A publication of the
Indiana University Public Policy Institute

An Indiana Traffic Safety Facts publication

INDIANA CRASH FACTS 2016

COMMERCIAL VEHICLES

BICYCLISTS

SEATBELT USE

MOTORCYCLES

YOUNG DRIVERS

PEDESTRIANS

CHILD PASSENGER SAFETY

ALCOHOL-IMPAIRED

SPEEDING

INTRODUCTION AND ACKNOWLEDGEMENTS

Designing and implementing effective traffic safety policies requires data-driven analysis of traffic collisions. To help in the policy-making process, the Indiana University Public Policy Institute (PPI) collaborates with the Indiana Criminal Justice Institute (ICJI) to analyze data from the Automated Reporting Information Exchange System (ARIES) database maintained by the Indiana State Police. Research findings are summarized in a series of annual fact sheets on various aspects of traffic collisions, including alcohol-impaired crashes, children, motorcycles, dangerous driving, occupant protection, non-motorists, commercial vehicles, and young drivers. Portions of the content of those reports and in this Crash Fact Book are based on guidelines provided by the U.S. National Highway Traffic Safety Administration (NHTSA).

The *Indiana Officer's Standard Crash Report*, completed by local and state law enforcement officers, contains over 200 data items for each collision reported. These include the date, time and location of the collision, the types of vehicle(s) involved, a description of the events prior to the collision, conditions at the time of the collision, as well as information on the driver passengers, pedestrians, pedalcyclists, and animal-drawn vehicle occupants involved in the collision. These statistics are used to inform the public, as well as state and national policymakers, on matters of road safety and serve as the analytical foundation of traffic safety program planning and design in Indiana.

PPI would like to thank the Indiana Criminal Justice Institute, NHTSA, the Federal Highway Administration (FHWA), the Indiana State Police, and LexisNexis Risk Solutions for their continued support and guidance throughout the process of creating these reports. Cooperation of the Indiana Bureau of Motor Vehicles in providing data on Indiana registered vehicles and licensed drivers and to the Indiana Department of Transportation for the vehicle miles traveled data.

Funding for these publications is provided by the Indiana Criminal Justice Institute and the National Highway Traffic Safety Administration. An electronic copy of the fact sheets and this document can be accessed via the PPI traffic safety website (https://trafficsafety.iupui.edu/), the ICJI traffic safety website (http://www.in.gov/cji/2329.htm), or you may contact the IU Public Policy Institute at 317-261-3000.

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NOTES:

Data discrepancies may exist between the 2016 Indiana traffic safety reports and previous traffic safety publications due to updates to the Indiana State Police ARIES data that have occurred since the original publication dates. The most recent ARIES upgrade added a clarification to reporting officers on the definition of *incapacitating* injuries criteria to include "transported from scene for treatment"; therefore, recent increases in *incapacitating* injuries should be interpreted with caution. Additionally, when considering reported decreases in 2016 *alcohol-impaired* crashes and fatalities, it is important to note that these numbers are likely to change once BAC results reported after the March 16, 2017, extract are submitted and analyzed.

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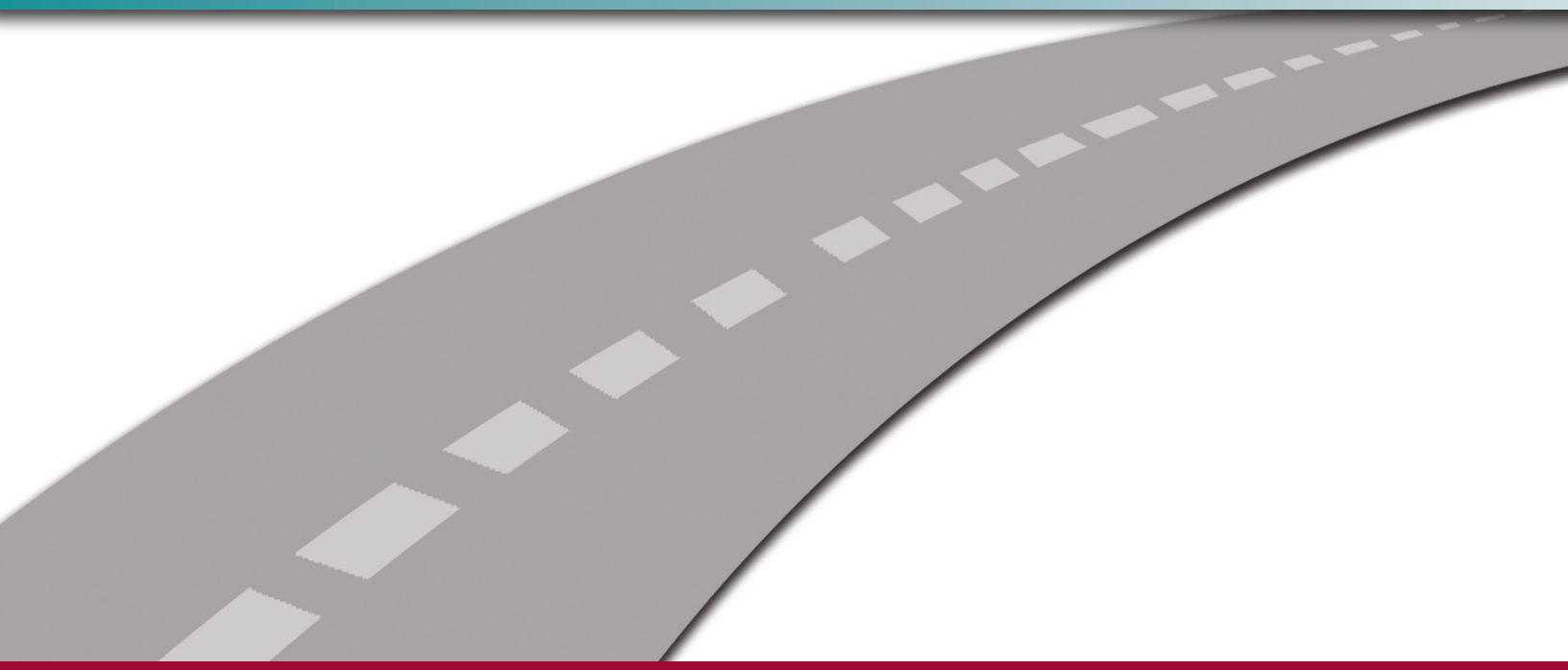


PROBLEM IDENTIFICATION, 2016

The Traffic Safety Division (TSD) of the Indiana Criminal Justice Institute (ICJI), in conjunction with the Indiana Governor's Council on Impaired and Dangerous Driving, annually develops a set of benchmarks as part of the Highway Safety Plan (HSP) to assess the state of traffic safety in Indiana. These benchmarks correspond to priority program areas established by the National Highway Traffic Safety Administration (NHTSA), targeting the occurrence of fatal and injury collisions as they relate to injuries overall, impaired driving, seatbelt usage, young drivers, motorcycle safety, dangerous driving, child passenger safety, and non-motorist injuries in collisions. Within each area, ICJI establishes specific annual goals and performance measures that relate to the occurrence of collisions and their impact on Indiana. ICJI also works closely with the Indiana Department of Transportation (INDOT) to ensure consistency in goal setting exists between the ICJI HSP, which approaches traffic safety from a policy and law enforcement perspective, and INDOT's Strategic Highway Safety Plan (SHSP), a document that approaches traffic safety from an engineering and transportation planning perspective.

Goal Setting by the Indiana Criminal Justice Institute

Each year, ICJI develops a set of specific short-term and long-term goals to be included in the HSP for each Indiana traffic safety problem area, and consistent with NHTSA's priority program areas. This section presents a set of baseline measures utilizing the most recent Indiana crash data, as well as historical data, maintained by the Indiana State Police in the Automated Reporting and Information Exchange System (ARIES).

NOTE: Subsequent sections include a general discussion of goals identified in the FY 2018 Indiana Highway Safety Plan. This document, produced annually by ICJI, uses ARIES crash data summarized in the 2016 traffic safety fact sheets produced by the Indiana University Public Policy Institute (PPI). These publications, along with this Crash Fact Book and the 2016 Indiana County Profile Book, were produced using the collision dataset current as of March 16, 2017. Discrepancies between figures presented in previous-year publications are due to updates to the ARIES collision dataset since the original publication date. For more details on specific goals, please refer to the ICJI FY 2018 Indiana Highway Safety Plan.

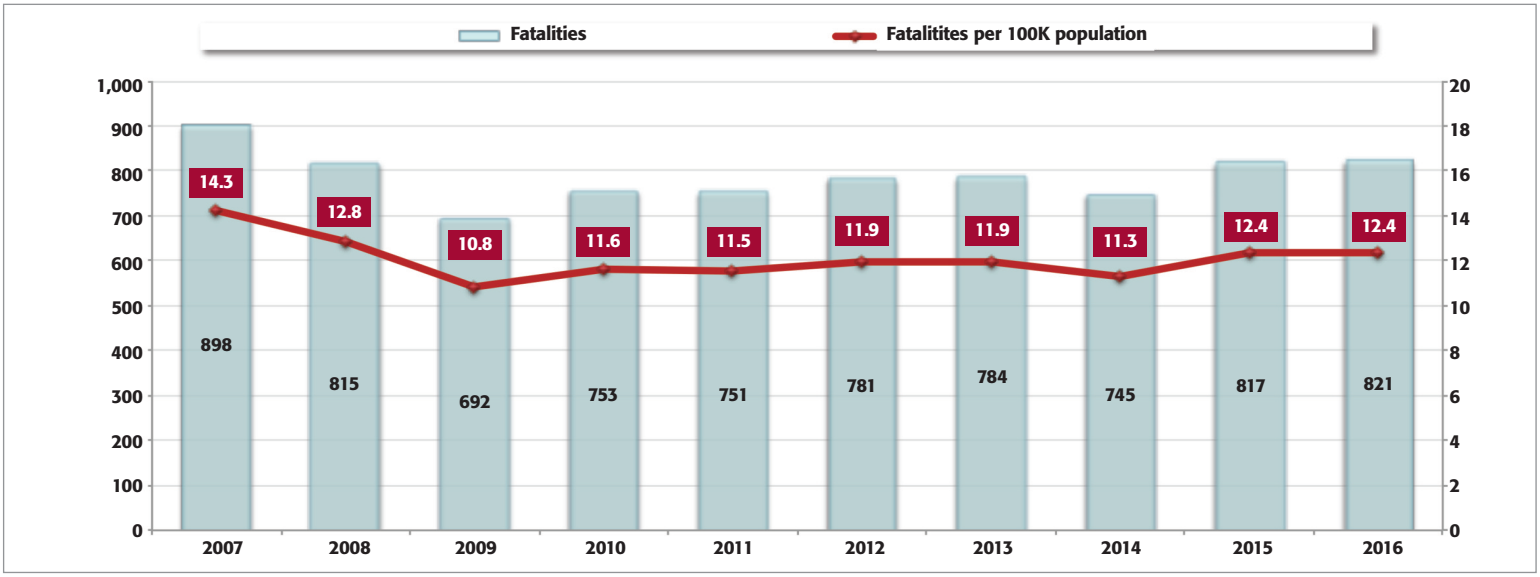
GOAL: Reducing fatalities and serious bodily injuries

Often, the severity of a traffic collision is influenced by many factors, including seatbelt usage, the speed at which vehicles are traveling, objects collided with, driver impairment and other dangerous driving behaviors, and emergency response times. Crashes in rural areas are more likely to result in fatalities largely due to these circumstances, as crashes are more likely to occur at higher speeds, with fixed objects that increase the force of impact, and because of greater distance and longer travel times to and from the crash site by emergency care providers.

In Indiana, traffic fatality rates have risen in recent years, after reaching an historic low of 10.8 per 100,000 of the population in 2009 (Figure 1.1). There were 821 traffic deaths in 2016, up slightly from 817 fatalities in 2015. The Indiana fatality rate per 100k remained the same at 12.4 during this same time period.

