



# Alberta Traffic Collision Statistics Summary 2017

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Traffic Safety, Alberta Transportation



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## Alberta Traffic Collisions

2013 – 2017

Severity of Collisions	2013	2014	2015	2016	2017
Fatal Collisions	331	328	288	273	259
Non-Fatal Injury Collisions	14,073	14,244	13,531	12,465	13,082
Property Damage Collisions	127,234	130,168	126,886	120,386	129,126
<b>Total Reportable Collisions</b>	<b>141,638</b>	<b>144,740</b>	<b>140,705</b>	<b>133,124</b>	<b>142,467</b>

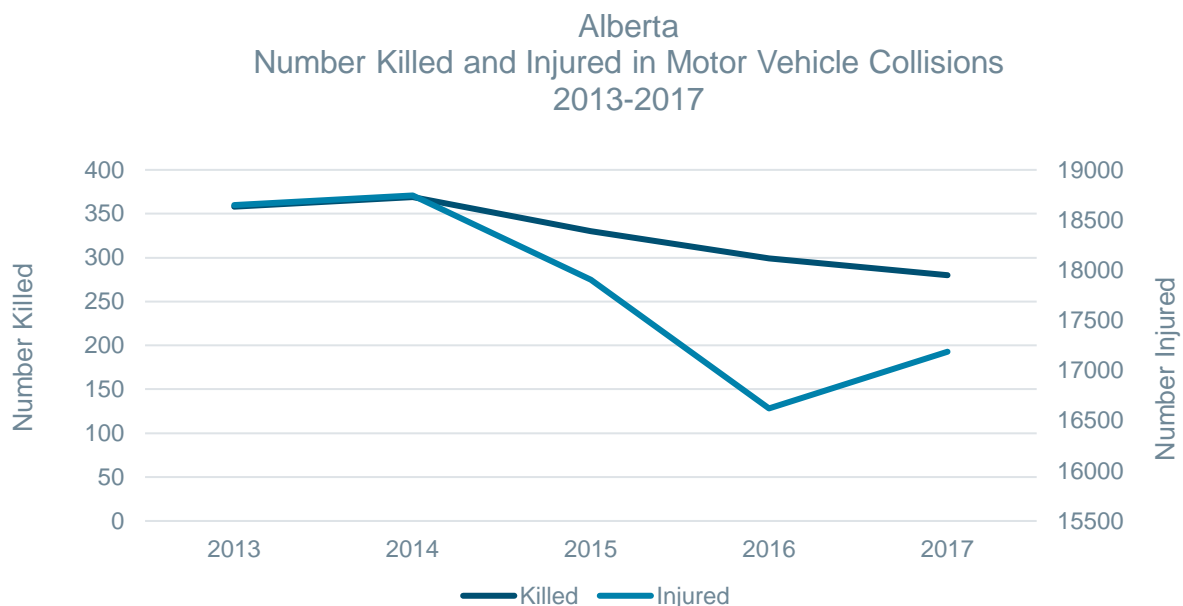
Injury Severity	2013	2014	2015	2016	2017
Number Killed	358	369	330	299	290
Number Injured	18,650	18,745	17,907	16,622	17,186
<b>Total Number of Casualties</b>	<b>19,008</b>	<b>19,114</b>	<b>18,237</b>	<b>16,921</b>	<b>17,476</b>

Total collisions for 2017 are up 7.0% compared to 2016:

- Fatal collisions decreased 5.1% (from 273 to 259)
- Injury collisions increased 4.9% (from 12,465 to 13,082)
- Property damage collisions increased 7.3% (from 120,386 to 129,126)

Total casualties for 2017 are up 3.3% compared to 2016:

- The number of fatal injuries decreased 3.0% (from 299 to 290)
- The number of non-fatal injuries increased 3.4% (from 16,622 to 17,186)

