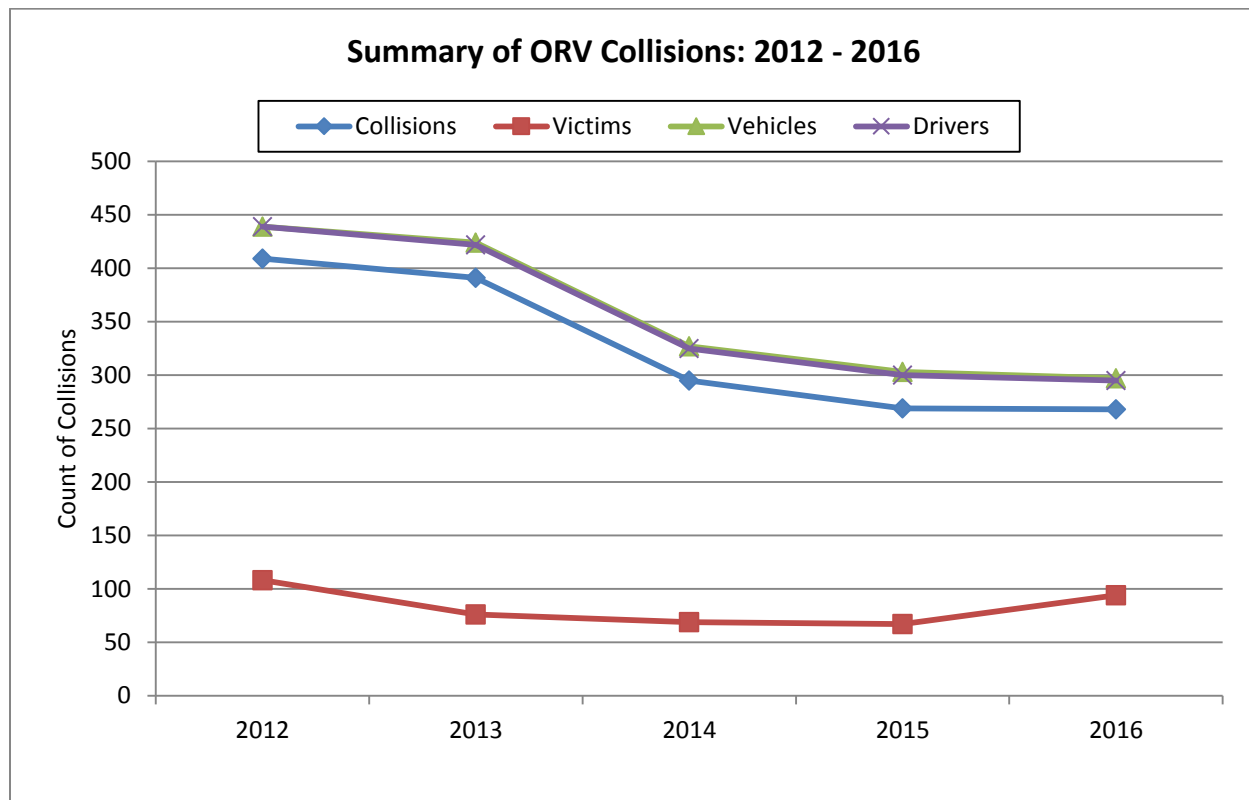
In 2016, there are 268 off-road vehicle collisions, involving 94 victims, 297 vehicles and 295 drivers. Of these:

- 18 are fatal collisions, involving 19 vehicles and 19 drivers, resulting in 20 people killed and 1 injured;
- 66 are injury collisions, involving 77 vehicles and 76 drivers, resulting in 73 people injured; and,
- 184 are PDO collisions, involving 201 vehicles and 200 drivers.

Total ORV collisions in 2016 is 1 count less than 2015 and 21% lower than the average number of collisions in the previous four year (2012 to 2015) period. Compared to the previous four years, in 2016:

- ORV collision victims are up nearly 18%;
- The number of people killed increased by 82%;
- The number of vehicles involved decreased by 20%; and,
- The number of drivers involved decreased by 21%.

Figure 11-1 Historical Summary of ORV Collisions



The number of ORV collisions and the number of vehicles and drivers involved in those collisions have decreased slightly in 2016. However, the number of victims has increased.

## Section 11

## Off-Road Vehicle Collisions

**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: 2016, 2012-2015 Average

	2016					2012-2015 Average					% Change 2016 to 2012-2015 Average				
	Snowmobile	ATV	Motorcycle	Other*	Total	Snowmobile	ATV	Motorcycle	Other*	Total	Snowmobile	ATV	Motorcycle	Other*	Total
Total Victims	36	54	0	4	<b>94</b>	35	38	3	5	80	2.1%	44.0%	-100.0%	-15.8%	17.5%
Killed	8	11	0	1	<b>20</b>	4	6	<1	<1	11	100.0%	76.0%	-100.0%	300.0%	81.8%
Injured	28	43	0	3	<b>74</b>	31	31	2	5	69	-10.4%	37.6%	-100.0%	-33.3%	7.2%
Total Vehicles Involved	139	117	0	41	<b>297</b>	177	155	3	40	373	-21.2%	-24.3%	-100.0%	3.1%	-20.4%
Fatal	8	10	0	1	<b>19</b>	4	6	<1	1	12	100.0%	60.0%	-100.0%	-20.0%	58.3%
Injury	27	41	0	9	<b>77</b>	32	28	2	7	69	-15.6%	46.4%	-100.0%	33.3%	12.4%
PDO	104	66	0	31	<b>201</b>	141	120	<1	32	293	-26.0%	-45.1%	-100.0%	-2.4%	-31.3%
Total Drivers Involved	139	115	0	41	<b>295</b>	176	154	3	39	372	-21.1%	-25.2%	-100.0%	5.1%	-20.6%
Fatal	8	10	0	1	<b>19</b>	4	6	<1	1	12	100.0%	60.0%	-100.0%	-20.0%	58.3%
Injury	27	40	0	9	<b>76</b>	32	28	2	7	69	-15.6%	42.9%	-100.0%	33.3%	10.9%
PDO	104	65	0	31	<b>200</b>	140	120	<1	31	291	-25.8%	-45.6%	-100.0%	0.0%	-31.3%

\* '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 2016, a total of 297 vehicles were involved in off-road collisions, including:

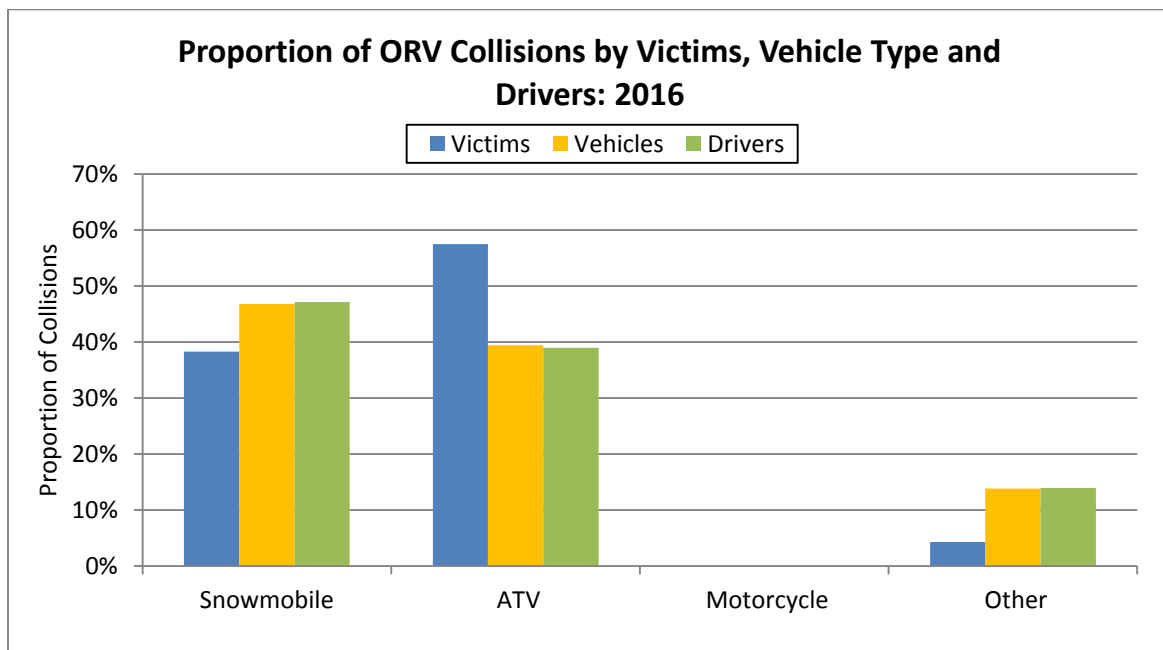
- 139 snowmobiles and snowmobile drivers, resulting in 36 victims including 8 people killed;
- 117 ATVs and 115 ATV drivers, resulting in 54 victims including 11 people killed;
- 0 motorcycle and motorcycle driver involvement; and,
- 41 'Other' vehicles and 41 drivers of those vehicles, resulting in 4 victims and 1 person killed.