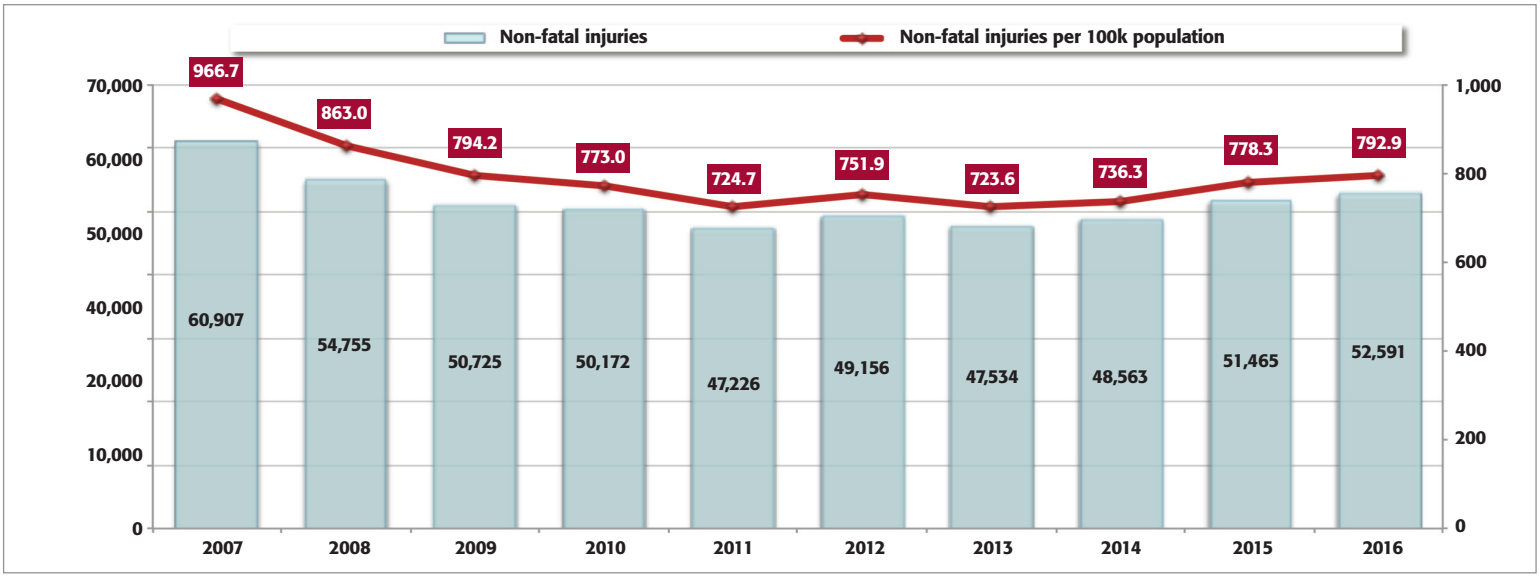
Non-fatal injury rates have also been on the rise since 2013 (Figure 1.2). The number of non-fatal injuries occurring in Indiana traffic collisions have also increased in recent years, from 47,534 in 2013 to 52,591 in 2016. The rate of non-fatal traffic injuries per 100,000 population in 2016 was 792.9, the highest rate since 2009.

Figure 1.1. Individuals killed in Indiana collisions, 2007-2016



Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017; U.S. Census Bureau, extracted from STATS Indiana, Indiana Business Research Center, August 17, 2017

Figure 1.2. Individuals suffering non-fatal injuries in Indiana collisions, 2007-2016

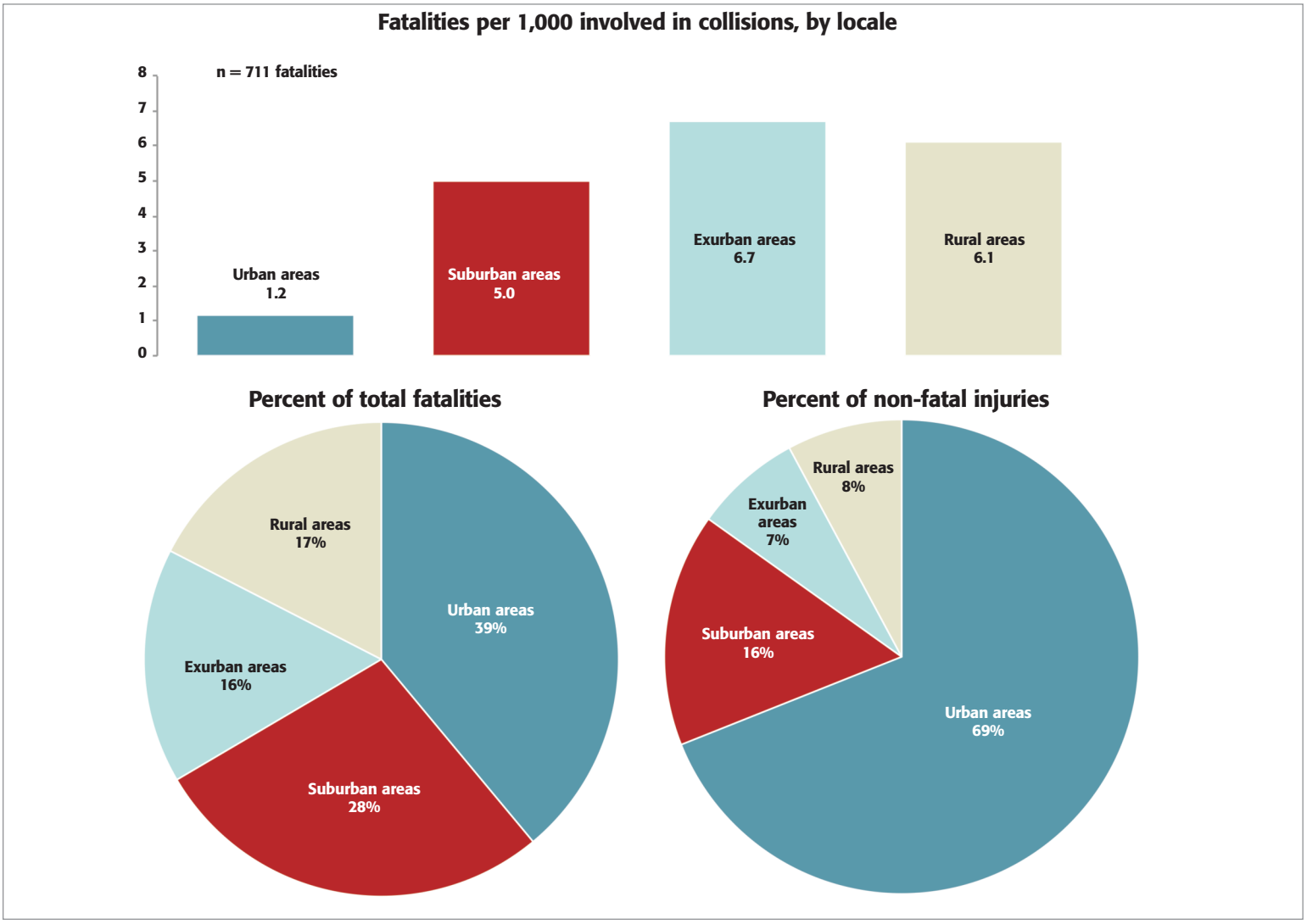


Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017; U.S. Census Bureau, extracted from STATS Indiana, Indiana Business Research Center, August 17, 2017

Note: Non-fatal injuries include those reported as *incapacitating, non-incapacitating, possible, not reported,* and *refused (treatment).*

Fatalities are more likely to occur in non-urban areas than less severe traffic injuries. In 2016, about 33 percent of all traffic fatalities occurred in *exurban* and *rural* areas, compared to 15 percent of non-fatal injuries (Figure 1.3). The *exurban* and *rural* rates of fatalities per 1,000 involved in collisions were 6.7 and 6.1, respectively, compared to 1.2 per 1,000 in *urban* areas.

Figure 1.3. Fatality rates and geographic distribution of fatalities and non-fatal injuries in Indiana collisions, by Census locale, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

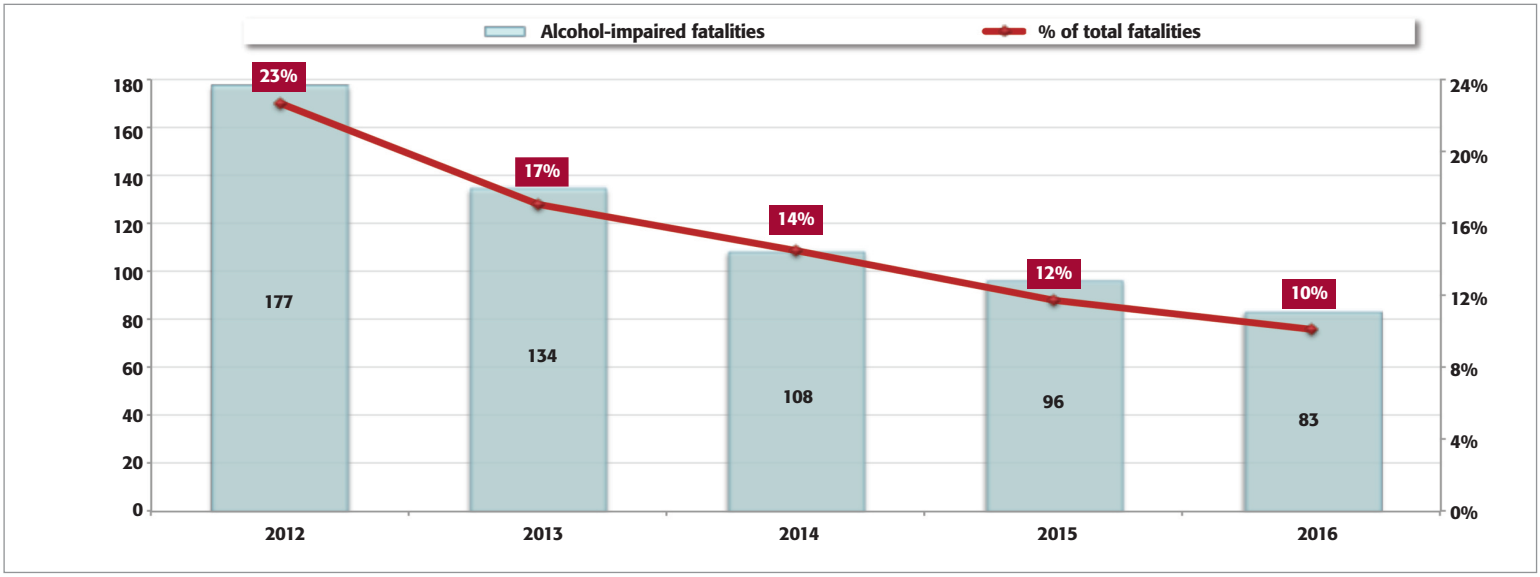
Notes:
1) *Non-fatal* injuries include those reported as *incapacitating, non-incapacitating, possible, not reported,* and *refused (treatment).*
2) Excludes fatalities and injuries where locale could not be determined. .

GOAL: Reducing impaired driving

According to available blood alcohol content (BAC) test results reported in ARIES, both the number (83) and percent (10) of Indiana traffic fatalities that involved an impaired driver reached a 5-year low in 2016 (Figure 1.4). These numbers are likely to increase, however, once BAC results reported after the March 16, 2017, extract are analyzed. According to the most recent data available from the NHTSA's Fatality Analysis Reporting System (FARS), 22 percent of all 2015 Indiana traffic fatalities occurred in crashes involving an alcohol-impaired driver, compared to 12 percent in 2015 as reported in ARIES (DOT HS 812 350).

Rates of driver alcohol impairment vary by vehicle type. Figure 1.5 shows that, in 2016, moped operators (13 percent) and pickup truck drivers (10 percent) had the highest percent of impaired driving in fatal crashes across all vehicle types. Six percent of all drivers in fatal Indiana collisions were driving legally impaired.