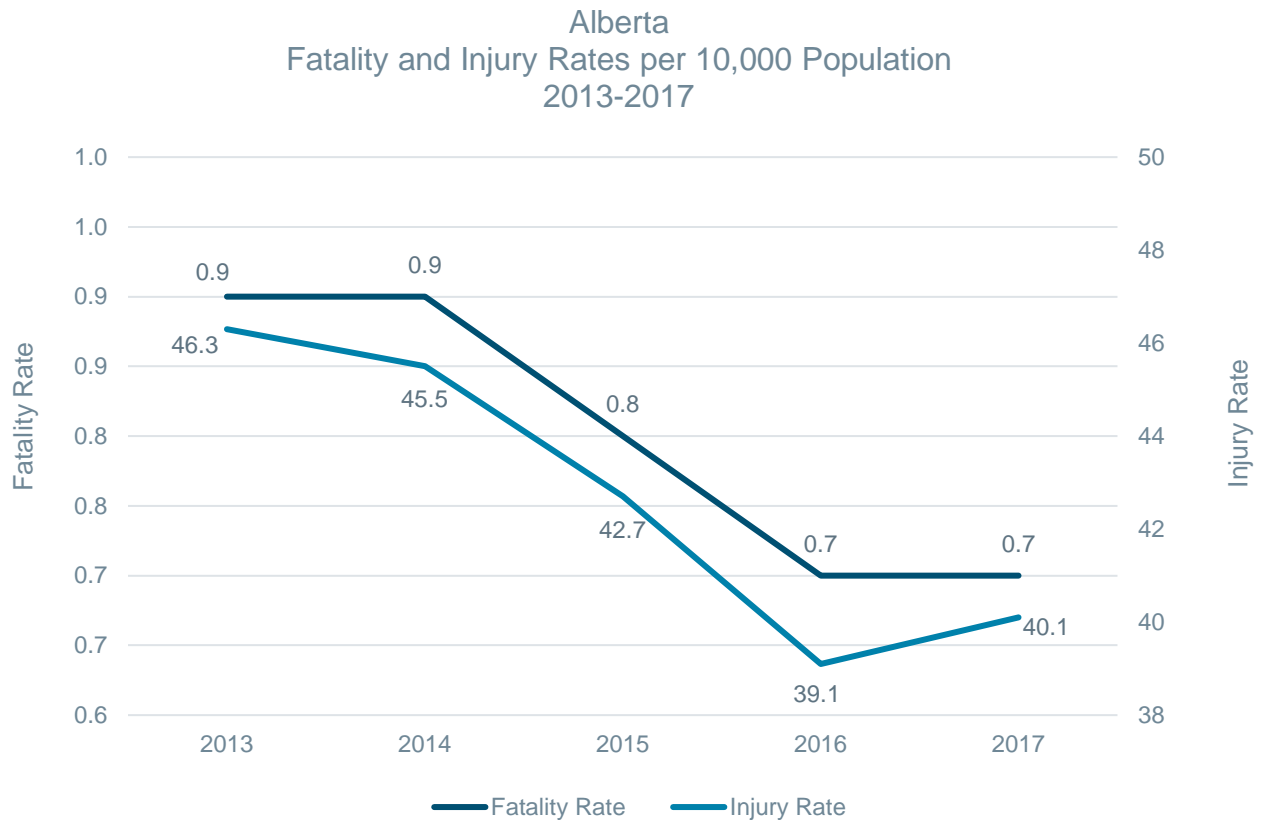


# Alberta Traffic Collision Rates

2013 – 2017

Severity of Collision	Rate Per 10,000 Population					Rate Per 10,000 Licenced Drivers					Rate Per 10,000 Registered Vehicles				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Fatal Collisions	0.8	0.8	0.7	0.6	0.6	1.1	1.1	0.9	0.9	0.8	1.0	0.9	0.8	0.7	0.7
Number Killed	0.9	0.9	0.8	0.7	0.7	1.2	1.2	1.1	1.0	0.9	1.0	1.0	0.9	0.8	0.8
Non-Fatal Injury Collisions	35.0	34.6	32.2	29.3	30.5	47.4	46.6	43.3	39.6	41.1	40.5	39.5	37.1	33.3	34.6
Number Injured	46.3	45.5	42.7	39.1	40.1	62.8	61.3	57.3	52.9	53.9	53.6	52.0	49.1	44.4	45.4
Property Damage Collisions	316.1	315.8	302.4	283.1	301.3	428.7	425.7	405.8	382.8	405.3	366.0	360.8	347.9	321.5	341.1
<b>Total Reportable Collisions</b>	<b>351.9</b>	<b>351.2</b>	<b>335.3</b>	<b>313.0</b>	<b>332.4</b>	<b>477.2</b>	<b>473.4</b>	<b>450.0</b>	<b>423.3</b>	<b>447.1</b>	<b>407.4</b>	<b>401.2</b>	<b>385.8</b>	<b>355.6</b>	<b>376.3</b>

Fatal collision and fatality rates are down or have remained steady from 2016, in terms of population, driver, and registered vehicles. Injury collision and injury rates have slightly increased since 2016, and overall collision rates have also gone up.



## Where Did Casualty Collisions Occur (Urban/Rural)?

2017

Location	Fatal Collisions		Non-Fatal Injury Collisions		Property Damage Collisions		Total Collisions	
	N	%	N	%	N	%	N	%
Urban	84	32.4	9,724	74.3	107,840	83.5	117,648	82.6
Rural	175	67.6	3,358	25.7	21,286	16.5	24,819	17.4
<b>Total Number of Collisions</b>	<b>259</b>	<b>100.0</b>	<b>13,082</b>	<b>100.0</b>	<b>129,126</b>	<b>100.0</b>	<b>142,467</b>	<b>100.0</b>

The majority of fatal collisions (67.6%) occurred in rural areas. Collisions occurring in urban areas resulted in the highest proportion of non-fatal injury collisions (74.3%) and property damage crashes (83.5%).

## Where Did Casualty Collisions Occur (Intersection-Related)?

2017

Location	Fatal Collisions		Non-Fatal Injury Collisions		Property Damage Collisions		Total Collisions	
	N	%	N	%	N	%	N	%
Intersection Related	64	24.7	5,854	44.7	30,713	23.8	36,631	25.7
Non-Intersection Related	195	75.3	7,228	55.3	98,413	76.2	105,836	74.3
<b>Total Number of Collisions</b>	<b>259</b>	<b>100.0</b>	<b>13,082</b>	<b>100.0</b>	<b>129,126</b>	<b>100.0</b>	<b>142,467</b>	<b>100.0</b>

One in four (25.7%) collisions were intersection-related. During 2017, 73 people were killed and 7,901 were injured in intersection related collisions.