Compared to the previous four year (2012 to 2015) annual average, in 2016:

- Total vehicles and total drivers involved in snowmobile collisions are both down by 21%. However, victim counts are up by 2%; the number of people killed in snowmobile collisions has doubled (from a count of 4 to a count of 8).
- Total vehicles and total drivers involved in ATV collisions are down by 24% and 25%, respectively. However, victims are up by 44%; the number of people killed and injured in ATV collisions increased by 76% and 38%, respectively.
- There were no motorcycle collisions recorded in 2016.
- 'Other' vehicle collisions are similar to the previous four 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 2016, 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: 2016, 2012-2015 Average

Month	2016 Collision Severity						2016 Total	% of 2016 Total	2012-2015 Average	% Change 2016 to 2012-2015 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
January	1	5.6%	9	13.6%	30	16.3%	40	14.9%	45	-11.1%
February	0	-	12	18.2%	29	15.8%	41	15.3%	52	-21.2%
March	1	5.6%	5	7.6%	26	14.1%	32	11.9%	52	-38.2%
April	2	11.1%	1	1.5%	6	3.3%	9	3.4%	27	-66.0%
May	2	11.1%	7	10.6%	11	6.0%	20	7.5%	21	-5.9%
June	1	5.6%	3	4.5%	6	3.3%	10	3.7%	19	-48.1%
July	2	11.1%	12	18.2%	9	4.9%	23	8.6%	20	13.6%
August	0	-	5	7.6%	11	6.0%	16	6.0%	19	-13.5%
September	1	5.6%	8	12.1%	15	8.2%	24	9.0%	20	23.1%
October	2	11.1%	1	1.5%	5	2.7%	8	3.0%	17	-52.9%
November	1	5.6%	2	3.0%	5	2.7%	8	3.0%	19	-57.3%
December	5	27.8%	1	1.5%	31	16.8%	37	13.8%	31	18.4%
Total	18	100%	66	100%	184	100%	268	100%	341	-21.4%

The majority of ORV collisions in 2016 occur in December, January, February and March. When combined, these four months account for 56% of ORV collisions.

The 2016 proportional distribution of ORV collisions by month is similar to the previous four year (2012 to 2015) annual average.

- Winter (December/January/February) – 44% in 2016; 38% in the previous four years.
- Spring (March/April/May) – 23% in 2016; 29% in the previous four years.
- Summer (June/July/August) – 18% in 2016; 17% in the previous four years.
- Fall (September/October/November) – 15% in 2016; 16% in the previous four years.

In 2016, December has the largest proportion of fatal ORV collisions – a count of 5.

Injury ORV collisions fluctuate throughout the year in 2016.

NOTE: For a detailed count of ORV collisions by month of occurrence in each year from 2012 to 2016, 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**

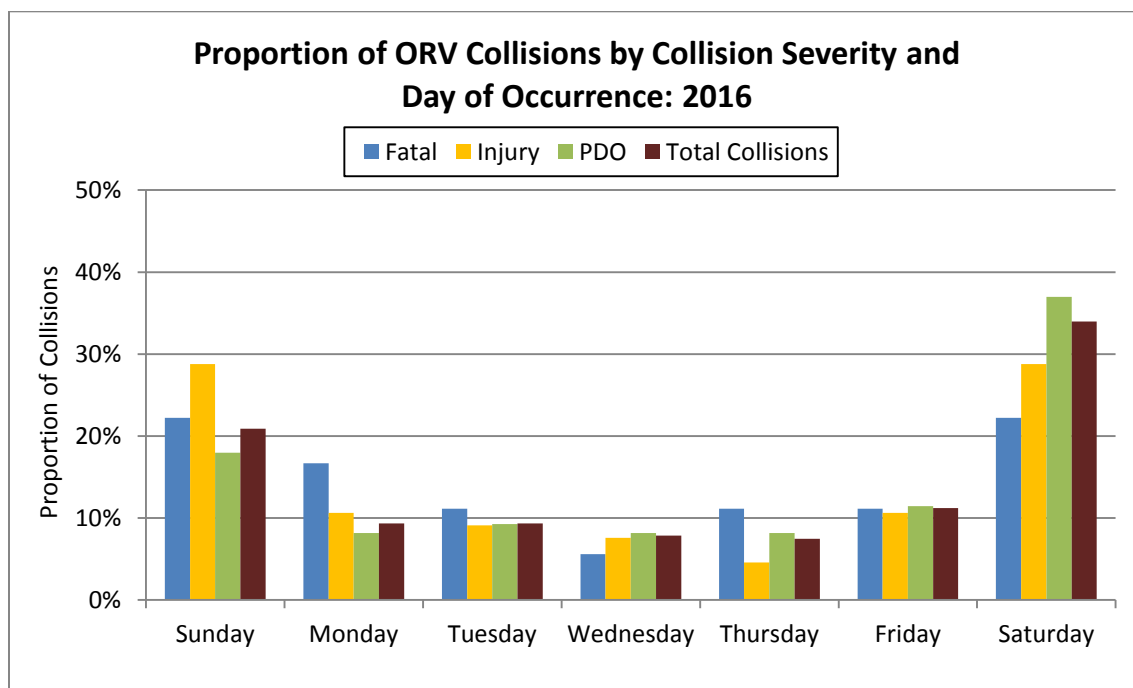
Table 11-4  
 ORV Collisions by Day of Occurrence and Collision Severity: 2016, 2012-2015 Average

Day	2016 Collision Severity						2016 Total	% of 2016 Total	2012-2015 Average	% Change 2016 to 2012-2015 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
Sunday	4	22.2%	19	28.8%	33	17.9%	56	20.9%	76	-26.6%
Monday	3	16.7%	7	10.6%	15	8.2%	25	9.3%	27	-5.7%
Tuesday	2	11.1%	6	9.1%	17	9.2%	25	9.3%	23	8.7%
Wednesday	1	5.6%	5	7.6%	15	8.2%	21	7.8%	23	-8.7%
Thursday	2	11.1%	3	4.5%	15	8.2%	20	7.5%	25	-18.4%
Friday	2	11.1%	7	10.6%	21	11.4%	30	11.2%	39	-23.1%
Saturday	4	22.2%	19	28.8%	68	37.0%	91	34.0%	129	-29.3%
Total	18	100%	66	100%	184	100%	268	100%	341	-21.4%

The majority of ORV collisions happen on weekends (Friday, Saturday and Sunday). In 2016, 66% of ORV collisions occurred on Friday (11%), Saturday (34%) and Sunday (21%). Monday through Thursday account for 34% of ORV collisions.

In 2016, 10 of 18 of all fatal ORV collisions (56%) 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: 2016, 2012-2015 Average

Time	2016 Collision Severity						2016 Total	% of 2016 Total	2012-2015 Average	% Change 2016 to 2012-2015 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
00:00 - 02:59	2	11.1%	2	3.0%	3	1.6%	7	2.6%	7	0.0%
03:00 - 05:59	0	-	0	-	0	-	0	-	3	-100.0%
06:00 - 08:59	0	-	2	3.0%	3	1.6%	5	1.9%	4	33.3%
09:00 - 11:59	2	11.1%	6	9.1%	21	11.4%	29	10.8%	36	-18.9%
12:00 - 14:59	4	22.2%	15	22.7%	60	32.6%	79	29.5%	100	-21.0%
15:00 - 17:59	3	16.7%	19	28.8%	59	32.1%	81	30.2%	98	-16.9%
18:00 - 20:59	2	11.1%	18	27.3%	27	14.7%	47	17.5%	65	-27.1%
21:00 - 23:59	2	11.1%	4	6.1%	11	6.0%	17	6.3%	29	-41.9%
Not Stated	3	16.7%	0	-	0	-	3	1.1%	<1	500.0%
Total	18	100%	66	100%	184	100%	268	100%	341	-21.4%

The majority of off-road collisions occur in the afternoon and evening. In 2016, 84% of all ORV vehicle collisions occurred between noon and midnight (12:00 to 14:59 – nearly 30%; 15:00 to 17:59 – 30%; 18:00 to 20:59 – nearly 18%; 21:00 to 23:59 – 6%).

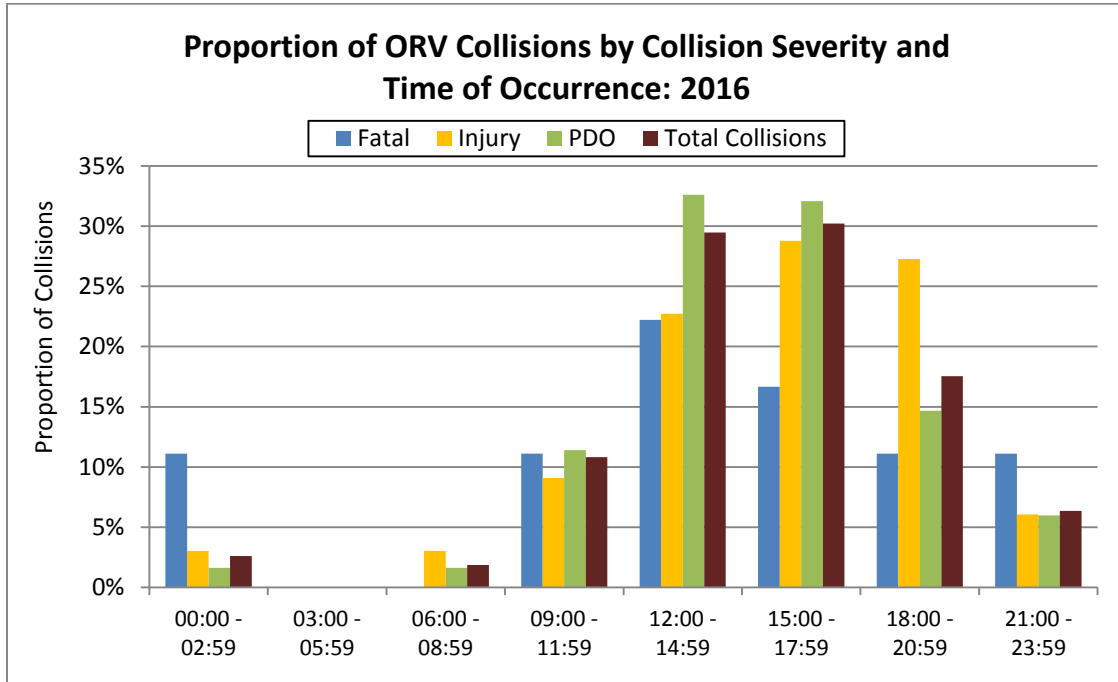
The proportional distribution of ORV collisions by time of day in 2016 is similar to the previous four year (2012 to 2015) annual average.

- Morning (06:00 to 11:59) – 13% in 2016; 12% in the previous four years.
- Afternoon (12:00 to 17:59) – 60% in 2016; 58% in the previous four years.
- Evening (18:00 to 20:59) – nearly 18% in 2016; 19% in the previous four years.
- Overnight (21:00 to 05:59) – 9% in 2016; 11% in the previous four years.