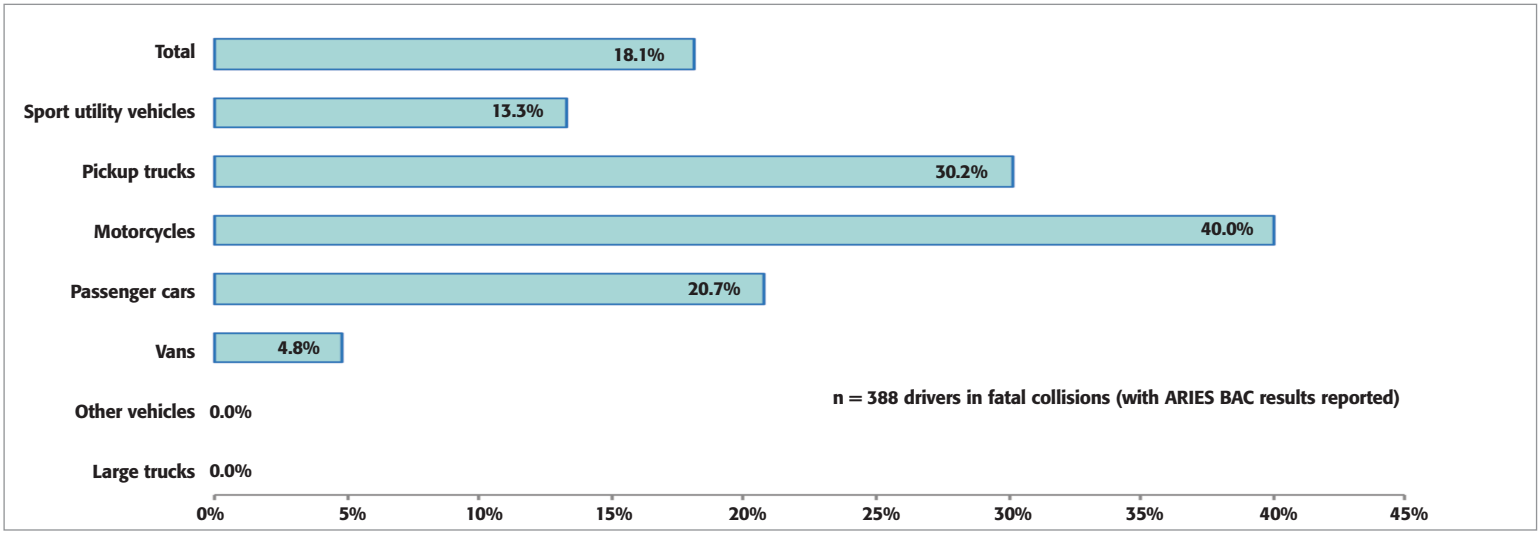
Figure 1.4. Indiana alcohol-impaired traffic fatalities as a percent of total traffic fatalities, 2012-2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: When considering the reported decreases in 2016 alcohol-impaired crashes and fatalities, it is important to note that these numbers are likely to increase once BAC results reported after the March 16, 2017, extract are analyzed.

Figure 1.5. Percent of drivers involved in fatal collisions with reported BAC results who were legally impaired, by vehicle type, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

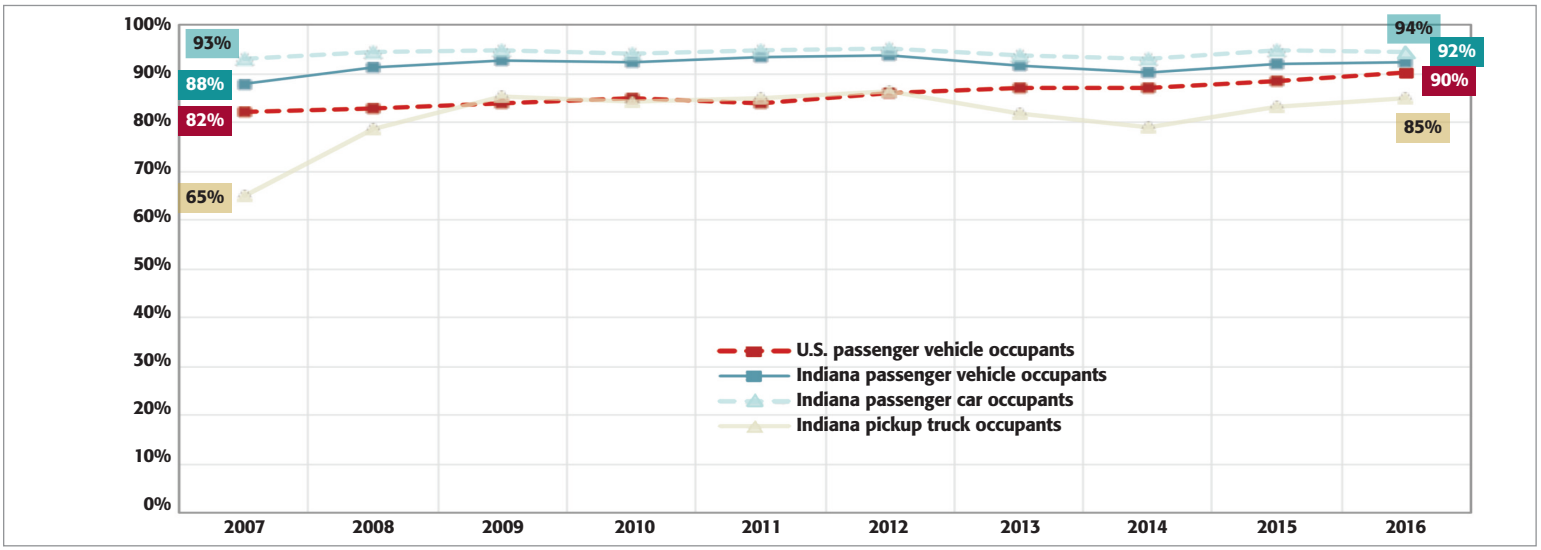
Notes:
1) *Other* vehicles includes *commercial buses, school buses, farm vehicles,* and *recreational vehicles.*
2) *Non-motorists* and *unknown* vehicle types are excluded.
3) *Motorcycles* include *motorcycles and motor driven cycles Class A. Mopeds include mopeds, motorized bicycles,* and *motor driven cycles Class B.*

GOAL: Increasing seatbelt usage

Indiana's observational rate of seatbelt use among passenger vehicle occupants has increased from 88 percent in 2007 to 92 percent in 2016, 2 percentage points higher than the most recently reported national rate (Figure 1.6). According to observational surveys conducted in Indiana, pickup truck seatbelt use rates, while continually lagging behind rates for passenger cars, have increased dramatically over the past decade, from a rate of 65 percent in 2007 to 85 percent in 2016.

Seatbelt use among people in collisions varies by injury severity and Census locale. Overall, seatbelt use among passenger vehicle occupants **involved** in 2016 collisions was higher in more densely populated *urban* (91 percent) and *suburban* areas (92 percent) compared to 85 percent in *rural* areas (Figure 1.7). Seatbelt use among passenger vehicle occupants **killed** in collisions follows a similar pattern, although usage rates are consistently far lower among individuals fatally injured. Among passenger vehicle occupants killed in collisions, 51 percent were wearing seatbelts in *urban* areas, compared to 38 percent in *rural* and 37 percent in exurban areas.

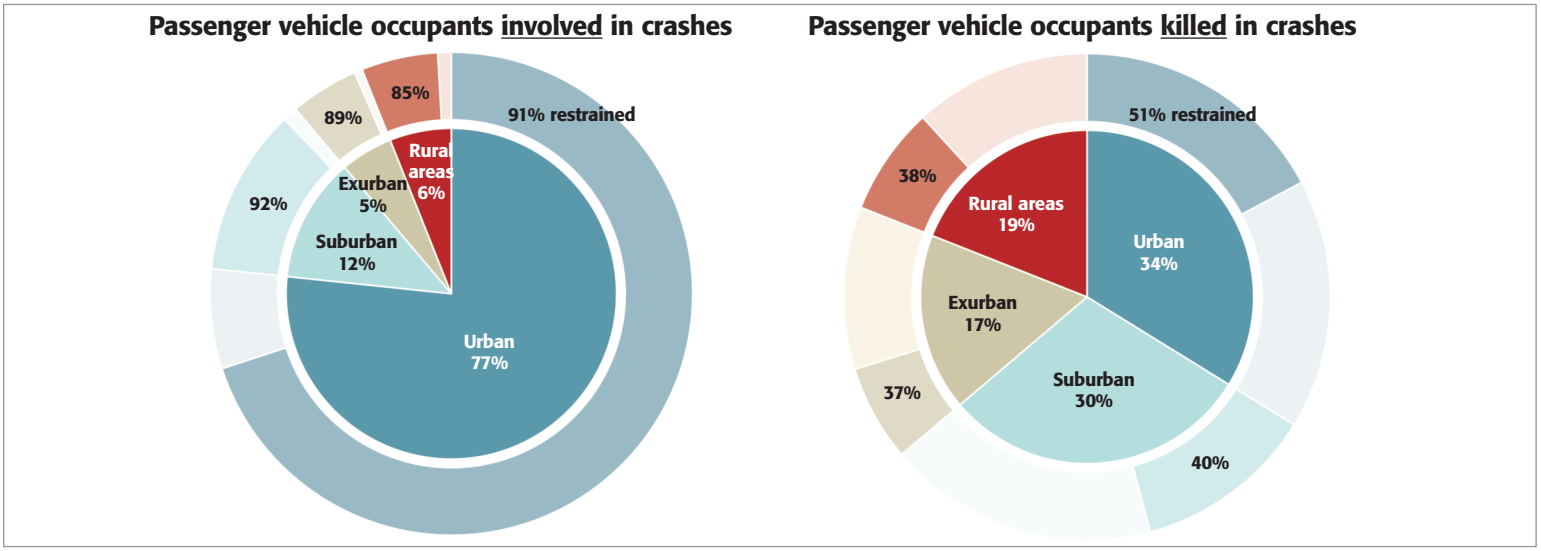
Figure 1.6. Comparison of observed seatbelt usage rates by vehicle type, 2007-2016



Sources: Indiana - *Indiana Roadside Observational Survey of Safety Belt Use*, Center for Road Safety, Purdue University, 2016
U.S. - *Seat Belt Use in 2016 - Use Rates in the States and Territories. National Highway Traffic Safety Administration:* DOT HS 812 351, November 2016

Note: When considering decreases in *alcohol-impaired* crashes and fatalities, it is important to note that these numbers reflect under-reported BAC results each year, as follows: The percentage of involved drivers with actual BAC results reported in ARIES: 2012 (67 percent), 2013 (53), 2014 (49), 2015 (43), and 2016 (33)

Figure 1.7. Seatbelt usage among passenger vehicle occupants in Indiana collisions, by injury status and Census locale, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

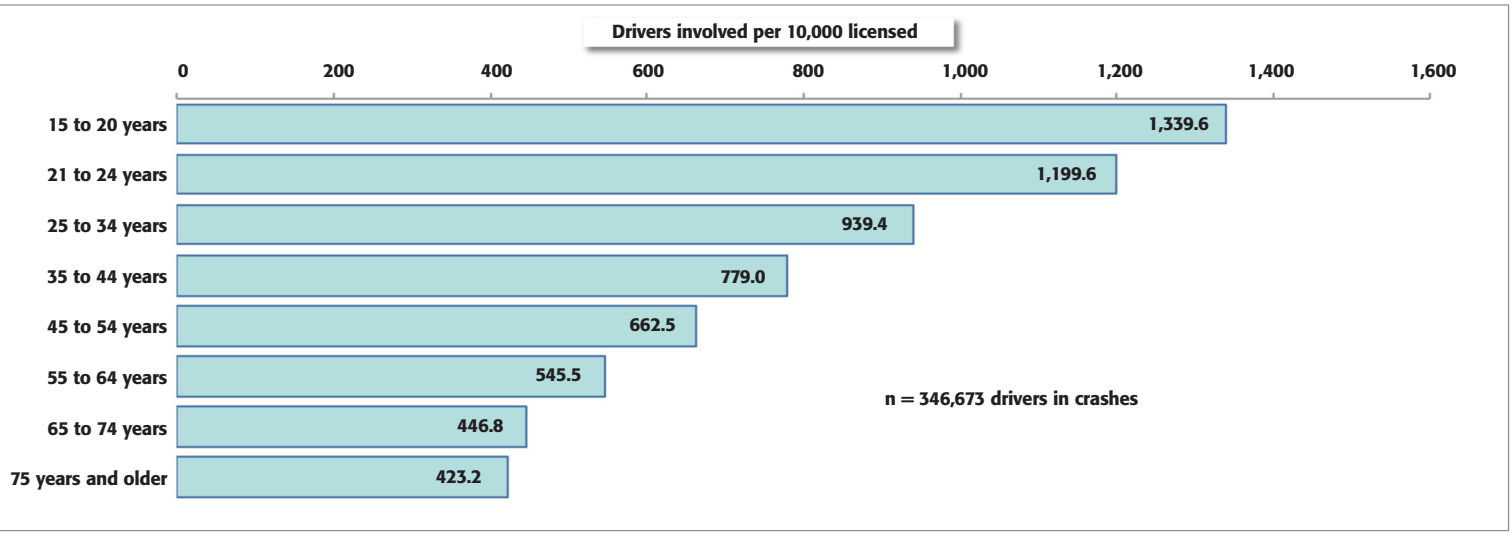
Notes:
1) Passenger vehicles include vehicles reported as a *passenger car, pickup truck, van,* or *sport utility vehicle.*
2) Excludes cases where locale could not be determined.