In Alberta, in 2017, three of the top five most frequently identified improper driver actions for drivers in casualty collisions were intersection-related: making a left turn across the path of an on-coming vehicle (11.4%), committing a stop sign violation (7.8%), and disobeying a traffic signal (6.2%).

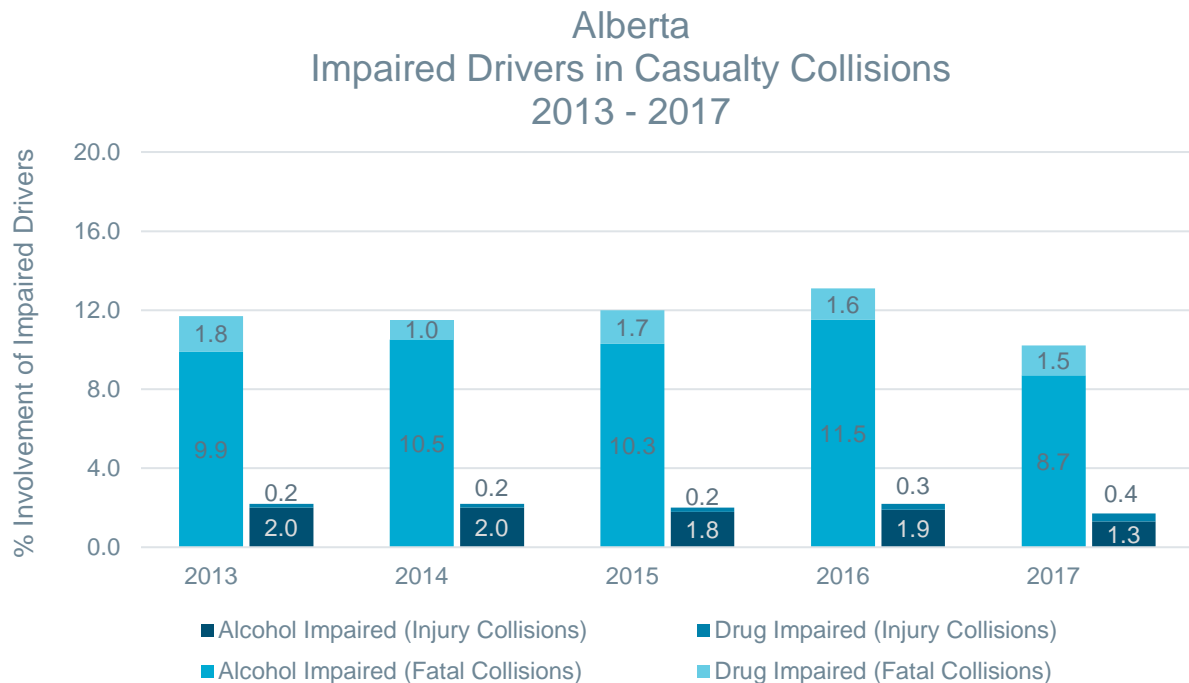
See page 13 for a complete summary of all driver actions in casualty collisions.

## What was the Condition of Drivers in Casualty Collisions?

2017

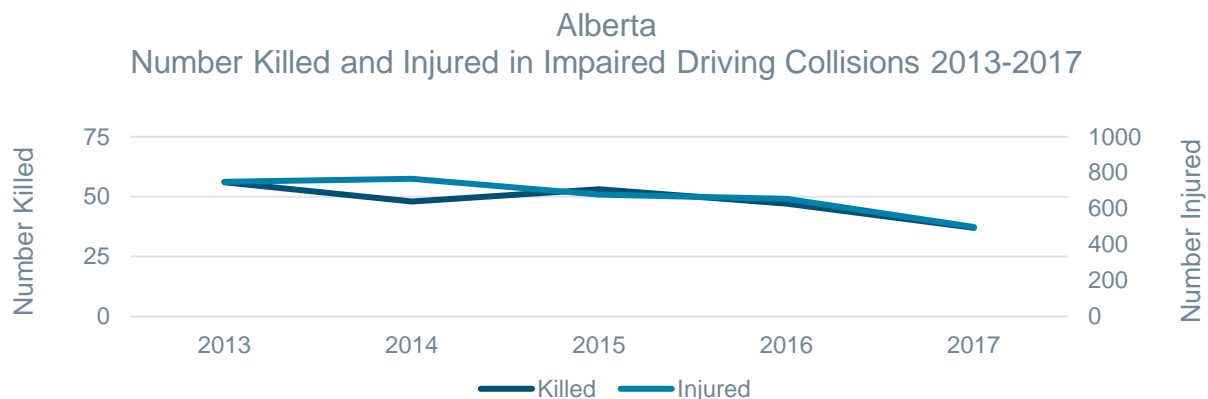
Condition of Driver	Drivers in Fatal Collisions		Drivers in Non-Fatal Injury Collisions		Total Drivers in Casualty Collisions	
	N	%	N	%	N	%
Normal	274	82.0	19,495	95.4	19,769	95.1
Alcohol Impaired	29	8.7	268	1.3	297	1.4
Drug Impaired	5	1.5	75	0.4	80	0.4
<b>Total Impaired Drivers</b>	<b>34</b>	<b>10.2</b>	<b>343</b>	<b>1.7</b>	<b>377</b>	<b>1.8</b>
Fatigued/Asleep	6	1.8	200	1.0	206	1.0
Other	20	6.0	405	2.0	425	2.0
<b>Total Number of Drivers</b>	<b>334</b>	<b>100.0</b>	<b>20,443</b>	<b>100.0</b>	<b>20,777</b>	<b>100.0</b>

Of drivers involved in injury collisions, 1.7% were legally impaired, compared to 10.2% in fatal collisions. Over the five year period 2013 to 2017, the proportion of drivers in fatal collisions who were impaired was highest in 2016 (13.1%).