In 2016, the majority of fatal ORV collisions occurred between noon and midnight (11 of 18 fatal collisions).

In 2016, 34 of 66 injury ORV collisions occurred between noon and 6 p.m. and 22 of 66 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 2016, the majority of all ORV collisions occurred between noon and midnight (84%), while 11% 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: 2016, 2012-2015 Average

Light Condition	2016 Collision Severity						2016 Total	% of 2016 Total	2012-2015 Average	% Change 2016 to 2012-2015 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
Day	7	38.9%	45	68.2%	112	60.9%	164	61.2%	215	-23.5%
Dawn	0	-	0	-	0	-	0	-	2	-100.0%
Dusk	4	22.2%	3	4.5%	13	7.1%	20	7.5%	17	17.6%
Dark	3	16.7%	8	12.1%	23	12.5%	34	12.7%	49	-30.6%
Artificial Light	0	-	0	-	1	0.5%	1	0.4%	2	-42.9%
Not Stated	4	22.2%	10	15.2%	35	19.0%	49	18.3%	57	-13.7%
Total	18	100%	66	100%	184	100%	268	100%	341	-21.4%

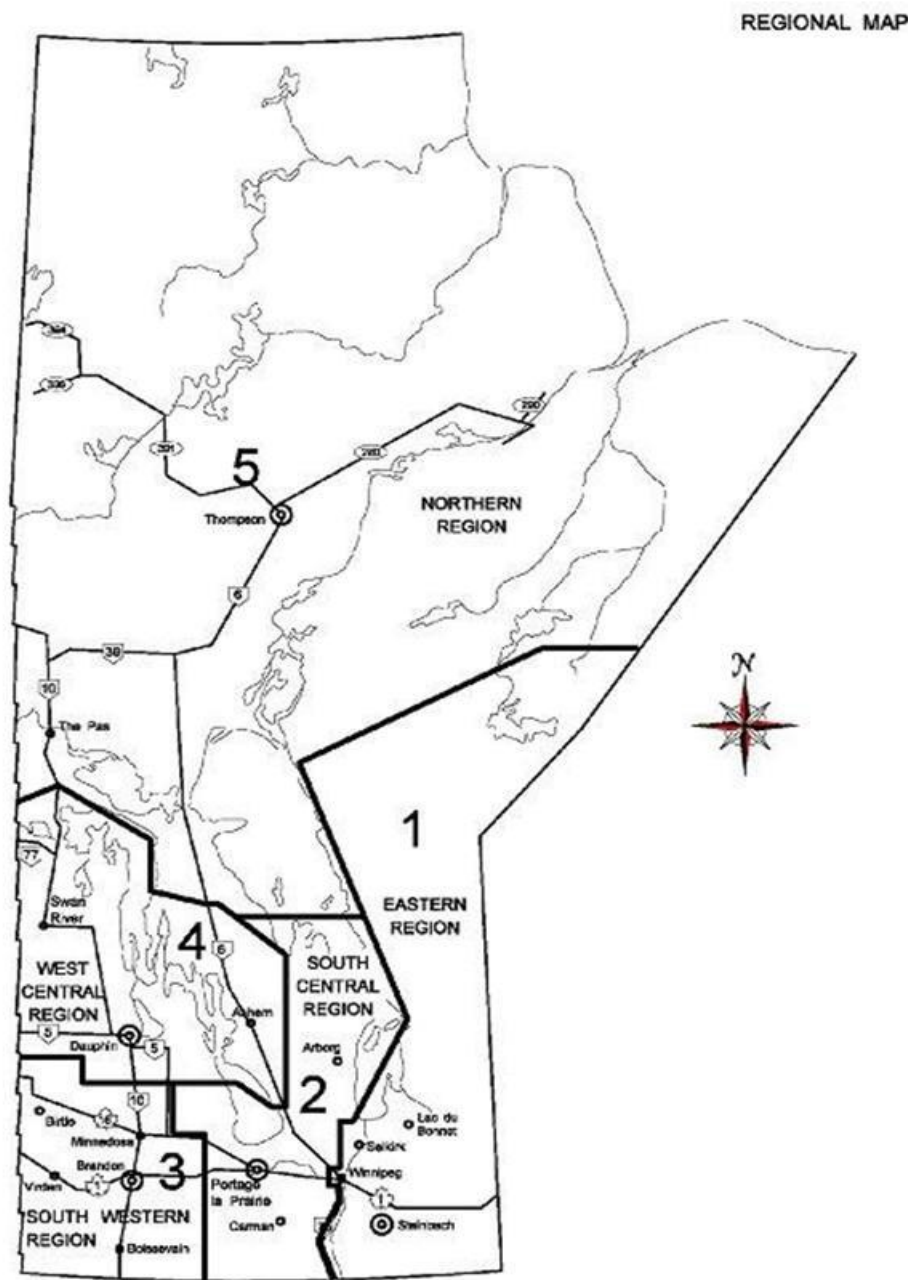
The majority of ORV collisions occur during daylight conditions, from a half hour after sunrise to a half hour before sunset. In 2016, daylight conditions account for 61% of ORV collisions. An additional 13% occurred during darkness.

**Table 11-7 ORV Collisions by Weather Condition and Collision Severity**Table 11-7  
ORV Collisions by Weather Condition and Collision Severity: 2016, 2012-2015 Average

Weather Condition	2016 Collision Severity						2016 Total	% of 2016 Total	2012-2015 Average	% Change 2016 to 2012-2015 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
Clear	9	50.0%	38	57.6%	104	56.5%	151	56.3%	207	-27.1%
Cloudy	2	11.1%	12	18.2%	21	11.4%	35	13.1%	35	0.0%
Raining	0	-	2	3.0%	2	1.1%	4	1.5%	5	-23.8%
Snowing	0	-	1	1.5%	10	5.4%	11	4.1%	13	-12.0%
Fog/Mist	0	-	1	1.5%	3	1.6%	4	1.5%	3	23.1%
Smoke/Dust	0	-	0	-	1	0.5%	1	0.4%	<1	33.3%
Freezing Rain/Sleet/Hail	1	5.6%	0	-	0	-	1	0.4%	<1	300.0%
Drifting Snow	0	-	2	3.0%	1	0.5%	3	1.1%	5	-40.0%
Strong Winds	0	-	0	-	0	-	0	-	3	-100.0%
Not Stated	6	33.3%	10	15.2%	42	22.8%	58	21.6%	70	-16.5%
Total	18	100%	66	100%	184	100%	268	100%	341	-21.4%

The majority of ORV collisions occur when weather conditions are clear. In 2016, 56% 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.<sup>3</sup> Off-road vehicle collisions are reported by location within these regions.

<sup>3</sup> 2015/2016 Annual Report for Manitoba Infrastructure and Transportation:  
[http://www.gov.mb.ca/mit/reports/annual/2015\\_2016\\_annual.pdf](http://www.gov.mb.ca/mit/reports/annual/2015_2016_annual.pdf)

**Table 11-8 ORV Collisions by MIT Regions and Collision Severity**

Table 11-8  
ORV Collisions by MIT Regions and Collision Severity: 2016, 2012-2015 Average

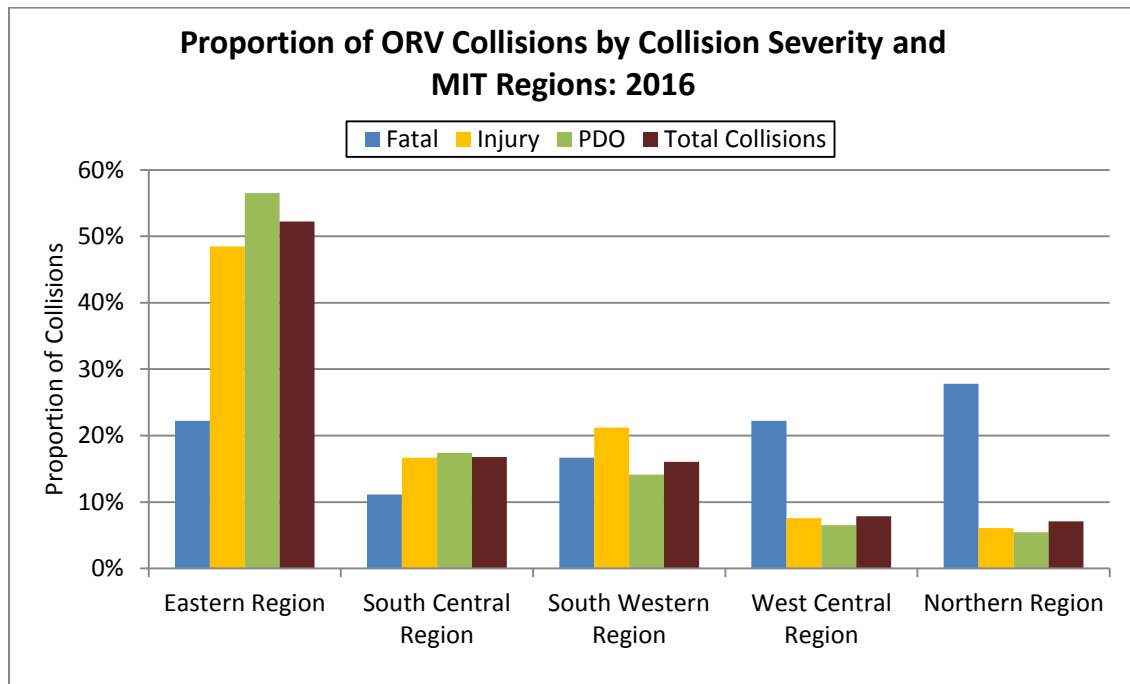
Region	2016 Collision Severity						2016 Total	% of 2016 Total	2012-2015 Average	% Change 2016 to 2012-2015 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
Eastern Region	4	22.2%	32	48.5%	104	56.5%	140	52.2%	172	-18.7%
South Central Region	2	11.1%	11	16.7%	32	17.4%	45	16.8%	70	-35.9%
South Western Region	3	16.7%	14	21.2%	26	14.1%	43	16.0%	45	-3.9%
West Central Region	4	22.2%	5	7.6%	12	6.5%	21	7.8%	33	-35.4%
Northern Region	5	27.8%	4	6.1%	10	5.4%	19	7.1%	21	-10.6%
Total	18	100%	66	100%	184	100%	268	100%	341	-21.4%

The Eastern Region of Manitoba historically accounts for a large share of off-road vehicle accidents. In 2016, 52% of ORV collisions occurred in the Eastern Region. The South Central Region follows with 17%, while the South Western Region accounts for 16% of the total collisions.