GOAL: Reducing young driver involvement in fatal crashes

In 2016, collision involvement rates were higher among young drivers than any other age group (Figure 1.8). Crash rates are lowest among drivers 75 years and older (423 per 10,000 licensed). Drivers, ages 15 to 20 years old, had the highest rate of crash involvement (1,340 per 10,000 licensed). Research shows that young drivers are more likely than older drivers to be involved in collisions due to aggressive driving behavior and a lack of experience.

The overall number of young drivers involved in collisions increased between 2012 and 2016, from 40,497 to 46,384, respectively (not shown). During this same time period, the number of young drivers **killed** in collisions dropped from 54 in 2012 to 47 in 2016 (Figure 1.9).

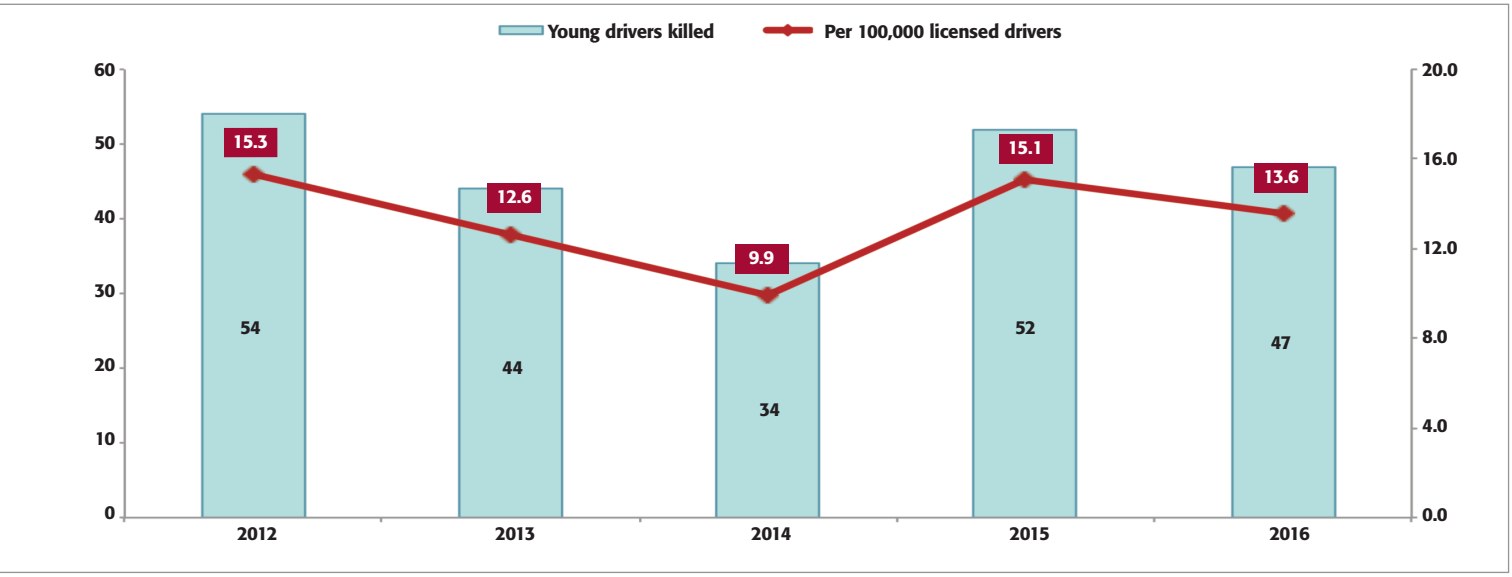
Figure 1.8. Drivers in Indiana crashes per 10,000 licensed, by age group, 2016



Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017; Indiana Bureau of Motor Vehicles

Note: Drivers with unknown or invalid age are excluded.

Figure 1.9. Young drivers killed in Indiana collisions, 2012-2016



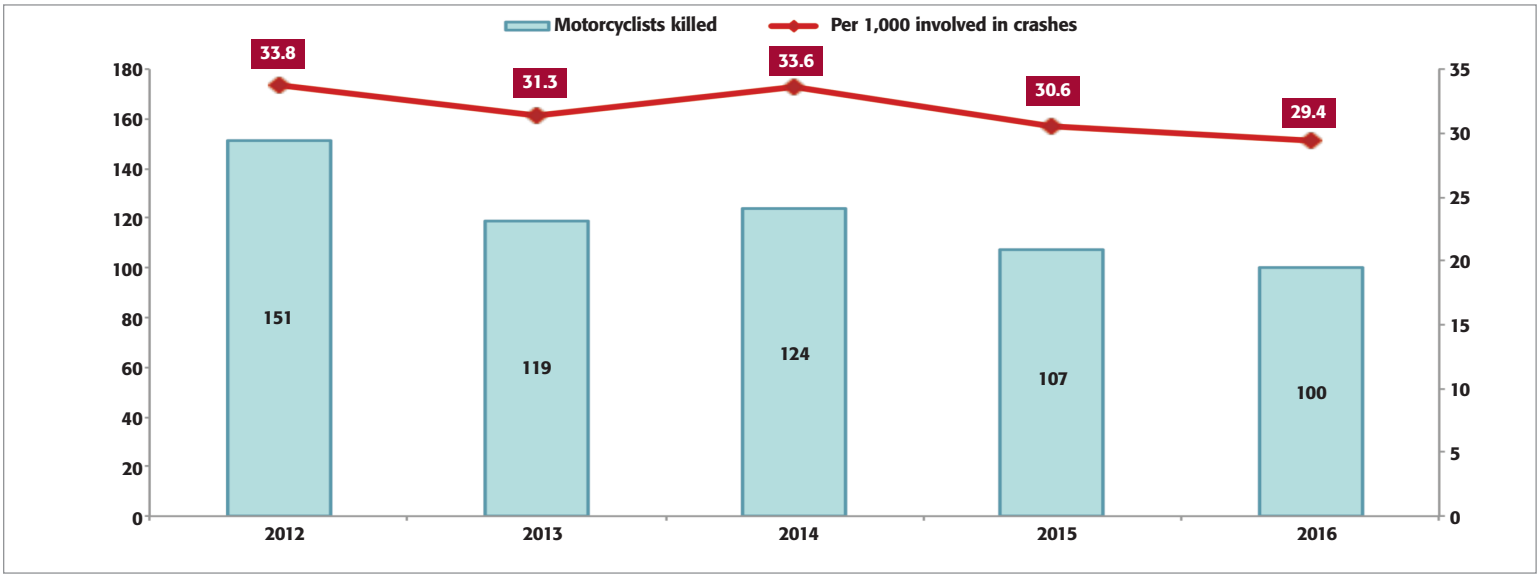
Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Young drivers* include drivers ages 15 to 20 years old.
2) *Non-motorists* are excluded.

GOAL: Reducing motorcyclist fatalities

The number of Indiana motorcyclist fatalities reached a 5-year low of 100 in 2016 (Figure 1.10). The rate per 1,000 motorcyclists involved in crashes decreased from 34 per 1,000 in 2012 to 29 per 1,000 in 2015.

Figure 1.10. Motorcyclists killed in Indiana collisions, 2012-2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

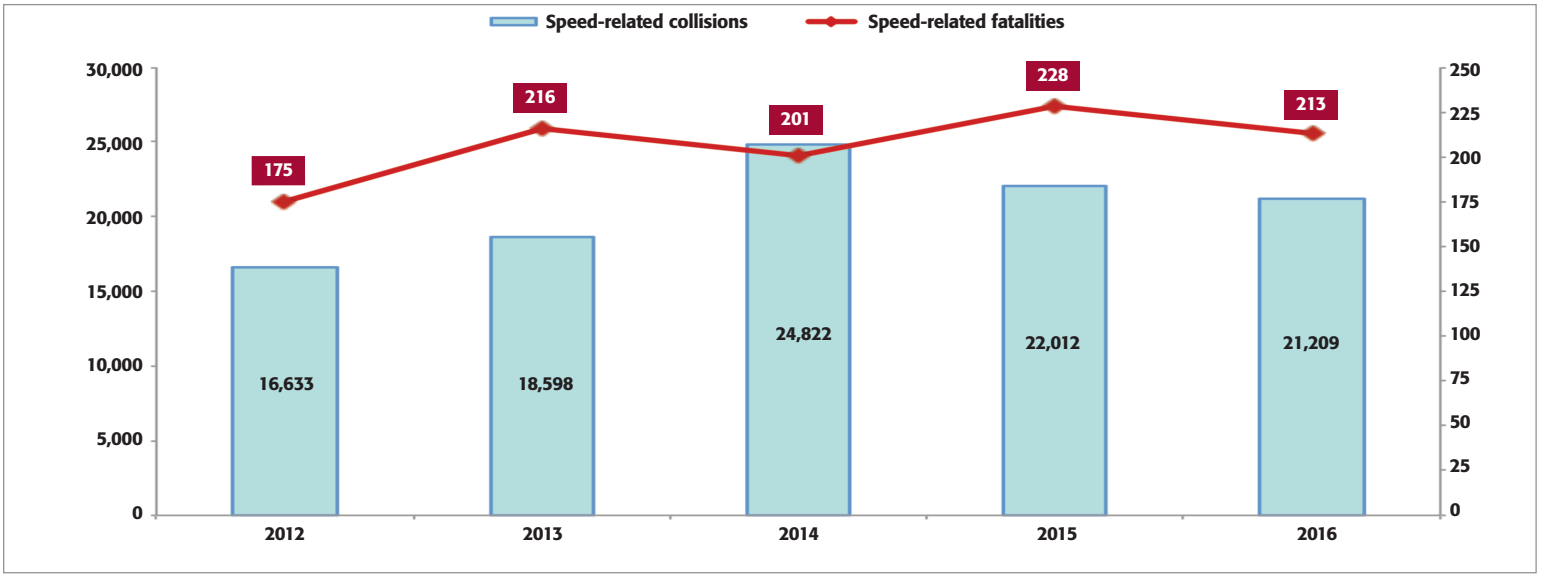
Note: *Motorcyclists* include operators and passengers of *motorcycles, motor driven cycles Class A, mopeds, motorized bicycles,* and *motor driven cycles Class B.*

GOAL: Reducing dangerous driving

The number of Indiana collisions that involved a speeding driver decreased to 21,209 in 2016, after reaching a five-year high in 2014 of 24,822 (Figure 1.11). The number of traffic fatalities that involved a speeding driver also decreased from 228 in 2015 to 213 fatalities in 2016.