## How Many People are Killed or Injured in Collisions Involving Impaired Drivers?

- During 2017, 37 people were killed in impaired driving collisions – this is down 21.3% from 2016 with 47. Another 498 people were injured in 2017 – down 23.9% over 2016 with 654.
- From 2013 to 2017, on average each year 48 people were killed and 669 people were injured in collisions involving an impaired driver.



## Who is Driving Impaired and Crashing?

- In Alberta, one in ten drivers involved in fatal collisions were legally impaired. This compares to one in 59 drivers involved in injury collisions.
- Males between 22 and 24 years of age were most likely to have been impaired.
- There were over three times as many male impaired drivers as female impaired drivers.
- As the severity of the collision increases, so does the likelihood the collision will involve impairment.

## When Do Impaired Driving Crashes Occur?

- In 2017, August saw the highest numbers of fatal collisions involving an impaired driver (18.2%) and July recorded the highest number of injury collisions (10.2%).
- The most casualty collisions involving impaired driving occur on weekends. The most likely time period for these collisions, on any day of the week, is between 11 p.m. and 3 a.m.

## How Big of an Issue is Drug-Impaired Driving?

- A recent Canadian study of alcohol and drug use among drivers found that drug use in nighttime drivers exceeded that of alcohol use.
- In Canada, studies indicate that drugs are found in up to 40% of fatally injured drivers.

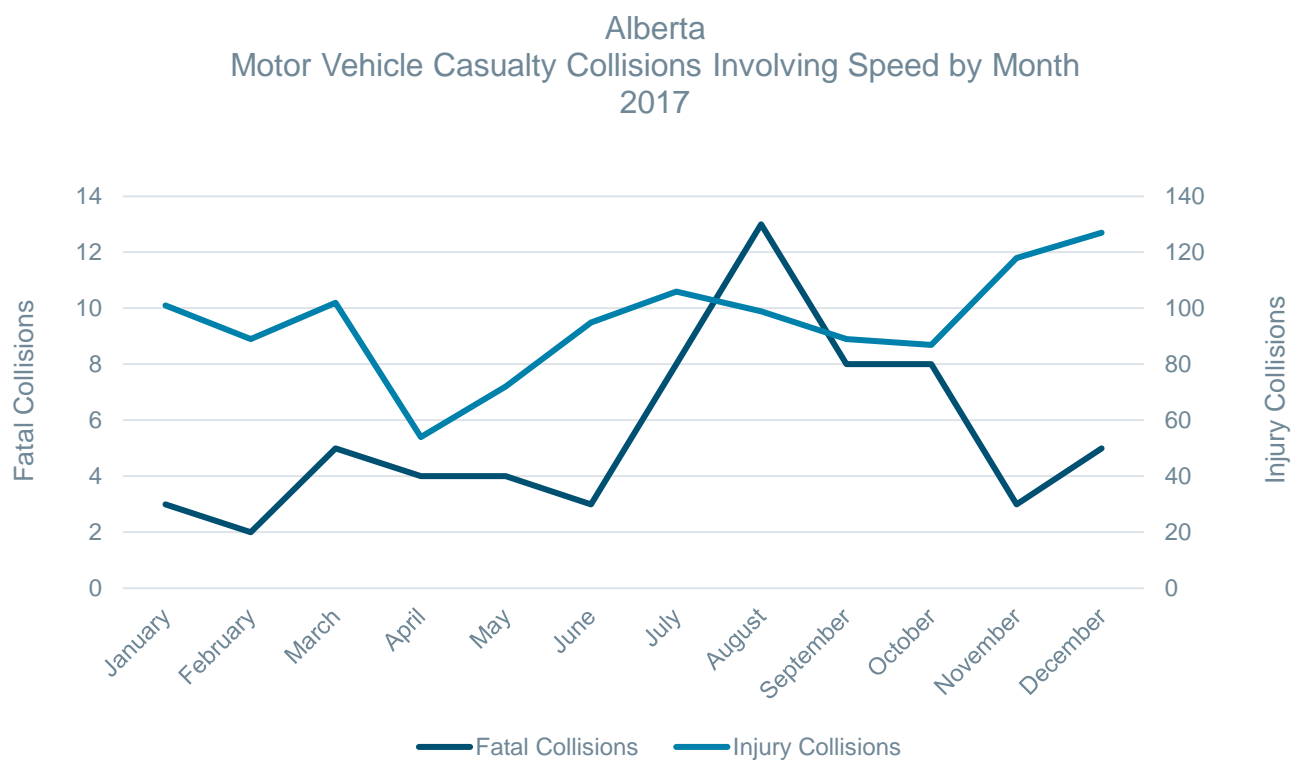


## Speeding Drivers in Casualty Collisions 2017

Unsafe Speed	Drivers in Fatal Collisions		Drivers in Non-Fatal Injury Collisions		Total Drivers in Casualty Collisions	
	N	%	N	%	N	%
Yes	70	25.0	1,159	7.5	1,229	7.8
No	210	75.0	14,231	92.5	14,441	92.2
<b>Total Number of Drivers</b>	<b>280</b>	<b>100.0</b>	<b>15,390</b>	<b>100.0</b>	<b>15,670</b>	<b>100.0</b>

One quarter (25.0%) of drivers in fatal collisions were reported as travelling at an unsafe speed compared to 7.5% in injury collisions. Collisions involving these 1,229 drivers resulted in 75 fatalities and 1,674 injuries.