The overall count of ORV collisions in 2016 is down across all regions in Manitoba (compared to the 2012 to 2015 annual average). The proportional distribution of collisions by region in 2016 is similar to the previous four year annual average.

- Eastern Region – 52% of ORV collisions in 2016; nearly 51% in previous four years.
- South Central Region – 17% of ORV collisions in 2016; 21% in previous four years.
- South Western Region – 16% of ORV collisions in 2016; 13% in previous four years.
- West Central Region – 8% of ORV collisions in 2016; nearly 10% in previous four years.
- Northern Region – 7% of ORV collisions in 2016; 6% in previous four years.

**Figure 11-5 Proportion of ORV Collisions by Collision Severity and MIT Regions**



Fatal ORV collisions in 2016 occur most often in the Northern Region of Manitoba (5 of 18 fatal collisions), followed by the Eastern and West Central Regions (4 of 18 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: 2016, 2012-2015 Average

Location	2016 Collision Severity						2016 Total	% of 2016 Total	2012-2015 Average	% Change 2016 to 2012-2015 Average
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO				
Public Roadway	9	50.0%	17	25.8%	22	12.0%	48	17.9%	57	-16.2%
Ditches	0	-	6	9.1%	19	10.3%	25	9.3%	29	-12.3%
River/Lake	5	27.8%	5	7.6%	8	4.3%	18	6.7%	32	-44.2%
Field	0	-	5	7.6%	15	8.2%	20	7.5%	15	35.6%
Farm Yard/Private Property	3	16.7%	1	1.5%	21	11.4%	25	9.3%	46	-45.9%
Parking Lot	0	-	1	1.5%	0	-	1	0.4%	2	-42.9%
Embankment	0	-	1	1.5%	4	2.2%	5	1.9%	2	185.7%
Gravel Road	0	-	3	4.5%	2	1.1%	5	1.9%	7	-23.1%
Trail*	0	-	18	27.3%	58	31.5%	76	28.4%	81	-6.5%
Other**	1	5.6%	9	13.6%	31	16.8%	41	15.3%	65	-36.7%
Not Stated	0	-	0	-	4	2.2%	4	1.5%	6	-33.3%
Total	18	100%	66	100%	184	100%	268	100%	341	-21.4%

\*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 2016, “trail” was the most common location for ORV collisions (28% of total) followed by “public roadway” (18%).

The proportion of ORV collisions happening at specific locations in 2016 is similar to the previous four year (2012 to 2015) annual average.

- “Trail” – 28% in 2016; 24% in the previous four years.
- “Public Roadway” – 18% in 2016; 17% in the previous four years.
- “Other” – 15% in 2016; 19% in the previous four years.
- “Farm Yard/Private Property” – 9% in 2016; 14% in the previous four years.
- “Ditches” – 9% in 2016; 8% in the previous four years.

NOTE: For a detailed count of ORV collisions by location in each year from 2012 to 2016, 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: 2016, 2012-2015 Average

Age Group	2016 Casualty Type				2016 Total Victims	% of 2016 Total Victims	2012-2015 Average			
	Killed	% of Total Killed	Injured	% of Total Injured			Killed	Injured	Total Victims	% of Total Victims
0-4	0	-	0	-	0	-	0	<1	<1	0.3%
5-9	0	-	1	1.4%	1	1.1%	0	<1	<1	0.3%
10-14	2	10.0%	0	-	2	2.1%	<1	<1	2	1.9%
15-19	0	-	6	8.1%	6	6.4%	1	6	7	9.1%
20-24	1	5.0%	3	4.1%	4	4.3%	2	9	10	12.8%
25-34	3	15.0%	17	23.0%	20	21.3%	3	12	15	18.4%
35-44	2	10.0%	20	27.0%	22	23.4%	<1	16	17	20.9%
45-54	6	30.0%	13	17.6%	19	20.2%	2	12	14	16.9%
55-64	2	10.0%	8	10.8%	10	10.6%	2	5	7	9.1%
65+	4	20.0%	1	1.4%	5	5.3%	0	2	2	2.5%
Not Stated	0	-	5	6.8%	5	5.3%	<1	6	6	7.8%
Total	20	100%	74	100%	94	100%	11	69	80	100%

The majority of ORV collision victims are under the age of 45 (nearly 59% of all victims). In 2016, 13 of 94 ORV collision victims (14%) are under the age of 25 while 21% are aged 25-34, and 23% are aged 35-44. Thirty-four of 94 victims (36%) are 45 years old and older (20% aged 45 to 54; 11% aged 55 to 64; 5% aged 65 and older).

ORV collision victims in 2016 are, for the most part, consistent in terms of overall age demographic when compared with the previous four year (2012 to 2015) annual average. In the previous four years:

- Persons under the age of 15 account for nearly 3% of all victims in ORV collisions, compared to 3% in 2016;
- Persons aged 15 to 44 account for 61% of all victims in ORV collisions, compared to 55% in 2016;
- Persons aged 45 and above account for 28% of all victims in ORV collisions, compared to 36% in 2016.

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 2016, 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: 2016, 2012-2015 Average

Gender	2016 Casualty Type				2016 Total Victims	% of 2016 Total Victims	2012-2015 Average			
	Killed	% of Total Killed	Injured	% of Total Injured			Killed	Injured	Total Victims	% of Total Victims
Male	19	95%	50	72.5%	69	77.5%	9	53	62	84.3%
Female	1	5.0%	19	27.5%	20	22.5%	2	10	12	15.7%
Total	20	100%	69	100%	89	100%	10	63	73	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 2016 are male. Males account for 69 of 89 ORV collision victims (nearly 78%). This is similar to the previous four year (2012 to 2015) annual average (84%).

**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: 2016, 2012-2015 Average

Safety Equipment	2016 Casualty Type				2016 Total Victims	% of 2016 Total Victims	2012-2015 Average				% Change 2016 to 2012-2015 Average
	Killed	% of Total Killed	Injured	% of Total Injured			Killed	Injured	Total Victims	% of Total Victims	
Safety Helmet Worn	2	10.0%	43	58.1%	45	47.9%	4	47	50	62.5%	-10.0%
Safety Helmet Not Worn	7	35.0%	9	12.2%	16	17.0%	4	6	9	11.6%	73.0%
Seat Belt Assembly Used	2	10.0%	7	9.5%	9	9.6%	0	7	7	9.1%	24.1%
Seat Belt Assembly Not Used	1	5.0%	2	2.7%	3	3.2%	<1	2	3	3.1%	20.0%
Not Stated	7	35.0%	1	1.4%	8	8.5%	2	3	4	5.3%	88.2%
Not Applicable*	1	5.0%	12	16.2%	13	13.8%	2	5	7	8.4%	92.6%
Total	20	100%	74	100%	94	100%	11	69	80	100%	17.5%

\* Victims who were not operators/passengers of off-road vehicles; therefore do not require a helmet.

In 2016, 45 victims (48%) in ORV collisions were wearing a safety helmet; 16 were not. This includes 2 people killed while wearing a helmet and 7 people killed while not wearing a helmet. The proportion of victims who were wearing a helmet in 2016 (48%) has decreased compared to the previous four year annual average (2012 to 2015; nearly 63%).



**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 (2012-2016)

	Helmet worn		Helmet not worn		Helmet Effectiveness
	Number	Percent	Number	Percent	(Ratio of % helmet not worn to % helmet worn)
Killed	16	6.5%	22	41.5%	6.36
Injured	229	93.5%	31	58.5%	0.63
Total	245	100%	53	100%	-

Note: Data have been presented in aggregate for the years 2012-2016.

As the number of victims wearing helmets exceeds those not wearing helmets, a casual interpretation of the statistics may lead one to 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, nearly 7% are killed. Among people not wearing helmets when they sustain an injury from an ORV collision, nearly 42% are killed. This indicates that an ORV collision victim is 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: 2016, 2012-2015 Average

Age Group	2016 Collision Severity						2016 Total	% of 2016 Total	2012-2015 Average	% Change 2016 to 2012-2015 Average
	Fatal	% of Total Fatal*	Injury	% of Total Injury*	PDO	% of Total PDO*				
<16	2	10.5%	2	2.6%	5	2.7%	9	3.2%	8	12.5%
16-19	0	-	6	7.9%	8	4.3%	14	5.0%	26	-46.7%
20-24	1	5.3%	4	5.3%	30	16.3%	35	12.5%	54	-35.2%
25-34	3	15.8%	14	18.4%	41	22.3%	58	20.8%	93	-37.5%
35-44	2	10.5%	22	28.9%	46	25.0%	70	25.1%	68	3.7%
45-54	5	26.3%	14	18.4%	36	19.6%	55	19.7%	66	-16.7%
55-64	2	10.5%	11	14.5%	14	7.6%	27	9.7%	27	1.9%
65+	4	21.1%	3	3.9%	4	2.2%	11	3.9%	7	69.2%
Not Stated	0	-	0	-	16	-	16	-	24	-
Total	19	100%	76	100%	200	100%	295	100%	372	-20.6%

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

In 2016, drivers under the age of 45 account for 67% of drivers involved in ORV collisions (<16 – 3%; 16 to 19 – 5%; 20 to 24 – nearly 13%; 25 to 34 – 21%; 35 to 44 – 25%), while drivers aged 45 and older account for 33% (45 to 54 – 20%; 55 to 64 – 10%; 65 and older – 4%).