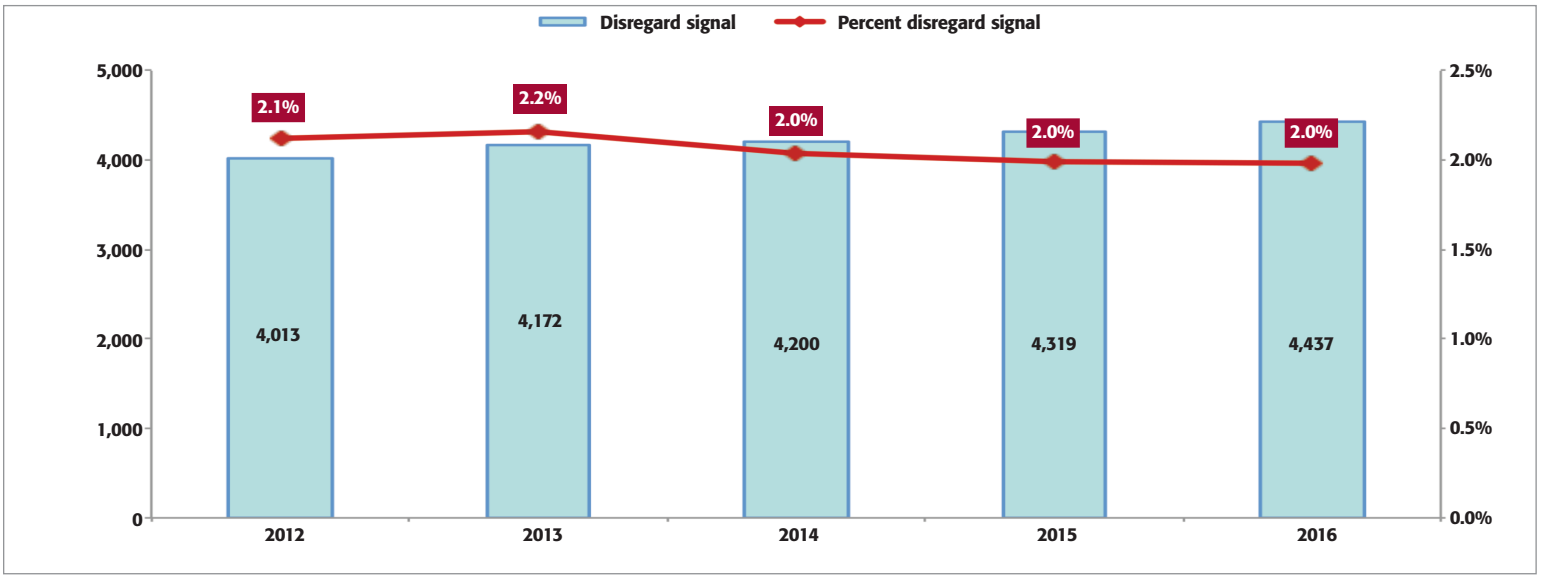
Disregarding traffic signals is also a form of dangerous driving. Both the number and percent of Indiana collisions that involved a driver who disregarded a signal has remained fairly steady since 2012 (Figure 1.12).

Figure 1.11. Indiana collisions that involved a speeding driver, 2012-2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Figure 1.12. Indiana collisions that involved a driver that disregarded a signal, 2012-2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

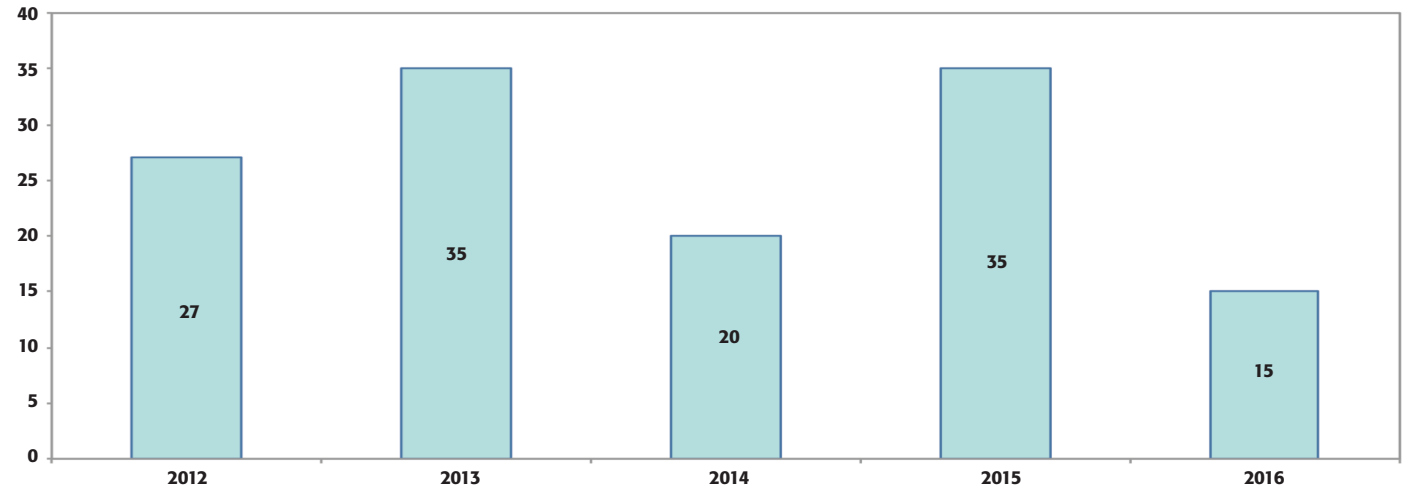
GOAL: Reducing fatalities and serious injuries among children

Between 2012 and 2016, Indiana child traffic fatalities reach a 5-year low (Figure 1.13). The number of children killed in Indiana traffic collisions decreased from 35 in 2015 to 15 in 2016.

GOAL: Reducing fatalities among non-motorists

In 2016, non-motorists (pedestrians and pedalcyclists) represented less than 1 percent of all individuals in traffic collisions, but 12 percent of total Indiana traffic fatalities (not shown). The percent of all pedestrians in Indiana crashes that were killed decreased from 5.1 percent in 2015 to 4.2 percent in 2016 (Figure 1.14). After reaching a 5-year low in 2015 (0.9 percent), the percent of pedalcyclists killed in collisions increased to 1.6 percent in 2016.

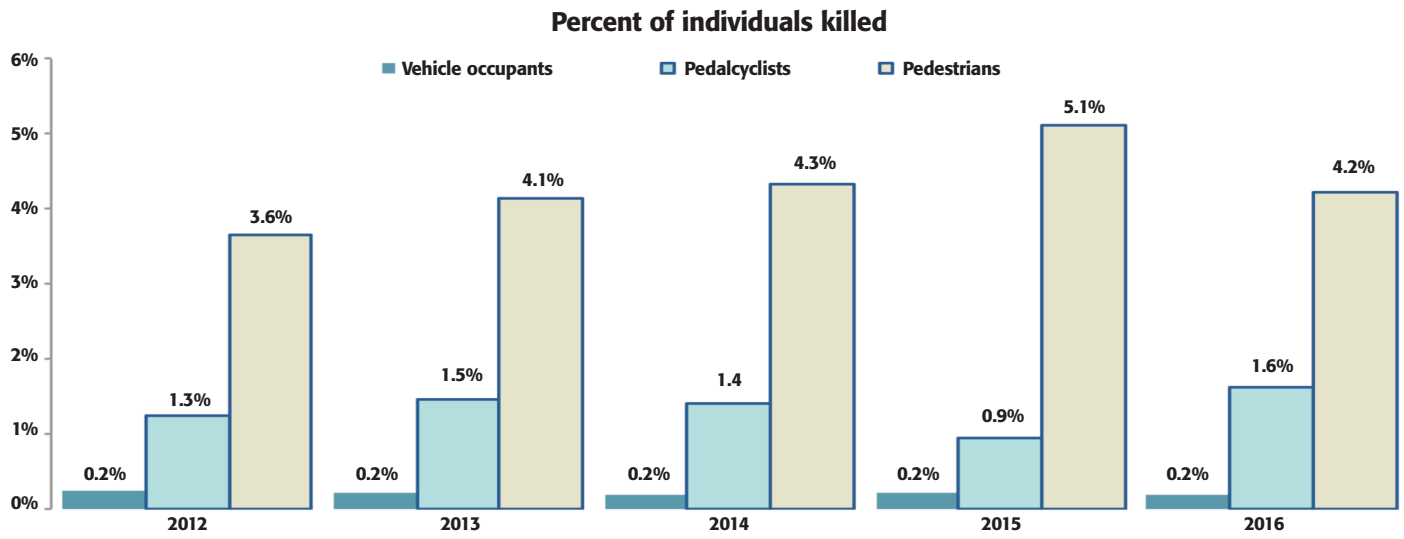
Figure 1.13. Children ages 14 and under killed in Indiana collisions, 2012-2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: *Children* include individuals ages 14 and under in collisions.

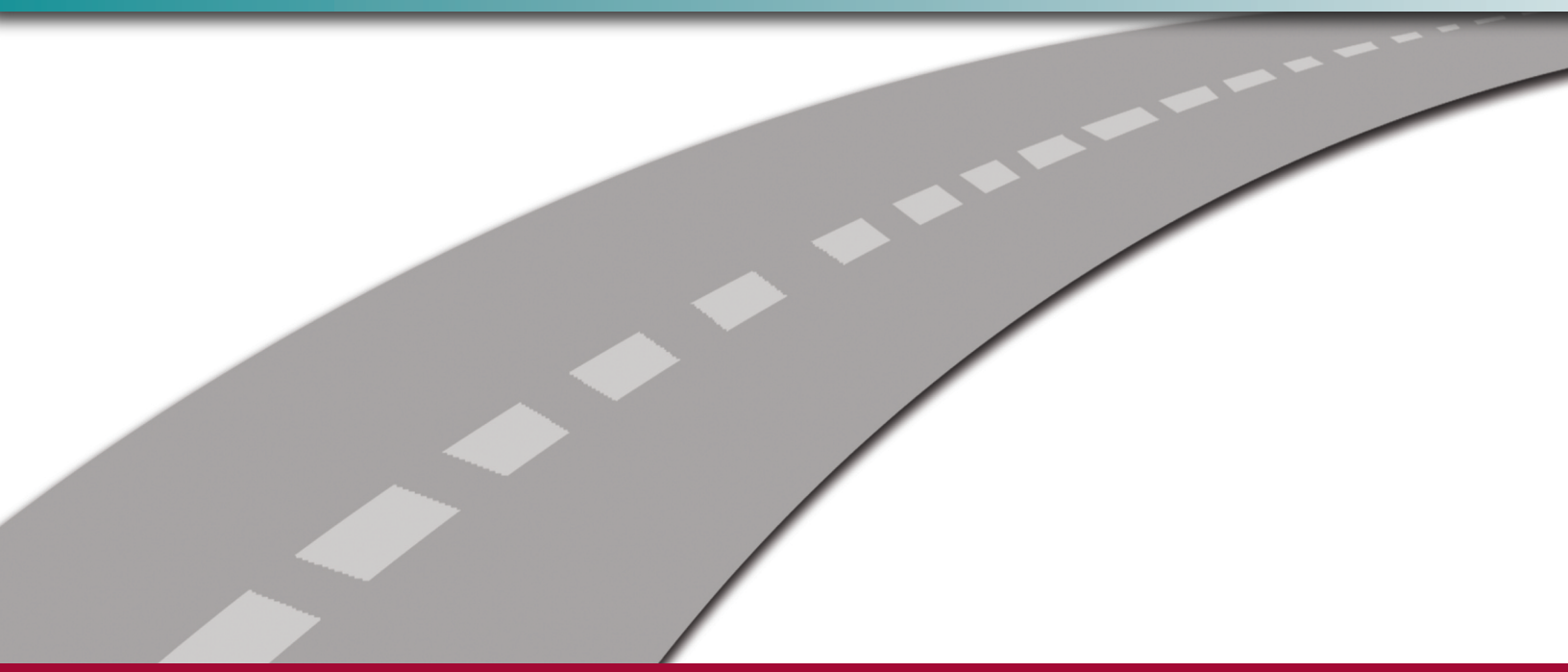
Figure 1.14. Fatalities in Indiana collisions as a percent of all involved, by person type, 2012-2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Animal-drawn vehicle occupants* are excluded.
2) *Vehicle occupants* include *drivers* and *passengers*.