## When are Speed-related Casualty Collisions Occurring?



The month of August saw the most speed-related fatal collisions. December recorded the most injury collisions involving unsafe speed.

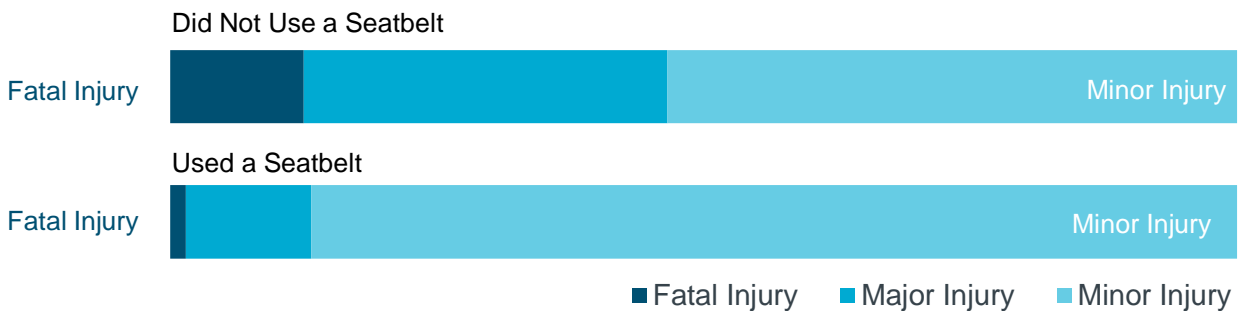
## Restraint Use of Vehicle Occupants and Injury Severity (Use versus Non-Use)

2017

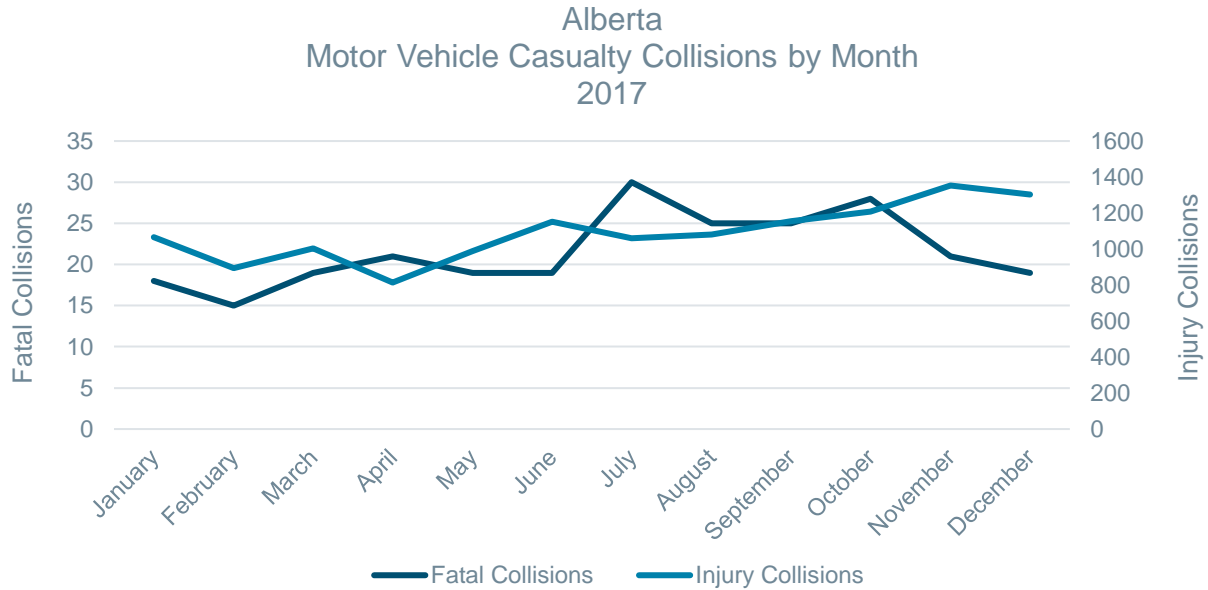
Injury Severity of Occupants	Percentage of Occupants Using Restraints	Percentage of Occupants Not Using Restraints
	%	%
Fatal Injury	0.1	2.2
Major Injury	0.8	6.0
Minor Injury	5.9	9.4
<b>Total Occupants Sustaining Injuries</b>	<b>6.8</b>	<b>17.6</b>
No Apparent Injury	93.2	82.4
<b>Total Occupants</b>	<b>100.0</b>	<b>100.0</b>

Collision involved restraint users had a much lower injury rate (6.8%) than those not using restraints (17.6%). This table illustrates the moderating effect of seat belt use on injury severity. Occupants using a restraint reduce the likelihood of sustaining an injury and the severity of injury decreases.