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**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: 2016

Contributing Factor	2016 Collision Severity						2016 Total Drivers	% of 2016 Total Drivers
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Driver Action - Driving Properly and Human Condition - Apparently Normal	0	-	18	23.7%	18	9.0%	36	12.2%
Driver Action - Driving properly	0	-	0	-	2	1.0%	2	0.7%
Any At-fault Driver Action	11	57.9%	39	51.3%	120	60.0%	170	57.6%
Following too closely	0	-	0	-	3	1.5%	3	1.0%
Turning improperly	0	-	0	-	4	2.0%	4	1.4%
Passing improperly	0	-	1	1.3%	0	-	1	0.3%
Changing lanes improperly	0	-	0	-	0	-	0	-
Fail to yield right-of-way	0	-	0	-	0	-	0	-
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	1	5.3%	0	-	0	-	1	0.3%
Parking improperly	0	-	0	-	0	-	0	-
Lost control/Drive off road	3	15.8%	6	7.9%	15	7.5%	24	8.1%
Driverless vehicle ran out of control	0	-	0	-	0	-	0	-
Leave stop sign before safe to do so	0	-	0	-	1	0.5%	1	0.3%
Failed to signal	0	-	0	-	0	-	0	-
Take avoiding action	2	10.5%	1	1.3%	2	1.0%	5	1.7%
Driver inexperience	2	10.5%	3	3.9%	3	1.5%	8	2.7%
Pedestrian error/confusion	0	-	0	-	0	-	0	-
NET Speed	6	31.6%	10	13.2%	26	13.0%	42	14.2%
Exceeding speed limit	1	5.3%	1	1.3%	0	-	2	0.7%
Driving too fast for conditions	1	5.3%	8	10.5%	25	12.5%	34	11.5%
Unsafe operating speed (Too fast or too slow)	4	21.1%	1	1.3%	1	0.5%	6	2.0%
NET Distracted driving	5	26.3%	24	31.6%	91	45.5%	120	40.7%
Careless Driving	5	26.3%	22	28.9%	87	43.5%	114	38.6%
Distraction/Inattention	0	-	2	2.6%	9	4.5%	11	3.7%

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## Off-Road Vehicle Collisions

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Contributing Factor	2016 Collision Severity						2016 Total Drivers	% of 2016 Total Drivers
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Human Condition - Apparently Normal	2	10.5%	24	31.6%	51	25.5%	77	26.1%
Any At-fault Human Condition	8	42.1%	2	2.6%	1	0.5%	11	3.7%
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	8	42.1%	2	2.6%	1	0.5%	11	3.7%
Ability impaired alcohol	4	21.1%	2	2.6%	0	-	6	2.0%
Ability impaired drugs	0	-	0	-	0	-	0	-
Had been drinking/Suspected alcohol use	4	21.1%	0	-	1	0.5%	5	1.7%
No Apparent (Vehicle) Defect	3	15.8%	42	55.3%	87	43.5%	132	44.7%
Any At-fault Vehicle Defect	1	5.3%	0	-	3	1.5%	4	1.4%
Defective brakes	0	-	0	-	0	-	0	-
Defective steering	0	-	0	-	1	0.5%	1	0.3%
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	-	2	1.0%	2	0.7%
Defective suspension/wheels	0	-	0	-	1	0.5%	1	0.3%
Defective tires	1	5.3%	0	-	0	-	1	0.3%
Tow hitch/yoke defective	0	-	0	-	0	-	0	-
Defective exhaust system	0	-	0	-	1	0.5%	1	0.3%
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	-

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Contributing Factor	2016 Collision Severity						2016 Total Drivers	% of 2016 Total Drivers
	Fatal	% of Total Fatal	Injury	% of Total Injury	PDO	% of Total PDO		
Any At-fault Environmental Condition	7	36.8%	13	17.1%	43	21.5%	63	21.4%
Animal action - Wild	0	-	0	-	0	-	0	-
Animal action - Domestic	0	-	0	-	0	-	0	-
Slippery road surface	1	5.3%	0	-	5	2.5%	6	2.0%
Snow drift	0	-	2	2.6%	6	3.0%	8	2.7%
Obstruction/debris on roadway	2	10.5%	6	7.9%	25	12.5%	33	11.2%
View obstructed/limited	3	15.8%	1	1.3%	4	2.0%	8	2.7%
Glare/reflection	0	-	0	-	0	-	0	-
Construction zone	0	-	0	-	0	-	0	-
Defective driving surface	1	5.3%	5	6.6%	7	3.5%	13	4.4%
Shoulders defective	0	-	0	-	0	-	0	-
Lane markings inadequate	0	-	0	-	0	-	0	-
Defective/inoperative traffic control device	0	-	0	-	0	-	0	-
Weather	1	5.3%	0	-	2	1.0%	3	1.0%
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	3	15.8%	12	15.8%	45	22.5%	60	20.3%
<b>Total</b>	<b>19</b>	<b>100%</b>	<b>76</b>	<b>100%</b>	<b>200</b>	<b>100%</b>	<b>295</b>	<b>100%</b>

\*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 2016, at least one at-fault driver action is recorded for 170 of the 295 drivers involved in ORV collisions (58%), including:

- 11 of 19 drivers involved in fatal collisions;
- 39 of 76 drivers involved in injury collisions; and,
- 120 of 200 drivers involved in PDO collisions.

The most prevalent at-fault driver actions include:

- Distracted driving (including “careless driving” and “distraction/inattention”) – 41% of the drivers involved;
- Speed (including “exceeding speed limit”, “driving too fast for conditions” and “unsafe operating speed”) – 14% of the drivers involved; and,
- “Loss of control/drive off road” – 8% 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 2016 for drivers involved in ORV collisions. Impaired driving is a contributing factor for 4% of the drivers involved.

Environmental conditions are recorded as contributing for 21% of the drivers involved in ORV collisions, with the most prevalent being “obstruction/debris on roadway” (11% of the drivers involved).

Only 1% of the drivers involved in ORV collisions had a vehicle defect recorded as a contributing factor.

In the previous four year (2012 to 2015) annual average of the drivers involved in ORV collisions:

- 42% had an at-fault driver action recorded, with 28% being distracted (“careless driving” and “distraction/inattention”), 8% speed, and 5% “lost control/drive off road”;
- Nearly 2% had an at-fault ‘human condition’ recorded, with the most common being impaired (1%);
- 10% had an environmental condition recorded, with the most common being “obstruction/debris on roadway” (4%), “animal action – wild” (1%), and “defective driving surface” (1%); and,
- Only 2 drivers had a vehicle defect recorded as a contributing factor.

In 2016, 11 of 19 drivers involved in fatal collisions had an at-fault driver action and 8 of 19 had an at-fault human condition. The most common at-fault contributing factors recorded for drivers involved in fatal ORV collisions in 2016 include:

- Impaired (including “ability impaired by alcohol”, “ability impaired by drugs” and “had been drinking/suspected alcohol use”) – 8 of 19 drivers;
- Speed (including “exceeding speed limit”, “driving too fast for conditions” and “unsafe operating speed”) – 6 of 19 drivers; and,
- Distracted driving (including “careless driving” and “distraction/inattention”) – 5 of 19 drivers.

NOTE: For a detailed count of drivers involved in ORV collisions by the contributing factors recorded in each year from 2012 to 2016, please refer to “*Table 11-19 Historical Summary of Drivers Involved in ORV Collisions by Contributing Factors*” at the end of this section.

## Section 11

## Off-Road Vehicle Collisions

**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 2016

Month	2012 Total	% of 2012 Total	2013 Total	% of 2013 Total	2014 Total	% of 2014 Total	2015 Total	% of 2015 Total	<b>2016 Total</b>	<b>% of 2016 Total</b>
January	52	12.7%	53	13.6%	40	13.6%	35	13.0%	<b>40</b>	<b>14.9%</b>
February	67	16.4%	61	15.6%	44	14.9%	36	13.4%	<b>41</b>	<b>15.3%</b>
March	60	14.7%	67	17.1%	41	13.9%	39	14.5%	<b>32</b>	<b>11.9%</b>
April	24	5.9%	28	7.2%	30	10.2%	24	8.9%	<b>9</b>	<b>3.4%</b>
May	20	4.9%	23	5.9%	27	9.2%	15	5.6%	<b>20</b>	<b>7.5%</b>
June	20	4.9%	25	6.4%	13	4.4%	19	7.1%	<b>10</b>	<b>3.7%</b>
July	18	4.4%	23	5.9%	20	6.8%	20	7.4%	<b>23</b>	<b>8.6%</b>
August	18	4.4%	20	5.1%	20	6.8%	16	5.9%	<b>16</b>	<b>6.0%</b>
September	23	5.6%	17	4.3%	16	5.4%	22	8.2%	<b>24</b>	<b>9.0%</b>
October	16	3.9%	20	5.1%	16	5.4%	16	5.9%	<b>8</b>	<b>3.0%</b>
November	29	7.1%	25	6.4%	14	4.7%	7	2.6%	<b>8</b>	<b>3.0%</b>
December	62	15.2%	29	7.4%	14	4.7%	20	7.4%	<b>37</b>	<b>13.8%</b>
<b>Total</b>	<b>409</b>	<b>100%</b>	<b>391</b>	<b>100%</b>	<b>295</b>	<b>100%</b>	<b>269</b>	<b>100%</b>	<b>268</b>	<b>100%</b>

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## Off-Road Vehicle Collisions

**Table 11-17 Historical Summary of ORV Collisions by Location**

Table 11-17  
 Summary of ORV Collisions by Location: 2012 to 2016

Location	2012 Total	% of 2012 Total	2013 Total	% of 2013 Total	2014 Total	% of 2014 Total	2015 Total	% of 2015 Total	<b>2016 Total</b>	<b>% of 2016 Total</b>
Public Roadway	62	15.2%	68	17.4%	45	15.3%	54	20.1%	<b>48</b>	<b>17.9%</b>
Ditches	36	8.8%	35	9.0%	16	5.4%	27	10.0%	<b>25</b>	<b>9.3%</b>
River/Lake	45	11.0%	42	10.7%	20	6.8%	22	8.2%	<b>18</b>	<b>6.7%</b>
Field	16	3.9%	17	4.3%	9	3.1%	17	6.3%	<b>20</b>	<b>7.5%</b>
Farm Yard/Private Property	50	12.2%	46	11.8%	46	15.6%	43	16.0%	<b>25</b>	<b>9.3%</b>
Parking Lot	2	0.5%	1	0.3%	2	0.7%	2	0.7%	<b>1</b>	<b>0.4%</b>
Embankment	2	0.5%	2	0.5%	2	0.7%	1	0.4%	<b>5</b>	<b>1.9%</b>
Gravel Road	4	1.0%	12	3.1%	5	1.7%	5	1.9%	<b>5</b>	<b>1.9%</b>
Trail*	112	27.4%	88	22.5%	77	26.1%	48	17.8%	<b>76</b>	<b>28.4%</b>
Other**	72	17.6%	74	18.9%	66	22.4%	47	17.5%	<b>41</b>	<b>15.3%</b>
Not Stated	8	2.0%	6	1.5%	7	2.4%	3	1.1%	<b>4</b>	<b>1.5%</b>
<b>Total</b>	<b>409</b>	<b>100%</b>	<b>391</b>	<b>100%</b>	<b>295</b>	<b>100%</b>	<b>269</b>	<b>100%</b>	<b>268</b>	<b>100%</b>

\*Includes marked groomed trail, bush trail/winter road, and snowmobile trail.