COUNTY COMPARISONS



COUNTY COMPARISONS BY SUBJECT AREA, 2016

Understanding the spatial distribution of traffic collisions and injuries can assist officials in developing policies and targeting resources to address the many variables that may impact the geography of crashes. A variety of factors may influence the number and nature of traffic collisions that occur in a given area, including the size and makeup of the population, the number of registered vehicles and licensed drivers, the number of vehicle miles traveled (VMT), and, perhaps most importantly, human behaviors and social norms that may contribute to the likelihood of particular types of crashes occurring in regions throughout the state. The following tables and *choropleth* maps show various collision and injury rates in Indiana counties in 2016. The economic costs associated with 2016 collisions are also reported for each county.

Note: Choropleth maps show counties grouped by quartiles.

Collision severity and injuries

In 2016, 223,733 collisions occurred in Indiana, 768 of which were fatal. The mean number of collisions per county was 2,432, and the mean number of fatal collisions per county was 8 (Table 2.1). Marion County ranked highest in the total number of collisions (37,447), and Pike County ranked highest in the percentage of all collisions that were fatal (2.0). The mean county rate of collisions per 100 million (100M) VMT was 242, and the median rate was 236.2 (Map 2.1). Tippecanoe (455.9), Brown (437.2), and Monroe (428.2) counties had the highest rate of collisions per 100M VMT.

The total number of individuals involved in 2016 Indiana collisions was 364,012, and the mean number of individuals involved in collisions per county was 3,957 (Table 2.2). Marion County had the largest number of individuals involved (65,721) and the largest number of traffic fatalities (100). The median county traffic fatality rate per 100,000 population was 15.3 (Map 2.2), with Decatur County having the highest rate per 100,000 (63.9) and Union County having the lowest (0.0).

Speed-related collisions

Speed-related collisions accounted for 9.5 percent of all Indiana collisions in 2016, and 26 percent of all fatal collisions (Table 2.3). The mean number of speed-related collisions per county was 231. Jay (2.4 percent) and Randolph (3.7 percent) counties had the lowest percentage of speed-related collisions, and Tipton (21.9 percent) and LaGrange (19.0 percent) had the highest percentages of all collisions that were speed-related. The median county percent of speed-related collision was 8.8, and many counties with the highest percentages of speed-related collisions were clustered in the northern half of the state (Map 2.3).

Alcohol collisions

Indiana collisions that involved an alcohol-impaired driver accounted for 2.1 percent of all Indiana collisions in 2016, and 9.5 percent of all fatal collisions (Table 2.4). The mean number of alcohol-impaired collisions per county was 52, and the mean number of fatal alcohol-impaired collisions per county was 1. The mean percentage of alcohol-impaired collisions was 2.5 percent. Daviess (9.2 percent) and Vermillion (5.0 percent) counties had the highest percentages of alcohol-impaired collisions, and Rush (0.6 percent), Adams (0.9 percent), Pulaski (1.1 percent), and Jay (1.1 percent) counties had the lowest percentage of alcohol-impaired collisions (Map 2.4).

Deer collisions

A large percentage of 2016 collisions that occurred in Indiana counties that are predominantly rural involved deer. Counties with the highest percentage of deer-involved collisions were clustered in areas outside of central Indiana. (Map 2.5). The mean percentage of deer-related collisions was 14.6 percent. Pulaski County (44.7) and Warren County (38.7 percent) had the highest percentages of deer-involved collisions, while the urban counties of Marion (0.3 percent) and Lake (1.3 percent) had the lowest percentages of collisions that involved deer.

Work zone collisions

There were 5,487 work zone collisions in Indiana in 2016 (Map 2.6). The mean county rate of work zone collisions per 1,000 total collisions was 113.6, and the median rate was 107.8. Jasper County (114.1), located in northwestern Indiana along I-65, Johnson County (94.0) in central Indiana, and Clark County (91.8), located in southeastern Indiana, had the highest rates of work zone collisions per 1,000 collisions. Given that work zone locations are constantly changing throughout the state, counties with the highest work zone collision rates tend to vary from year to year, accordingly.

Restraint use

Forty-six percent of all vehicle occupants killed in Indiana collisions were unrestrained in 2016, while only 6.2 percent of individuals suffering non-incapacitating injuries were unrestrained (Table 2.5). The median county percent of unrestrained passenger vehicle occupants injured in collisions was 18.0 (Map 2.7). Crawford (47.5), Owen (42.0), and Fountain (36.8) counties, located in the south and western portions of Indiana, had the highest rates of unrestrained passenger vehicle occupants injured in collisions. More generally, urban counties in central and northern Indiana had lower percentages of unrestrained injuries.

Young drivers

In 2016, 46,384 young drivers (ages 15 to 20) were involved in collisions (13.4 percent of all drivers involved). Forty-seven young drivers were killed in 2016 collisions (Table 2.6). Union County (20 percent) had the highest percentages of young drivers in collisions. The mean county rate of young driver involvement in collisions was 113.6 per 1,000 licensed young drivers, and the median county rate was 107.8. Counties that are the locations of large universities (Tippecanoe, Vanderburgh, Delaware, Elkhart, and Monroe) were among the highest rates of young driver involvement in collisions (Map 2.8), continuing a pattern observed year to year over the past decade.

Motorcycle collisions

Of the 223,733 collisions occurring in Indiana in 2016, 3,216 (1.4 percent) involved motorcycles, 101 of which were fatal, representing 13.8 percent of all fatal collisions (Table 2.7). On average, 2 percent of collisions in Indiana counties involved a motorcycle. The highest percentages of collisions involving motorcycles occurred in the southern Indiana counties of Brown (6.9) and Martin (4.5 percent) (Map 2.9).

Hit-and-run collisions

Drivers involved in collisions resulting in injury or death are expected to remain or immediately return to the scene to provide proper identification (IC 9-26-1-1); otherwise, the crash is considered a *hit-and-run*. Hit-and-run

collisions accounted for 9.4 percent or 21,209 of the 223,733 collisions in Indiana in 2016. The mean county percent of hit-and-run collisions was 8.3 percent, and the median county percent was 7.4 percent (Map 2.10). St. Joseph (20.5 percent), Marion (20.3 percent), and Vigo (20.0 percent) counties had the highest hit-and-run collision rates in the state in 2016.

County ranks

Table 2.8 shows Indiana counties ranked by six collision metrics: fatalities per 100K population, percent of speed-related collisions, percent of alcohol-impaired collisions, percent of motorcycle collisions, percent of unrestrained injuries in collisions, and percent of young drivers in collisions. A composite index consisting of the average of the six ranks was also calculated to provide an indication of a county's overall traffic safety environment. However, a number of factors not accounted for here—such as different population compositions, road types, driving conditions, crash reporting practices, etc.—may influence collision rankings, so readers should be mindful of these differences when viewing county ranks.

Based on the composite index (Map 2.11), many counties with relatively dangerous traffic safety environments were clustered in the southwestern and north central areas of Indiana in 2016. By this index, Pike County (1), Franklin County (2), and Parke County (3) were the most dangerous counties in 2016, while Clark (92), Vanderburgh (91), Hamilton (90), and Marion (89) counties were the safest. Most of the top ten counties with the most dangerous traffic safety environments in 2016 (Pike, Franklin, Parke, Daviess, Brown, Ohio, Cass, Vermillion, Martin, and Newton) were primarily rural counties.

Economic Costs

Map 2.12 shows the economic costs associated with collisions by county. Due to the fact that cost estimates are based on the number of collisions and injuries that occur in a county, and more heavily populated areas tend to record higher numbers of collisions and injuries, counties with larger populations had the highest total economic costs associated with collisions in 2016. Marion County recorded the highest estimated economic costs with $725 million, followed by Lake County ($423 million), and Allen County ($297 million). The median county economic cost of collisions was $26 million, and the mean county economic cost of collisions was $55 million. Map 2.13 shows the economic costs per capita associated with collisions by county in 2016. Decatur County ($1,346), Scott County ($1,093), and Harrison County ($1,043) had the highest per capita costs of collisions. The median county per capita cost of collisions was $746, and the mean county per capita cost of collisions was $752.

Table 2.1. Indiana collisions, by severity and county, 2016

	Total collisions		Fatal			Non-fatal injury		Property damage only	
	Count	County rank	Count	As % county total	County rank (on %)	Count	As % county total	Count	As % county total
All counties	**223,733**	**na**	**768**	**0.3**	**na**	**35,323**	**15.8**	**187,642**	**83.9**
Mean	2,432	na	8	0.6	na	384	15.4	2,040	84.0
Median	1,022	na	5	0	na	153	15	861	85
Minimum	99	na	0	0.0	na	18	8.8	73	68.7
Maximum	37,447	na	93	2.0	na	6,386	30.1	30,968	90.7
Adams	702	60	2	0.3	71	94	13.4	606	86.3
Allen	14,372	3	30	0.2	82	2,370	16.5	11,972	83.3
Bartholomew	2,248	23	14	0.6	33	625	27.8	1,609	71.6
Benton	153	91	2	1.3	5	19	12.4	132	86.3
Blackford	269	85	3	1.1	10	39	14.5	227	84.4
Boone	2,032	24	5	0.2	77	233	11.5	1,794	88.3
Brown	554	68	1	0.2	87	89	16.1	464	83.8
Carroll	482	74	4	0.8	23	66	13.7	412	85.5
Cass	1,154	40	8	0.7	30	166	14.4	980	84.9
Clark	5,327	9	10	0.2	86	788	14.8	4,529	85.0
Clay	792	56	5	0.6	32	113	14.3	674	85.1
Clinton	1,148	41	4	0.3	63	156	13.6	988	86.1
Crawford	346	82	2	0.6	35	53	15.3	291	84.1
Daviess	402	79	5	1.2	8	121	30.1	276	68.7
Dearborn	1,860	27	5	0.3	74	251	13.5	1,604	86.2
Decatur	1,010	48	16	1.6	3	142	14.1	852	84.4
DeKalb	1,338	37	5	0.4	58	167	12.5	1,166	87.1
Delaware	4,301	13	9	0.2	81	736	17.1	3,556	82.7
Dubois	1,563	30	3	0.2	85	198	12.7	1,362	87.1
Elkhart	7,726	6	16	0.2	83	941	12.2	6,769	87.6
Fayette	545	69	3	0.6	36	74	13.6	468	85.9
Floyd	3,082	18	8	0.3	75	434	14.1	2,640	85.7
Fountain	452	77	2	0.4	49	40	8.8	410	90.7
Franklin	555	67	3	0.5	37	90	16.2	462	83.2
Fulton	624	63	2	0.3	68	64	10.3	558	89.4
Gibson	1,131	42	10	0.9	17	192	17.0	929	82.1
Grant	2,396	22	9	0.4	57	317	13.2	2,070	86.4
Greene	958	51	5	0.5	39	150	15.7	803	83.8
Hamilton	8,500	5	15	0.2	88	1,114	13.1	7,371	86.7
Hancock	1,913	25	7	0.4	60	339	17.7	1,567	81.9
Harrison	1,280	38	11	0.9	18	191	14.9	1,078	84.2
Hendricks	4,558	11	16	0.4	62	623	13.7	3,919	86.0
Henry	1,026	46	10	1.0	11	210	20.5	806	78.6
Howard	2,741	19	14	0.5	41	500	18.2	2,227	81.2
Huntington	1,200	39	5	0.4	52	196	16.3	999	83.3
Jackson	1,731	28	4	0.2	79	210	12.1	1,517	87.6
Jasper	1,402	36	7	0.5	45	187	13.3	1,208	86.2
Jay	707	59	3	0.4	51	116	16.4	588	83.2
Jefferson	1,073	43	5	0.5	47	171	15.9	897	83.6
Jennings	836	55	7	0.8	21	111	13.3	718	85.9
Johnson	3,830	17	6	0.2	89	670	17.5	3,154	82.3
Knox	906	54	3	0.3	65	197	21.7	706	77.9
Kosciusko	2,728	20	14	0.5	40	412	15.1	2,302	84.4
LaGrange	1,018	47	6	0.6	34	143	14.0	869	85.4
Lake	17,364	2	48	0.3	72	2,902	16.7	14,414	83.0
LaPorte	4,033	15	19	0.5	46	701	17.4	3,313	82.1
Lawrence	1,525	32	6	0.4	54	265	17.4	1,254	82.2
Madison	4,179	14	12	0.3	70	589	14.1	3,578	85.6