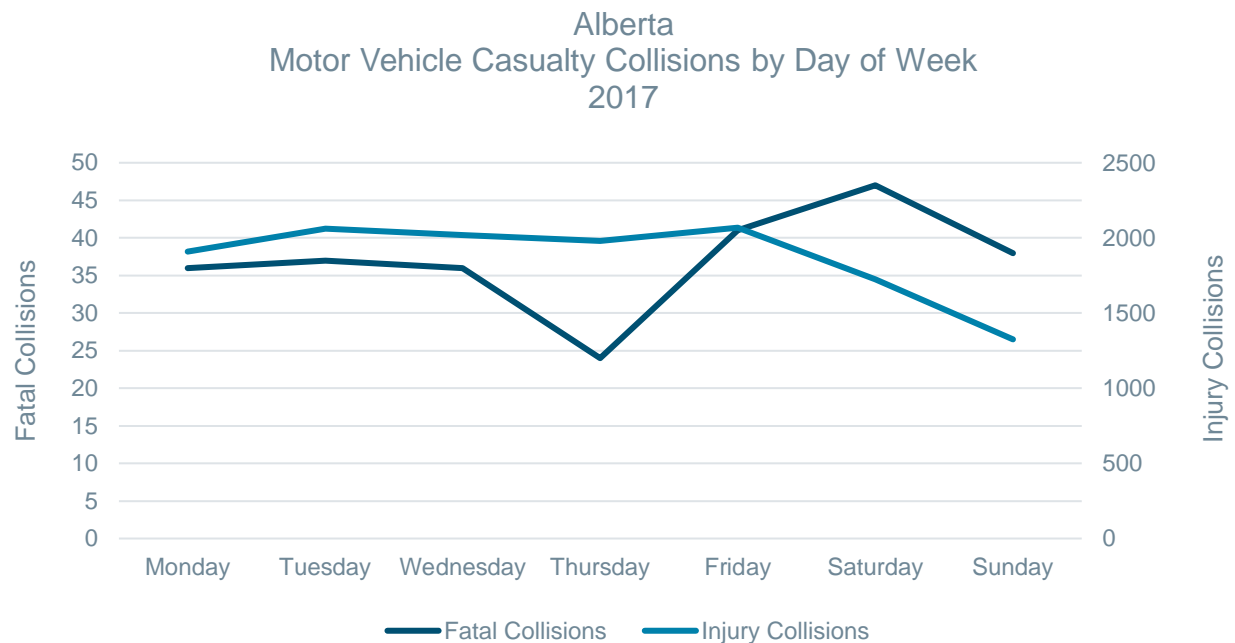
During 2017, 45 people who died and 312 people who sustained injuries were not properly restrained at the time of the collision.