\*\*Includes park, forest, bush, camp site, mountain, valley, hill, railroad and floodway/diversion.

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## Off-Road Vehicle Collisions

**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 2016

Age Group	2012 Total	% of 2012 Total	2013 Total	% of 2013 Total	2014 Total	% of 2014 Total	2015 Total	% of 2015 Total	<b>2016 Total</b>	<b>% of 2016 Total</b>
0-4	0	-	0	-	0	-	1	1.5%	<b>0</b>	<b>-</b>
5-9	0	-	0	-	0	-	1	1.5%	<b>1</b>	<b>1.1%</b>
10-14	3	2.8%	1	1.3%	1	1.4%	1	1.5%	<b>2</b>	<b>2.1%</b>
15-19	10	9.3%	6	7.9%	8	11.6%	5	7.5%	<b>6</b>	<b>6.4%</b>
20-24	12	11.1%	13	17.1%	7	10.1%	9	13.4%	<b>4</b>	<b>4.3%</b>
25-34	15	13.9%	16	21.1%	17	24.6%	11	16.4%	<b>20</b>	<b>21.3%</b>
35-44	29	26.9%	10	13.2%	12	17.4%	16	23.9%	<b>22</b>	<b>23.4%</b>
45-54	22	20.4%	14	18.4%	8	11.6%	10	14.9%	<b>19</b>	<b>20.2%</b>
55-64	7	6.5%	7	9.2%	8	11.6%	7	10.4%	<b>10</b>	<b>10.6%</b>
65+	4	3.7%	2	2.6%	0	-	2	3.0%	<b>5</b>	<b>5.3%</b>
Not Stated	6	5.6%	7	9.2%	8	11.6%	4	6.0%	<b>5</b>	<b>5.3%</b>
Total	108	100%	76	100%	69	100%	67	100%	<b>94</b>	<b>100%</b>



## Section 11

## Off-Road Vehicle Collisions

**Table 11-19 Historical Summary of ORV Collisions by Contributing Factors**Table 11-19  
Historical Summary of ORV Collisions by Contributing Factors: 2012 to 2016

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
Driver Action - Driving Properly and Human Condition - Apparently Normal	75	17.1%	25	5.9%	18	5.5%	34	11.3%	36	12.2%
Driver Action - Driving properly	7	1.6%	1	0.2%	0	-	3	1.0%	2	0.7%
Any At-fault Driver Action	154	35.1%	176	41.7%	157	48.3%	139	46.3%	170	57.6%
Following too closely	4	0.9%	1	0.2%	8	2.5%	7	2.3%	3	1.0%
Turning improperly	0	-	2	0.5%	6	1.8%	4	1.3%	4	1.4%
Passing improperly	0	-	0	-	0	-	0	-	1	0.3%
Changing lanes improperly	0	-	0	-	0	-	0	-	0	-
Fail to yield right-of-way	2	0.5%	0	-	1	0.3%	2	0.7%	0	-
Disobey traffic control device/officer	0	-	0	-	0	-	1	0.3%	0	-
Drive wrong way on roadway	0	-	0	-	0	-	0	-	0	-
Passing a vehicle at pedestrian X-walk	0	-	0	-	0	-	0	-	0	-
Back unsafely	3	0.7%	1	0.2%	1	0.3%	5	1.7%	1	0.3%
Parking improperly	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%
Driverless vehicle ran out of control	0	-	2	0.5%	0	-	0	-	0	-
Leave stop sign before safe to do so	1	0.2%	0	-	0	-	0	-	1	0.3%
Failed to signal	0	-	0	-	0	-	0	-	0	-
Take avoiding action	2	0.5%	3	0.7%	3	0.9%	2	0.7%	5	1.7%
Driver inexperience	4	0.9%	3	0.7%	1	0.3%	3	1.0%	8	2.7%
Pedestrian error/confusion	0	-	0	-	0	-	0	-	0	-
NET Speed	26	5.9%	33	7.8%	35	10.8%	19	6.3%	42	14.2%
Exceeding speed limit	1	0.2%	1	0.2%	0	-	0	-	2	0.7%
Driving too fast for conditions	22	5.0%	29	6.9%	31	9.5%	18	6.0%	34	11.5%
Unsafe operating speed (Too fast or too slow)	4	0.9%	3	0.7%	4	1.2%	1	0.3%	6	2.0%
NET Distracted driving	99	22.6%	111	26.3%	109	33.5%	97	32.3%	120	40.7%
Careless Driving	96	21.9%	110	26.1%	109	33.5%	93	31.0%	114	38.6%
Distraction/Inattention	4	0.9%	2	0.5%	2	0.6%	6	2.0%	11	3.7%

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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
Human Condition - Apparently Normal	71	16.2%	34	8.1%	29	8.9%	38	12.7%	77	26.1%
Any At-fault Human Condition	6	1.4%	6	1.4%	5	1.5%	5	1.7%	11	3.7%
Loss of consciousness/Blackout prior to collision	0	-	0	-	0	-	0	-	0	-
Extreme fatigue/Fell asleep	0	-	0	-	0	-	1	0.3%	0	-
Defective eyesight	0	-	0	-	0	-	0	-	0	-
Defective hearing	0	-	0	-	0	-	0	-	0	-
Medical disability	0	-	0	-	0	-	0	-	0	-
Physical disability	0	-	1	0.2%	0	-	0	-	0	-
Mental disability	0	-	0	-	0	-	0	-	0	-
Mental confusion/Inability to remember	0	-	0	-	0	-	0	-	0	-
Sudden illness	0	-	0	-	0	-	0	-	0	-
Exceed hours of service (commercial drivers only)	0	-	0	-	0	-	0	-	0	-
NET Impaired	6	1.4%	5	1.2%	5	1.5%	4	1.3%	11	3.7%
Ability impaired alcohol	6	1.4%	2	0.5%	2	0.6%	3	1.0%	6	2.0%
Ability impaired drugs	0	-	0	-	0	-	0	-	0	-
Had been drinking/Suspected alcohol use	0	-	3	0.7%	3	0.9%	1	0.3%	5	1.7%
No Apparent (Vehicle) Defect	139	31.7%	50	11.8%	39	12.0%	64	21.3%	132	44.7%
Any At-fault Vehicle Defect	0	-	2	0.5%	3	0.9%	1	0.3%	4	1.4%
Defective brakes	0	-	1	0.2%	1	0.3%	0	-	0	-
Defective steering	0	-	0	-	0	-	1	0.3%	1	0.3%
Defective headlights	0	-	0	-	0	-	0	-	0	-
Defective brake lights	0	-	0	-	0	-	0	-	0	-
Defective lighting (unspecified)	0	-	0	-	0	-	0	-	0	-
Defective engine controls/drive train	0	-	0	-	0	-	0	-	2	0.7%
Defective suspension/wheels	0	-	0	-	2	0.6%	0	-	1	0.3%
Defective tires	0	-	0	-	0	-	0	-	1	0.3%
Tow hitch/yoke defective	0	-	0	-	0	-	0	-	0	-
Defective exhaust system	0	-	0	-	0	-	0	-	1	0.3%
Hood/tailgate/door/covering opened	0	-	0	-	0	-	0	-	0	-
Defective glazing (obscured windows)	0	-	0	-	0	-	0	-	0	-
Vehicle modifications	0	-	0	-	0	-	0	-	0	-
Fire	0	-	0	-	0	-	0	-	0	-
Overloaded/oversized	0	-	0	-	0	-	0	-	0	-
Load shifted/spilled	0	-	1	0.2%	0	-	0	-	0	-
Jack-knife/trailer swing	0	-	0	-	0	-	0	-	0	-
Hydroplaning tires	0	-	0	-	0	-	0	-	0	-

(continued on next page)