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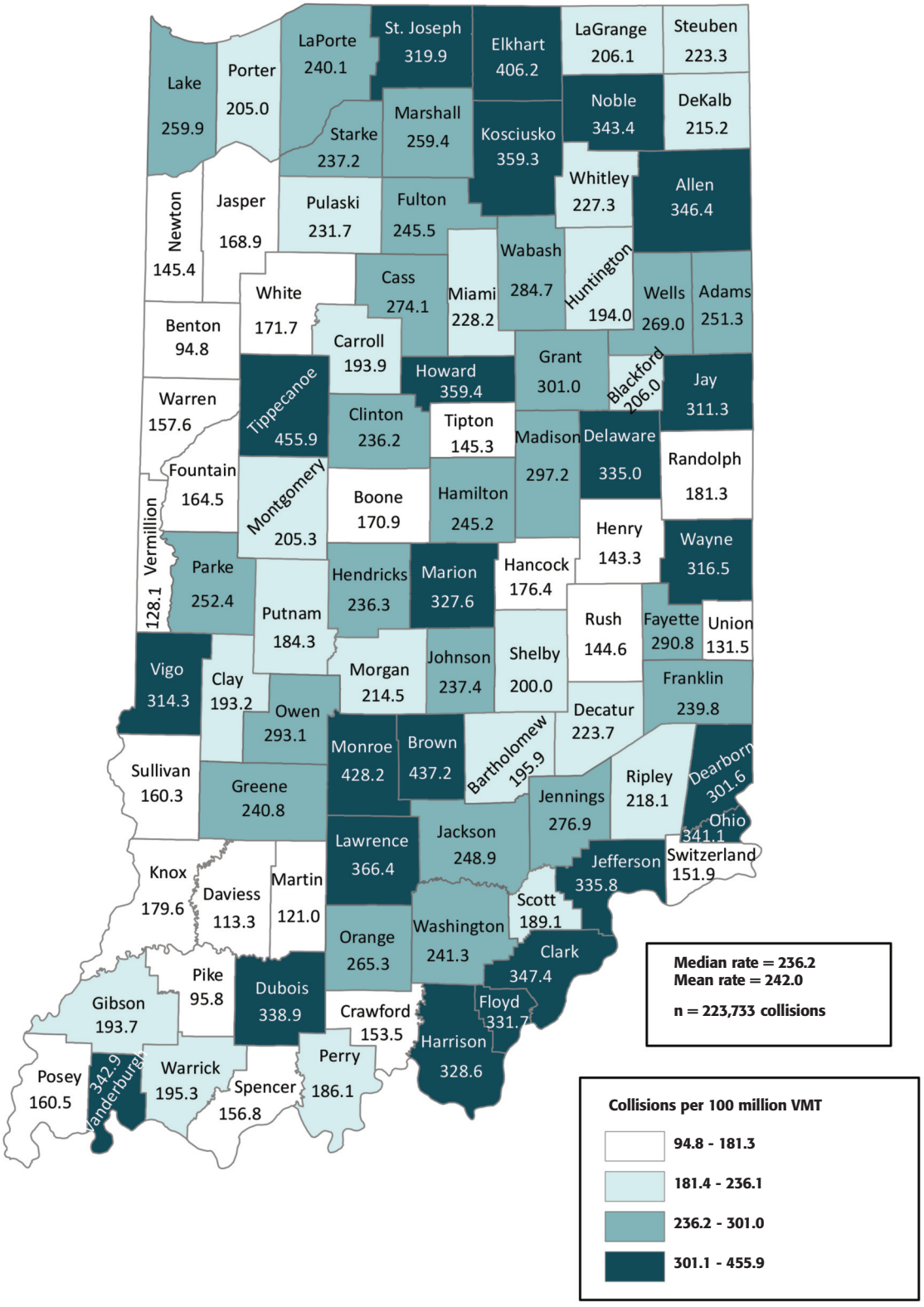
Table 2.1. *(continued)*

	Total collisions		Fatal			Non-fatal injury		Property damage only	
	Count	County rank	Count	As % county total	County rank (on %)	Count	As % county total	Count	As % county total
Marion	37,447	1	93	0.2	76	6,386	17.1	30,968	82.7
Marshall	1,597	29	8	0.5	44	201	12.6	1,388	86.9
Martin	156	90	2	1.3	6	31	19.9	123	78.8
Miami	1,051	45	4	0.4	55	145	13.8	902	85.8
Monroe	4,376	12	16	0.4	61	793	18.1	3,567	81.5
Montgomery	987	50	5	0.5	42	148	15.0	834	84.5
Morgan	1,907	26	14	0.7	29	318	16.7	1,575	82.6
Newton	369	81	3	0.8	24	55	14.9	311	84.3
Noble	1,480	34	4	0.3	73	190	12.8	1,286	86.9
Ohio	159	89	2	1.3	7	18	11.3	139	87.4
Orange	526	71	2	0.4	56	78	14.8	446	84.8
Owen	579	66	4	0.7	31	85	14.7	490	84.6
Parke	503	72	7	1.4	4	68	13.5	428	85.1
Perry	470	76	1	0.2	80	75	16.0	394	83.8
Pike	199	87	4	2.0	1	42	21.1	153	76.9
Porter	5,160	10	17	0.3	66	1,009	19.6	4,134	80.1
Posey	586	65	2	0.3	64	69	11.8	515	87.9
Pulaski	443	78	2	0.5	48	43	9.7	398	89.8
Putnam	1,059	44	1	0.1	90	179	16.9	879	83.0
Randolph	493	73	8	1.6	2	65	13.2	420	85.2
Ripley	791	57	7	0.9	16	116	14.7	668	84.5
Rush	324	83	3	0.9	15	61	18.8	260	80.2
St. Joseph	9,451	4	22	0.2	78	1,397	14.8	8,032	85.0
Scott	634	62	6	0.9	13	138	21.8	490	77.3
Shelby	1,452	35	11	0.8	27	292	20.1	1,149	79.1
Spencer	545	69	2	0.4	59	72	13.2	471	86.4
Starke	598	64	5	0.8	22	70	11.7	523	87.5
Steuben	1,496	33	11	0.7	28	136	9.1	1,349	90.2
Sullivan	476	75	4	0.8	20	74	15.5	398	83.6
Switzerland	163	88	2	1.2	9	26	16.0	135	82.8
Tippecanoe	7,578	7	7	0.1	91	1,138	15.0	6,433	84.9
Tipton	392	80	3	0.8	26	82	20.9	307	78.3
Union	99	92	0	0.0	92	26	26.3	73	73.7
Vanderburgh	7,246	8	15	0.2	84	1,296	17.9	5,935	81.9
Vermillion	322	84	3	0.9	14	45	14.0	274	85.1
Vigo	3,959	16	13	0.3	67	605	15.3	3,341	84.4
Wabash	944	52	8	0.8	19	133	14.1	803	85.1
Warren	248	86	2	0.8	25	27	10.9	219	88.3
Warrick	1,530	31	8	0.5	38	224	14.6	1,298	84.8
Washington	682	61	3	0.4	50	125	18.3	554	81.2
Wayne	2,522	21	10	0.4	53	306	12.1	2,206	87.5
Wells	732	58	7	1.0	12	94	12.8	631	86.2
White	936	53	3	0.3	68	106	11.3	827	88.4
Whitley	994	49	5	0.5	43	161	16.2	828	83.3
Unknown	0	na	0	na	na	1	na	1	na

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: *Non-fatal* injury collisions include collisions with *incapacitating, non-incapacitating* and *possible* injuries.

Map 2.1. Traffic collisions per 100M vehicle miles traveled, by county, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Table 2.2. Individuals involved in Indiana collisions, by injury status and county, 2016

	Total individuals involved		Fatal			Incapacitating		Non-incapacitating		Other/no injury	
	Count	County rank	Count	As % county total	County rank (on %)	Count	As % county total	Count	As % county total	Count	As % county total
All counties	**364,012**	**na**	**821**	**0.2**	**na**	**20,995**	**5.8**	**27,786**	**7.6**	**314,410**	**86.4**
Mean	3,957	na	9	0.4	na	228	8.1	302	6.3	3,418	85.2
Median	1,513	na	6	0.3	na	116	7.8	88	5.9	1,301	85.7
Minimum	142	na	1	0.0	na	10	0.5	6	1.6	109	73.1
Maximum	65,721	na	100	2.0	na	2,222	17.9	7,217	16.2	56,860	91.4
Adams	1,063	60	2	0.2	71	67	6.3	77	7.2	917	86.3
Allen	23,266	3	34	0.1	80	1,213	5.2	2,025	8.7	19,994	85.9
Bartholomew	3,940	21	14	0.4	44	430	10.9	460	11.7	3,036	77.1
Benton	213	90	2	0.9	6	19	8.9	12	5.6	180	84.5
Blackford	389	85	3	0.8	13	46	11.8	17	4.4	323	83.0
Boone	3,140	26	5	0.2	76	182	5.8	121	3.9	2,832	90.2
Brown	744	70	1	0.1	83	67	9.0	53	7.1	623	83.7
Carroll	611	78	5	0.8	11	72	11.8	19	3.1	515	84.3
Cass	1,786	39	9	0.5	29	155	8.7	101	5.7	1,521	85.2
Clark	8,958	9	10	0.1	87	567	6.3	532	5.9	7,849	87.6
Clay	1,214	56	5	0.4	35	130	10.7	38	3.1	1,041	85.7
Clinton	1,656	44	4	0.2	61	129	7.8	88	5.3	1,435	86.7
Crawford	449	84	2	0.4	32	51	11.4	20	4.5	376	83.7
Daviess	643	75	5	0.8	12	115	17.9	53	8.2	470	73.1
Dearborn	2,845	27	5	0.2	73	244	8.6	116	4.1	2,480	87.2
Decatur	1,529	46	17	1.1	3	108	7.1	95	6.2	1,309	85.6
DeKalb	2,001	36	7	0.3	46	146	7.3	87	4.3	1,761	88.0
Delaware	6,886	14	10	0.1	82	464	6.7	545	7.9	5,867	85.2
Dubois	2,302	30	3	0.1	84	126	5.5	132	5.7	2,041	88.7
Elkhart	12,353	7	16	0.1	85	801	6.5	481	3.9	11,055	89.5
Fayette	885	63	3	0.3	48	64	7.2	34	3.8	784	88.6
Floyd	5,251	18	8	0.2	77	338	6.4	291	5.5	4,614	87.9
Fountain	571	79	2	0.4	45	32	5.6	15	2.6	522	91.4
Franklin	752	69	3	0.4	39	99	13.2	27	3.6	623	82.8
Fulton	848	65	2	0.2	62	68	8.0	26	3.1	752	88.7
Gibson	1,734	40	10	0.6	25	149	8.6	117	6.7	1,458	84.1
Grant	3,642	23	11	0.3	52	193	5.3	240	6.6	3,198	87.8
Greene	1,294	54	7	0.5	28	137	10.6	63	4.9	1,087	84.0
Hamilton	15,137	4	16	0.1	88	742	4.9	757	5.0	13,622	90.0
Hancock	3,279	24	7	0.2	68	322	9.8	154	4.7	2,796	85.3
Harrison	1,884	38	13	0.7	15	206	10.9	87	4.6	1,578	83.8
Hendricks	7,787	11	17	0.2	65	491	6.3	364	4.7	6,915	88.8
Henry	1,657	43	10	0.6	23	201	12.1	115	6.9	1,331	80.3
Howard	4,713	19	17	0.4	43	389	8.3	337	7.2	3,970	84.2
Huntington	1,731	41	5	0.3	55	106	6.1	158	9.1	1,462	84.5
Jackson	2,508	28	4	0.2	75	139	5.5	151	6.0	2,214	88.3
Jasper	2,006	35	7	0.3	47	141	7.0	141	7.0	1,717	85.6
Jay	1,012	61	3	0.3	53	30	3.0	142	14.0	837	82.7
Jefferson	1,726	42	5	0.3	54	126	7.3	106	6.1	1,489	86.3
Jennings	1,280	55	7	0.5	27	98	7.7	77	6.0	1,098	85.8
Johnson	6,894	13	6	0.1	89	521	7.6	401	5.8	5,966	86.5
Knox	1,438	50	3	0.2	69	146	10.2	118	8.2	1,171	81.4
Kosciusko	4,198	20	17	0.4	36	45	1.1	534	12.7	3,602	85.8
LaGrange	1,391	52	6	0.4	34	37	2.7	173	12.4	1,175	84.5
Lake	29,466	2	50	0.2	74	2,222	7.5	1,742	5.9	25,452	86.4
LaPorte	6,210	16	19	0.3	51	527	8.5	491	7.9	5,173	83.3
Lawrence	2,276	32	6	0.3	59	208	9.1	163	7.2	1,899	83.4
Madison	6,699	15	12	0.2	72	553	8.3	259	3.9	5,875	87.7