## When Did Casualty Collisions Occur?

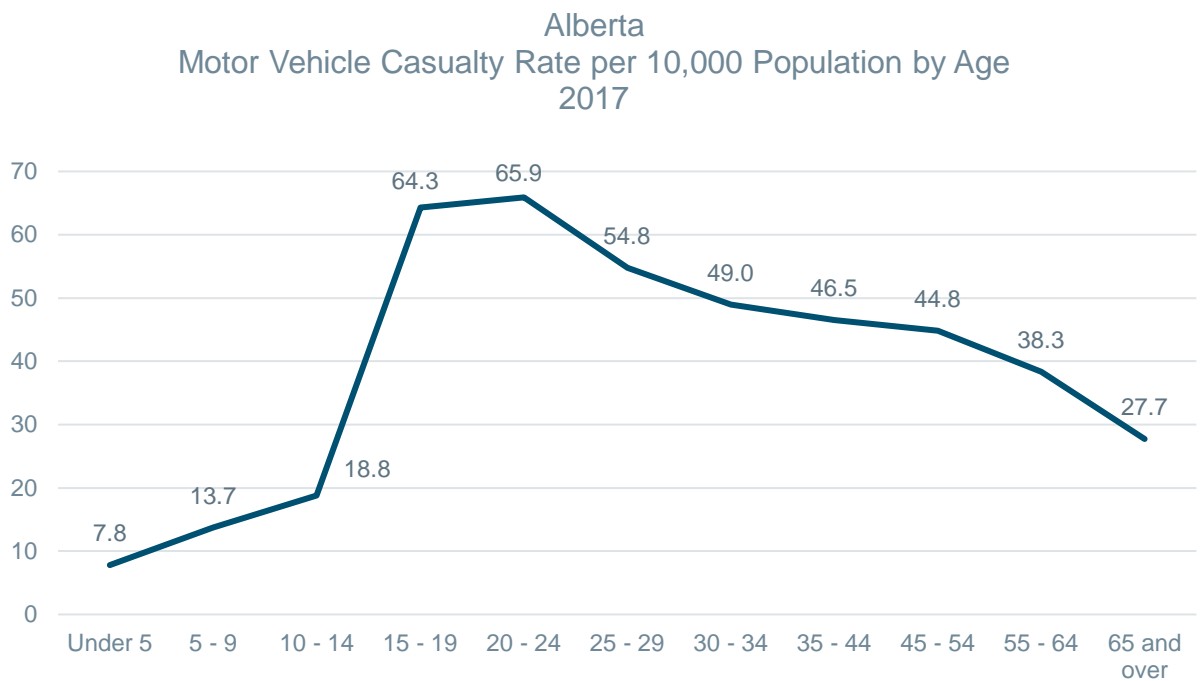
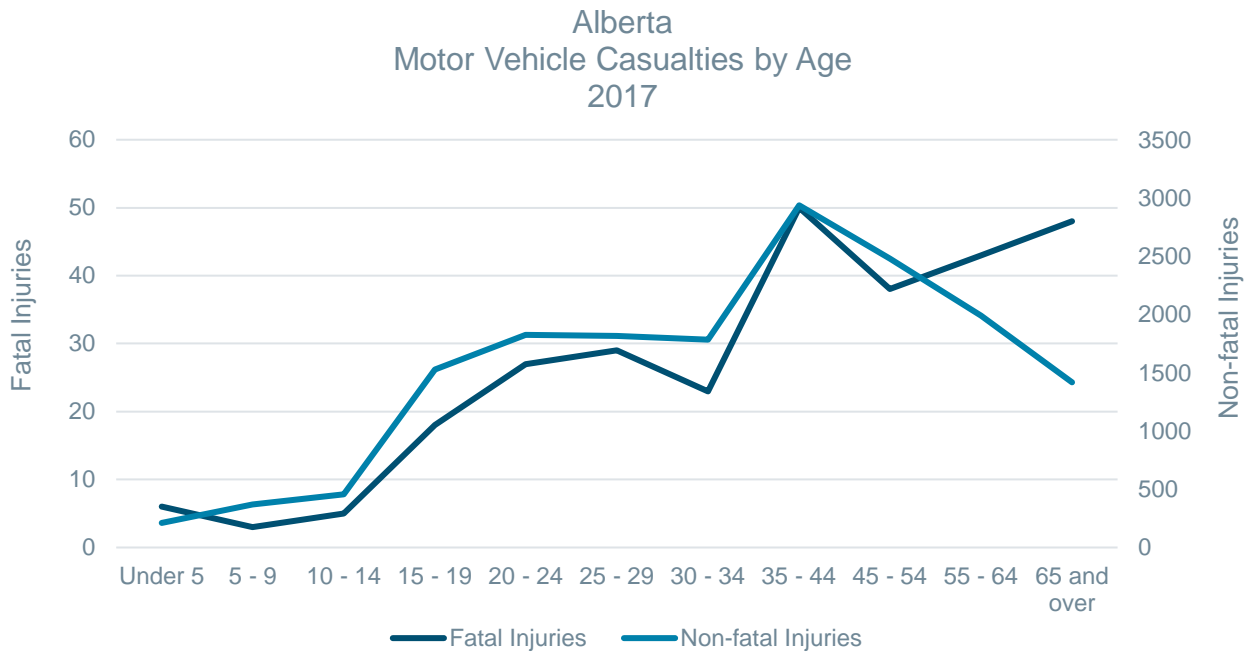


During 2017, July recorded the highest number of fatal collisions at 30 (11.6%) and November saw the highest number of injury collisions at 1,353 (10.3%).



Saturday recorded the most fatal collisions at 47 (18.1%) and Friday recorded the most injury collisions at 2,068 (15.8%).

## Who Were the Victims in Casualty Collisions?



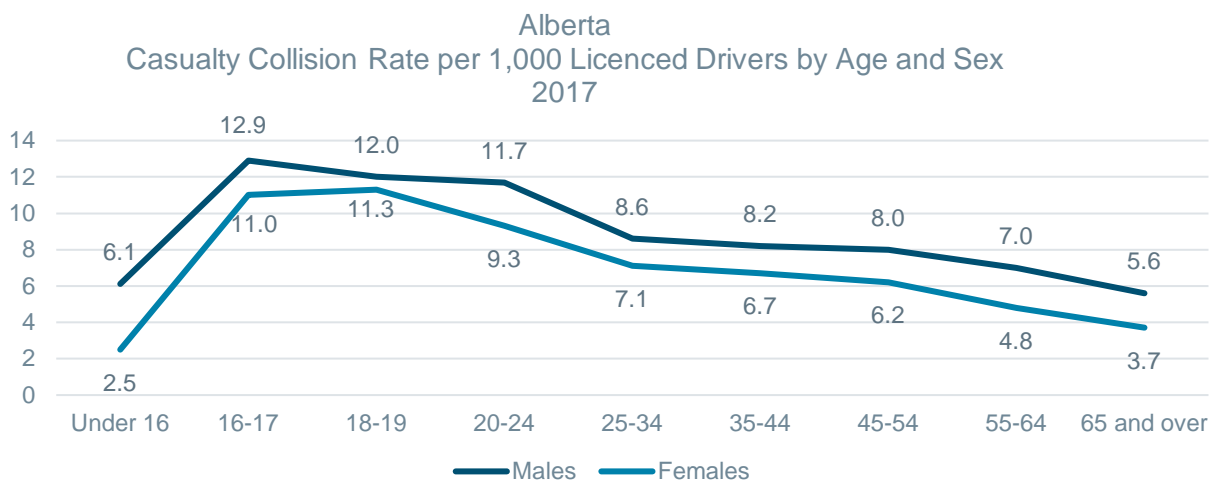
Casualty rates per 10,000 population continue to be highest for persons between the ages of 15 and 24. The lowest casualty rates were recorded for children 14 years of age and younger.