## Section 11

## Off-Road Vehicle Collisions

(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
Any At-fault Environmental Condition	47	10.7%	52	12.3%	29	8.9%	25	8.3%	63	21.4%
Animal action - Wild	4	0.9%	10	2.4%	5	1.5%	1	0.3%	0	-
Animal action - Domestic	1	0.2%	0	-	3	0.9%	1	0.3%	0	-
Slippery road surface	3	0.7%	7	1.7%	3	0.9%	2	0.7%	6	2.0%
Snow drift	4	0.9%	7	1.7%	2	0.6%	1	0.3%	8	2.7%
Obstruction/debris on roadway	20	4.6%	18	4.3%	13	4.0%	15	5.0%	33	11.2%
View obstructed/limited	3	0.7%	1	0.2%	2	0.6%	2	0.7%	8	2.7%
Glare/reflection	0	-	0	-	0	-	0	-	0	-
Construction zone	0	-	0	-	0	-	0	-	0	-
Defective driving surface	10	2.3%	7	1.7%	2	0.6%	2	0.7%	13	4.4%
Shoulders defective	0	-	0	-	0	-	0	-	0	-
Lane markings inadequate	0	-	0	-	0	-	0	-	0	-
Defective/inoperative traffic control device	0	-	0	-	0	-	0	-	0	-
Weather	2	0.5%	2	0.5%	1	0.3%	2	0.7%	3	1.0%
Pedestrian corridor in use	0	-	0	-	0	-	0	-	0	-
Uninvolved vehicle	0	-	1	0.2%	0	-	0	-	0	-
Uninvolved pedestrian	0	-	0	-	0	-	0	-	0	-
Presence of prior accident	0	-	0	-	0	-	0	-	0	-
No Contributing Factor(s) Identified	0	-	0	-	1	0.3%	0	-	0	-
Not Stated	154	35.1%	158	37.4%	107	32.9%	105	35.0%	60	20.3%
<b>Total</b>	<b>439</b>	<b>100%</b>	<b>422</b>	<b>100%</b>	<b>325</b>	<b>100%</b>	<b>300</b>	<b>100%</b>	<b>295</b>	<b>100%</b>

\*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 2015 by age at the time of the offence and includes historical statistics for the period 1996 to 2014. There is a one-year lag in the statistics reported to allow for court processing time. Therefore, 2015 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 2015, there are a total of 2,943 alcohol-related Criminal Code offence convictions, including:

- 1,754 convictions for driving with a blood alcohol concentration (BAC) over .08<sup>4</sup>;
- 1,059 convictions for impaired driving<sup>5</sup>; and,
- 130 convictions for refusing to provide a breath or blood sample<sup>6</sup>.

In 2015, the count of drivers convicted of alcohol-related Criminal Code offences (2,943) decreased by nearly 3% (74 less convictions) compared to 2014 (3,017), however the count increased by 33% compared to the previous five year (2010 to 2014) annual average (2,217). Comparing 2015 to the previous five year (2010 to 2014) annual average:

- Convictions for “alcohol content over .08” increased by 28%;
- Convictions for “impaired driving” increased by 43%; and,
- Convictions for “refuse sample” increased by 21%.

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 2015, but accounted for 26% of convictions.
- Drivers aged 25 to 44 represented 34% of the licensed drivers in 2015, but accounted for 52% of convictions.

Over the past 10 years, from 2005 to 2015, there was a notable 45% increase in the rate of first offences. Rates of recidivism, indicated by second, and third and subsequent offences, increased at a rate of 20% in second alcohol-related Criminal Code offences in 2015. In comparison, there was a notable 62% reduction in third and subsequent offences in 2015 compared to 2005.

### 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 with a youth 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.

<sup>4</sup> Includes s.253B and s.253BC

<sup>5</sup> Includes s.253A, s.253AC, s.255-2 and s.255-3

<sup>6</sup> 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”<sup>7</sup>: 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”<sup>7</sup>: 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 when there was a youth in the vehicle.

**“Criminal Code Statute 255-2”<sup>7</sup>: 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.

<sup>7</sup> 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.



## Section 12

## Alcohol-Related Criminal Code Convictions

**Table 12-1: Total Alcohol-Related Criminal Code Convictions**Table 12-1  
Total Alcohol-Related Criminal Code Convictions: 1996 to 2015\*

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	
1996	2,267	N/A	334	N/A	24	0	250	N/A	2,875
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	1,823	22	1,010	4	11	1	144	2	3,017
<b>2015</b>	<b>1,733</b>	<b>21</b>	<b>1,028</b>	<b>11</b>	<b>15</b>	<b>5</b>	<b>127</b>	<b>3</b>	<b>2,943</b>
2010-14 Average	1,361	8	714	5	18	4	107	<1	2,217
% Change 2014 to 2015	-4.9%	-4.5%	1.8%	175.0%	36.4%	400.0%	-11.8%	50.0%	-2.5%
% Change 2010-14 Average to 2015	27.4%	156.1%	43.9%	129.2%	-14.8%	31.6%	18.9%	275.0%	32.7%
% Change 1996 to 2015	-23.6%	N/A	207.8%	N/A	-37.5%	N/A	-49.2%	N/A	2.4%

\*There is a one-year lag in the statistics reported to allow for court processing time. Therefore, 2015 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 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 2015, the count of drivers convicted of alcohol-related Criminal Code offences (2,943) decreased by nearly 3% (74 less convictions) compared to 2014 (3,017); however the count increased by 33% compared to the previous five year (2010 to 2014) annual average (2,217).

Comparing 2015 to the previous five year (2010 to 2014) annual average:

- Convictions for "alcohol content over .08" increased by 28%;
- Convictions for "impaired driving" increased by 43%; and,
- Convictions for "refuse sample" increased by 21%.

In 2015, there were 21 convictions for driving with a blood alcohol concentration (BAC) over .08 while a youth (under age 16) was in the vehicle, 11 for impaired driving while a youth was in the vehicle, and 3 for refusing to provide a breath or blood sample while a youth was in the vehicle. Counts of these convictions over the eight year period have fluctuated dramatically due to their overall low frequency in any given year.

In the 20-year period from 1996 to 2015, total alcohol-related Criminal Code convictions increased by 2%, from 2,875 in 1996 to 2,943 in 2015.

- Convictions for "alcohol content over .08" decreased by 23% (2,267 in 1996 to 1,754 in 2015).
- Convictions for "impaired driving" nearly tripled (358 in 1996 to 1,059 in 2015).
- Convictions for "refuse sample" decreased by 48% (250 in 1996 to 130 in 2015).

## Section 12

## Alcohol-Related Criminal Code Convictions

**Table 12-2: Total Alcohol-Related Criminal Code Convictions by Age Group**

Table 12-2  
Total Alcohol-Related Criminal Code Convictions by Age Group: 1996 to 2015

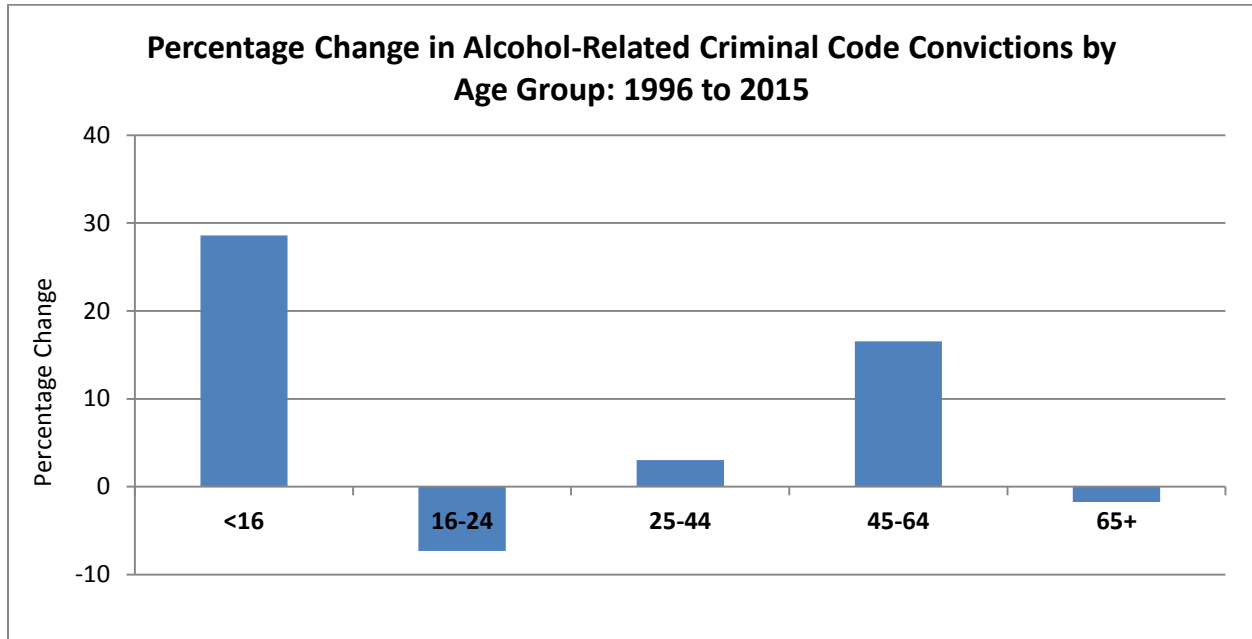
	<16	16-17	18-20	21-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total
1996	7	66	366	388	447	394	387	267	208	151	71	66	32	10	15	2,875
1997	7	105	430	495	451	440	440	302	201	130	78	50	44	18	11	3,202
1998	7	109	349	448	495	459	455	306	227	163	82	49	39	25	6	3,219
1999	13	81	412	504	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	12	26	298	457	533	424	331	258	223	200	121	65	49	12	8	3,017
<b>2015</b>	<b>9</b>	<b>27</b>	<b>284</b>	<b>449</b>	<b>537</b>	<b>427</b>	<b>317</b>	<b>259</b>	<b>240</b>	<b>166</b>	<b>114</b>	<b>58</b>	<b>37</b>	<b>9</b>	<b>10</b>	<b>2,943</b>
2010-14 Average	7	33	242	351	371	283	251	196	169	140	85	48	28	9	3	2,217
% Change 2014 to 2015	-25.0%	3.8%	-4.7%	-1.8%	0.8%	0.7%	-4.2%	0.4%	7.6%	-17.0%	-5.8%	-10.8%	-24.5%	-25.0%	25.0%	-2.5%
% Change 2010-14 Average to 2015	25.0%	-19.2%	17.5%	27.8%	44.7%	51.0%	26.1%	32.1%	42.0%	18.4%	34.4%	21.8%	31.2%	<0.1%	212.5%	32.7%
% Change 1996 to 2015	28.6%	-59.1%	-22.4%	15.7%	20.1%	8.4%	-18.1%	-3.0%	15.4%	9.9%	60.6%	-12.1%	15.6%	-10.0%	-33.3%	2.4%

Caution: The count of convictions shown does not take into account the number of licensed drivers by age group.

Comparing 2015 to the previous five year (2010 to 2014) annual average:

- There are 33% more convictions in total (a difference of 726);
- Convictions among the youngest age group (under age 16) increased by a count of 2;
- Convictions among 16 to 24 year olds increased by 21% (a count of 134);
- Convictions among 25 to 44 year olds is increased by 40% (a count of 439);
- Convictions among 45 to 64 year olds increased by 31% (a count of 136); and,
- Convictions among those aged 65 and older increased by 39% (a count of 16).

**Figure 12-1: Percentage Change in Alcohol-Related Criminal Code Convictions by Age Group**



During the 20-year period 1996 to 2015, alcohol-related Criminal Code convictions have increased by 2% in Manitoba. Convictions among drivers aged:

- Under 16 increased by a count of 2;
- 16 to 24 decreased by 7%;
- 25 to 44 increased by 3%;
- 45 to 64 increased by nearly 17%; and,
- 65 and older decreased by 2%.

## Section 12

## Alcohol-Related Criminal Code Convictions

**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: 2015

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	3	0	5	0	0	0	1	0	9
16-17	13	1	11	0	1	0	1	0	27
18-20	186	0	92	0	0	0	6	0	284
21-24	282	3	150	1	2	1	10	0	449
25-29	333	4	168	1	2	0	28	1	537
30-34	240	3	160	3	4	0	16	1	427
35-39	178	5	110	2	1	0	21	0	317
40-44	150	1	89	0	0	2	17	0	259
45-49	126	2	93	2	3	2	11	1	240
50-54	87	1	69	2	2	0	5	0	166
55-59	65	0	42	0	0	0	7	0	114
60-64	30	1	23	0	0	0	4	0	58
65-69	25	0	12	0	0	0	0	0	37
70-74	8	0	1	0	0	0	0	0	9
75+	7	0	3	0	0	0	0	0	10
<b>Total</b>	<b>1,733</b>	<b>21</b>	<b>1028</b>	<b>11</b>	<b>15</b>	<b>5</b>	<b>127</b>	<b>3</b>	<b>2,943</b>

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: 2005, 2010 and 2015

Age Group	2005			2010			2015		
	# Alcohol Convictions	% Total Alcohol Convictions	% Licensed Drivers	# Alcohol Convictions	% Total Alcohol Convictions	% Licensed Drivers	# Alcohol Convictions	% Total Alcohol Convictions	% Licensed Drivers
<16-24*	534	31.8%	14.5%	693	31.3%	14.1%	769	26.1%	13.8%
25-44	783	46.6%	36.0%	1,042	47.1%	33.4%	1,540	52.3%	33.9%
45-64	326	19.4%	34.6%	433	19.6%	36.6%	578	19.6%	34.4%
65+	38	2.3%	14.9%	43	1.9%	15.9%	56	1.9%	17.9%
<b>Total</b>	<b>1,681</b>	<b>100%</b>	<b>100%</b>	<b>2,211</b>	<b>100%</b>	<b>100%</b>	<b>2,943</b>	<b>100%</b>	<b>100%</b>

\* 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 75% from 2005 (count of 1,681) to 2015 (count of 2,943).

#### <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 nearly 15% of all licensed drivers in 2005 and 14% in 2010, but for 32% of alcohol offence convictions in 2005 and 31% in 2010. In 2015, these drivers represent 14% of the licensed drivers, but accounted for 26% 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 2005, 2010, and 2015, drivers in this group made up 36%, 33%, and 34% of licensed drivers, respectively. However, these drivers accounted for 47% in 2005 and 2010, and 52% in 2015 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 2005, 2010, and 2015, drivers in this group made up 35%, 37%, and 34%, respectively, of licensed drivers. At the same time, these drivers accounted for 19% in 2005, and 20% in 2010 and 2015 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 2005, 2010, and 2015, drivers 65 years of age and older made up 15%, 16%, and 18% of licensed drivers, respectively, but accounted for only 2% 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: 2005, 2010 and 2015

Age Group	2005			2010			2015		
	Alcohol* Convictions	Licensed Drivers	Rate /1,000	Alcohol Convictions	Licensed Drivers	Rate /1,000	Alcohol Convictions	Licensed Drivers	Rate /1,000
<b>Total Alcohol-Related Criminal Code Convictions</b>									
<16-24	534	103,927	5.1	693	111,514	6.2	769	121,798	6.3
25-44	783	257,668	3.0	1,042	264,077	3.9	1,540	298,957	5.2
45-64	326	247,526	1.3	433	289,306	1.5	578	303,245	1.9
65+	38	107,047	0.4	43	125,434	0.3	56	157,339	0.4
<b>Total</b>	<b>1,681</b>	<b>716,169</b>	<b>2.3</b>	<b>2,211</b>	<b>790,331</b>	<b>2.8</b>	<b>2,943</b>	<b>881,338</b>	<b>3.3</b>
<b>First Occurrence</b>									
<16-24	489	103,927	4.7	625	111,514	5.6	719	121,798	5.9
25-44	679	257,668	2.6	910	264,077	3.4	1,372	298,957	4.6
45-64	293	247,526	1.2	393	289,306	1.4	521	303,245	1.7
65+	34	107,047	0.3	39	125,434	0.3	55	157,339	0.3
<b>Total</b>	<b>1,495</b>	<b>716,169</b>	<b>2.1</b>	<b>1,967</b>	<b>790,331</b>	<b>2.5</b>	<b>2,667</b>	<b>881,338</b>	<b>3.0</b>
<b>Second Occurrence</b>									
<16-24	39	103,927	0.4	55	111,514	0.5	40	121,798	0.3
25-44	77	257,668	0.3	97	264,077	0.4	124	298,957	0.4
45-64	24	247,526	0.1	32	289,306	0.1	48	303,245	0.2
65+	4	107,047	<0.1	4	125,434	<0.1	1	157,339	<0.1
<b>Total</b>	<b>144</b>	<b>716,169</b>	<b>0.2</b>	<b>188</b>	<b>790,331</b>	<b>0.2</b>	<b>213</b>	<b>881,338</b>	<b>0.2</b>
<b>Third and Subsequent Occurrence</b>									
<16-24	34	103,927	0.3	13	111,514	0.1	10	121,798	0.1
25-44	64	257,668	0.2	35	264,077	0.1	44	298,957	0.1
45-64	35	247,526	0.1	8	289,306	<0.1	9	303,245	<0.1
65+	1	107,047	<0.1	0	125,434	<0.1	0	157,339	<0.1
<b>Total</b>	<b>134</b>	<b>716,169</b>	<b>0.2</b>	<b>56</b>	<b>790,331</b>	<b>0.1</b>	<b>63</b>	<b>881,338</b>	<b>&lt;0.1</b>

\* 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 increased by 42% (2.3 per 1,000 licensed drivers in 2005; 3.3 per 1,000 licensed drivers in 2015).<sup>8</sup>

<sup>8</sup> 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 5.1, 6.2 and 6.3 alcohol-related Criminal Code convictions in 2005, 2010 and 2015, respectively. The 2015 rate for this age group is 23% higher than the 2005 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 3.0 in 2005, 3.9 in 2010, and 5.2 in 2015. The 2015 rate for this age group is nearly 70% higher than the 2005 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 2005, 1.5 in 2010, and 1.9 in 2015. The 2015 rate for this age group is 45% higher than the 2005 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 0.4 in 2005, 0.3 in 2010, and 0.4 in 2015. The 2015 rate for this age group is similar to the 2005 rate.

First Occurrence

In 2015, the number of drivers convicted of an alcohol-related Criminal Code offence for the **first** time has increased by 78% compared to ten years ago (1,495 in 2005; 2,667 in 2015).

Comparing the involvement rates (per 1,000 licensed drivers) for 2005 and 2015, first occurrence Criminal Code convictions increased by 45% overall and in each age group individually.

- Age 24 and under – a nearly 26% increase in 2015 compared to 2005
- Age 25 to 44 – a 74% increase in 2015 compared to 2005
- Age 45 to 64 – a 45% increase in 2015 compared to 2005
- Age 65 and older – a 10% increase in 2015 compared to 2005

Second Occurrence

In 2015, the number of drivers convicted of an alcohol-related Criminal Code offence for the **second** time has increased by 48% compared to ten years ago (144 in 2005; 213 in 2015).

Comparing the involvement rates (per 1,000 licensed drivers) for 2005 and 2015, second occurrence Criminal Code convictions increased by 20% overall.

- Age 24 and under – a nearly 13% decrease in 2015 compared to 2005
- Age 25 to 44 – a 39% increase in 2015 compared to 2005
- Age 45 to 64 – a 63% increase in 2015 compared to 2005
- Age 65 and older – an 83% decrease in 2015 compared to 2005; a count of 1 in 2015 compared to 4 in 2005

Third and Subsequent Occurrence

In 2015, the number of drivers convicted of an alcohol-related Criminal Code offence for the **third and subsequent** time has decreased by 53% compared to ten years ago (134 in 2005; 63 in 2015).

Comparing the involvement rates (per 1,000 licensed drivers) for 2005 and 2015, third and subsequent occurrence Criminal Code convictions decreased by 62% overall.

- Age 24 and under – a count of 10 in 2015 compared to 34 in 2005; a 75% decrease in the rate
- Age 25 to 44 – a count of 44 in 2015 compared to 64 in 2005; a 41% decrease in the rate
- Age 45 to 64 – a count of 9 in 2015 compared to 35 in 2005; a 79% decrease in the rate
- Age 65 and older – none in 2015 compared to 1 in 2005

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”<sup>9</sup>: 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 when there was a youth in the vehicle.

<sup>9</sup> 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 when there was a youth 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:
  - [http://www.mpi.mb.ca/PDFs/DVL\\_PDFs/GDLGuide.pdf](http://www.mpi.mb.ca/PDFs/DVL_PDFs/GDLGuide.pdf); ou en Français,
  - [http://www.mpi.mb.ca/PDFs/DVL\\_PDFs/GDLGUIDEfr.pdf](http://www.mpi.mb.ca/PDFs/DVL_PDFs/GDLGUIDEfr.pdf)

“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 manoeuvre 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 Assent 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.