## Who Were the Drivers in Casualty Collisions? 2017

Age of Driver	Male			Female			Total*		
	N	%	Rate Per 1,000 Licenced Drivers	N	%	Rate Per 1,000 Licenced Drivers	N	%	Rate Per 1,000 Licenced Drivers
Under 16	105	0.4	6.1	41	0.2	2.5	146	0.6	4.3
16 - 17	435	1.8	12.9	339	1.4	11.0	774	3.3	12.0
18 - 19	505	2.1	12.0	433	1.8	11.3	938	4.0	11.6
20 - 24	1,497	6.3	11.7	1,078	4.5	9.3	2,575	10.9	10.6
25 - 34	3,005	12.7	8.6	2,283	9.6	7.1	5,288	22.3	7.9
35 - 44	2,625	11.1	8.2	1,978	8.3	6.7	4,603	19.4	7.5
45 - 54	2,243	9.5	8.0	1,584	6.7	6.2	3,827	16.1	7.1
55 - 64	1,856	7.8	7.0	1,163	4.9	4.8	3,019	12.7	5.9
65 and over	1,276	5.4	5.6	761	3.2	3.7	2,035	8.6	4.7
Unspecified	93	0.4		32	0.1		526	2.2	
<b>Total Number of Drivers</b>	<b>13,640</b>	<b>57.5</b>		<b>9,692</b>	<b>40.8</b>		<b>23,731</b>	<b>100.0</b>	

Collision rates per 1,000 licensed drivers indicated that males 16 to 17 years old were more likely to be involved in a casualty collision than any other age group. The next age group most likely to be involved in casualty collisions was males 18 to 19 years old.

\*Total includes drivers whose sex was not specified on the collision report form. Includes bicyclists.



## Improper Driver Actions in Casualty Collisions 2017

Improper Actions*	Drivers in Fatal Collisions		Drivers in Non-Fatal Injury Collisions		Total Drivers in Casualty Collisions	
	N	%	N	%	N	%
Followed Too Closely	11	5.0	3,233	32.3	3,244	31.7
Ran Off Road	92	42.0	1,753	17.5	1,845	18.0
Left Turn Across Path	9	4.1	1,163	11.6	1,172	11.4
Stop Sign Violation	36	16.4	761	7.6	797	7.8
Disobey Traffic Signal	4	1.8	626	6.2	630	6.2
Failed to Yield Right of Way to Pedestrian	6	2.7	455	4.5	461	4.5
Improper Turn	2	0.9	334	3.3	336	3.3
Improper Lane Change	1	0.5	334	3.3	335	3.3
Left of Centre	43	19.6	268	2.7	311	3.0
Backed Unsafely	1	0.5	276	2.8	277	2.7
Failed to Yield Right of Way - Uncontrolled Intersection	1	0.5	210	2.1	211	2.1
Yield Sign Violation	3	1.4	172	1.7	175	1.7
Improper Passing	4	1.8	117	1.2	121	1.2
Other	6	2.7	318	3.2	324	3.2
<b>Total Number of Drivers</b>	<b>219</b>	<b>100.0</b>	<b>10,020</b>	<b>100.0</b>	<b>10,239</b>	<b>100.0</b>

Following too closely (31.7%), running off the road (18.0%) and making a left turn across the path of an oncoming vehicle (11.4%) were the most frequently identified improper driver actions contributing to casualty collisions.

\*Based on those cases where driver actions were specified on the collision report form. Includes bicyclists. Note: There were a total of 21,123 drivers involved in casualty collisions for which a driver action was specified on the collision report form. 10,884 were indicated as driving properly at the time of the collision.

## What Types of Vehicles Were Involved in Casualty Collisions? 2017

Type of Vehicle	Vehicles in Fatal Collisions		Vehicles in Non-Fatal Injury Collisions		Total Vehicles in Casualty Collisions	
	N	%	N	%	N	%
Passenger Car	108	24.4	8,652	36.7	8,760	36.5
Mini-Van/MPV	101	22.8	7,248	30.8	7,349	30.6
Pick-up Truck/Van	130	29.3	5,220	22.2	5,350	22.3
Truck 4500 kg+	15	3.4	763	3.2	778	3.2
Motorcycle	27	6.1	526	2.2	553	2.3
Tractor-Trailer	49	11.1	473	2.0	522	2.2
Bicycle	6	1.4	416	1.8	422	1.8
Transit Bus	2	0.5	64	0.3	66	0.3
Off-Highway Vehicle	1	0.2	51	0.2	52	0.2
School Bus	--	--	44	0.2	44	0.2
Emergency Vehicle	--	--	38	0.2	38	0.2
Construction Equipment	1	0.2	21	0.1	22	0.1
Farm Equipment	1	0.2	14	0.1	15	0.1
Motorhome	--	--	13	0.1	13	0.1
Other Bus	2	0.5	10	0.0	12	0.0
Moped	--	--	5	0.0	5	0.0
Motorized Snow Vehicle	--	--	2	0.0	2	0.0
Intercity Bus	--	--	2	0.0	2	0.0
Other	--	--	1	0.0	1	0.0
<b>Total Number of Vehicles</b>	<b>443</b>	<b>100.0</b>	<b>23,563</b>	<b>100.0</b>	<b>24,006</b>	<b>100.0</b>

Passenger cars (36.5%), mini-vans/MPVs (30.6%) and pick-up trucks/vans (22.3%) were the vehicles most frequently involved in casualty collisions.