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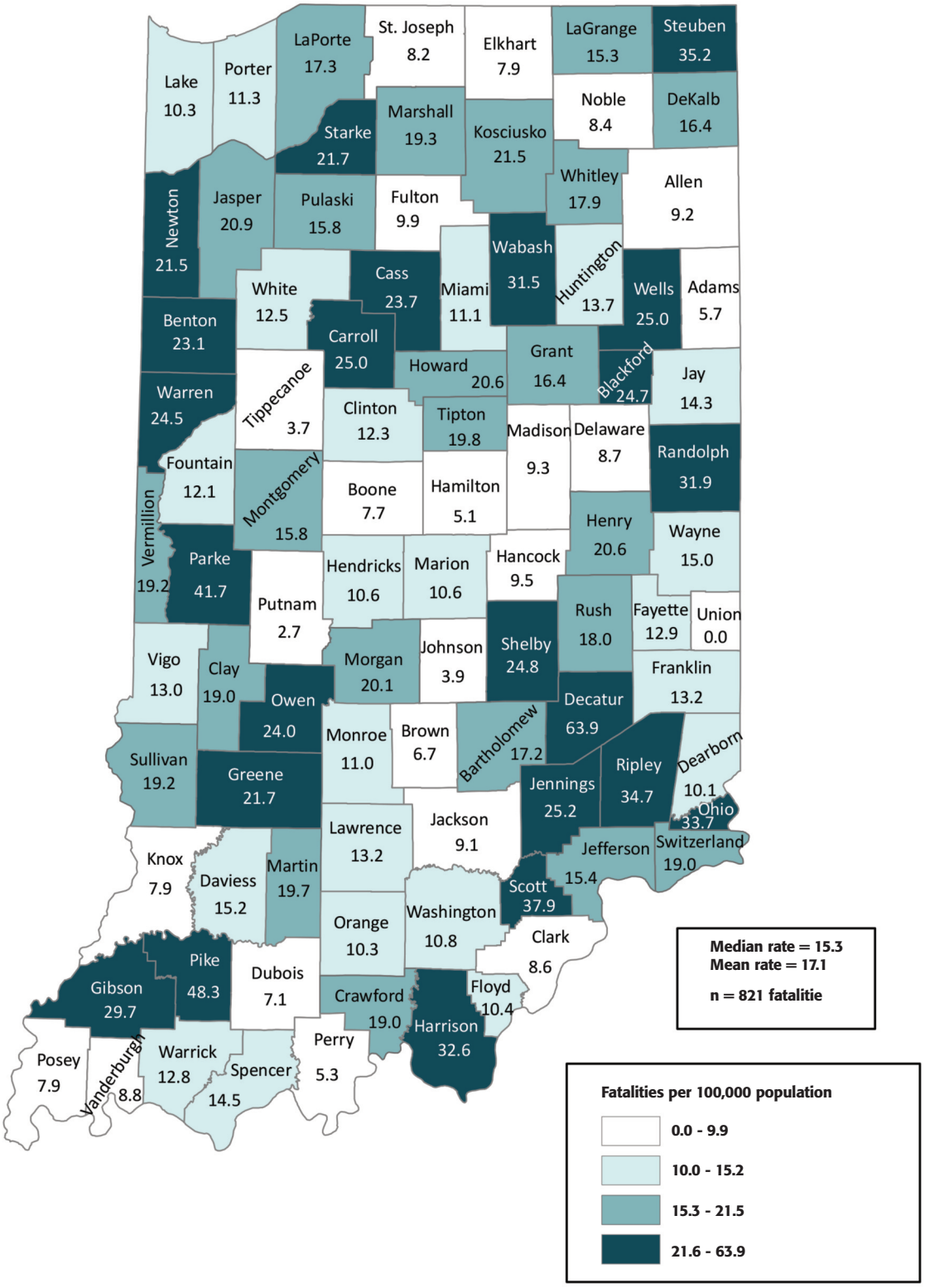
Map 2.2. *(continued)*

	Total individuals involved		Fatal			Incapacitating		Non-incapacitating		Other/no injury	
	Count	County rank	Count	As % county total	County rank (on %)	Count	As % county total	Count	As % county total	Count	As % county total
Marion	65,721	1	100	0.2	78	1,544	2.3	7,217	11.0	56,860	86.5
Marshall	2,290	31	9	0.4	40	144	6.3	163	7.1	1,974	86.2
Martin	231	88	2	0.9	9	27	11.7	17	7.4	185	80.1
Miami	1,466	49	4	0.3	56	133	9.1	67	4.6	1,262	86.1
Monroe	7,047	12	16	0.2	64	508	7.2	603	8.6	5,920	84.0
Montgomery	1,494	48	6	0.4	37	114	7.6	82	5.5	1,292	86.5
Morgan	3,159	25	14	0.4	33	280	8.9	165	5.2	2,700	85.5
Newton	486	81	3	0.6	20	52	10.7	19	3.9	412	84.8
Noble	2,040	34	4	0.2	70	151	7.4	110	5.4	1,775	87.0
Ohio	193	91	2	1.0	5	14	7.3	12	6.2	165	85.5
Orange	743	71	2	0.3	58	68	9.2	45	6.1	628	84.5
Owen	868	64	5	0.6	26	83	9.6	32	3.7	748	86.2
Parke	640	76	7	1.1	4	57	8.9	28	4.4	548	85.6
Perry	676	74	1	0.1	79	47	7.0	47	7.0	581	85.9
Pike	293	87	6	2.0	1	39	13.3	21	7.2	227	77.5
Porter	8,711	10	19	0.2	66	581	6.7	802	9.2	7,309	83.9
Posey	810	67	2	0.2	60	58	7.2	30	3.7	720	88.9
Pulaski	538	80	2	0.4	42	41	7.6	17	3.2	478	88.8
Putnam	1,649	45	1	0.1	90	164	9.9	77	4.7	1,407	85.3
Randolph	681	73	8	1.2	2	72	10.6	28	4.1	573	84.1
Ripley	1,090	58	10	0.9	7	103	9.4	51	4.7	926	85.0
Rush	465	82	3	0.6	18	52	11.2	29	6.2	381	81.9
St. Joseph	15,114	5	22	0.1	81	838	5.5	1,033	6.8	13,221	87.5
Scott	1,098	57	9	0.8	10	116	10.6	99	9.0	874	79.6
Shelby	2,217	33	11	0.5	30	231	10.4	157	7.1	1,818	82.0
Spencer	768	68	3	0.4	41	67	8.7	48	6.3	650	84.6
Starke	813	66	5	0.6	21	88	10.8	13	1.6	707	87.0
Steuben	1,973	37	12	0.6	22	105	5.3	73	3.7	1,783	90.4
Sullivan	690	72	4	0.6	24	64	9.3	34	4.9	588	85.2
Switzerland	221	89	2	0.9	8	27	12.2	6	2.7	186	84.2
Tippecanoe	12,182	8	7	0.1	91	123	1.0	1,388	11.4	10,664	87.5
Tipton	619	77	3	0.5	31	85	13.7	48	7.8	483	78.0
Union	142	92	0	0.0	92	10	7.0	23	16.2	109	76.8
Vanderburgh	13,235	6	16	0.1	86	69	0.5	1,734	13.1	11,416	86.3
Vermillion	453	83	3	0.7	16	37	8.2	23	5.1	390	86.1
Vigo	6,166	17	14	0.2	63	482	7.8	322	5.2	5,348	86.7
Wabash	1,394	51	10	0.7	14	99	7.1	87	6.2	1,198	85.9
Warren	311	86	2	0.6	19	24	7.7	16	5.1	269	86.5
Warrick	2,437	29	8	0.3	49	65	2.7	242	9.9	2,122	87.1
Washington	976	62	3	0.3	50	100	10.2	83	8.5	790	80.9
Wayne	3,701	22	10	0.3	57	240	6.5	156	4.2	3,295	89.0
Wells	1,066	59	7	0.7	17	71	6.7	65	6.1	923	86.6
White	1,391	52	3	0.2	67	109	7.8	40	2.9	1,239	89.1
Whitley	1,497	47	6	0.4	38	151	10.1	79	5.3	1,261	84.2

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Non-incapacitating* injuries include those reported as *non-incapacitating* and *possible* injuries.
2) *Other/no injury* counts include injury type values identified as *not reported, refused, unknown,* invalid and missing codes.

Map 2.2. Traffic fatalities per 100k population, by county, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Table 2.3. Indiana speed-related collisions, by severity and county, 2016

	All collisions			Fatal		Non-fatal injury		Property damage only	
	Speed-related collisions	Speed-related as % of total collisions	County rank (on %)	Count	Speed-related as % of total fatal collisions	Count	Speed-related as % of total non-fatal injury collisions	Count	Speed-related as % of total property damage collisions
All counties	**21,209**	**9.5**	**na**	**198**	**25.8**	**4,588**	**13.0**	**16,423**	**8.8**
Mean	231	9.5	na	2	27.0	50	14.9	179	8.5
Median	109	8.8	na	1	20.4	27	13	81	7.9
Minimum	7	2.4	na	0	0.0	2	3.1	4	2.0
Maximum	3,085	21.9	na	28	100.0	685	39.1	2,372	20.8
Adams	50	7.1	68	0	0.0	10	10.6	40	6.6
Allen	1,231	8.6	49	7	23.3	240	10.1	984	8.2
Bartholomew	164	7.3	64	3	21.4	48	7.7	113	7.0
Benton	9	5.9	80	0	0.0	3	15.8	6	4.5
Blackford	12	4.5	89	0	0.0	5	12.8	7	3.1
Boone	160	7.9	58	1	20.0	20	8.6	139	7.7
Brown	63	11.4	26	0	0.0	23	25.8	40	8.6
Carroll	53	11.0	29	0	0.0	12	18.2	41	10.0
Cass	136	11.8	22	1	12.5	26	15.7	109	11.1
Clark	310	5.8	83	3	30.0	89	11.3	218	4.8
Clay	51	6.4	75	2	40.0	14	12.4	35	5.2
Clinton	109	9.5	40	1	25.0	25	16.0	83	8.4
Crawford	41	11.8	21	1	50.0	16	30.2	24	8.2
Daviess	36	9.0	43	1	20.0	15	12.4	20	7.2
Dearborn	154	8.3	54	1	20.0	36	14.3	117	7.3
Decatur	119	11.8	23	3	18.8	30	21.1	86	10.1
DeKalb	170	12.7	17	1	20.0	31	18.6	138	11.8
Delaware	420	9.8	37	2	22.2	93	12.6	325	9.1
Dubois	116	7.4	62	0	0.0	34	17.2	82	6.0
Elkhart	1,159	15.0	8	3	18.8	182	19.3	974	14.4
Fayette	25	4.6	88	1	33.3	7	9.5	17	3.6
Floyd	186	6.0	79	4	50.0	46	10.6	136	5.2
Fountain	40	8.8	45	1	50.0	7	17.5	32	7.8
Franklin	101	18.2	3	2	66.7	15	16.7	84	18.2
Fulton	53	8.5	51	1	50.0	8	12.5	44	7.9
Gibson	94	8.3	52	3	30.0	33	17.2	58	6.2
Grant	243	10.1	34	2	22.2	39	12.3	202	9.8
Greene	91	9.5	39	1	20.0	29	19.3	61	7.6
Hamilton	554	6.5	73	3	20.0	101	9.1	450	6.1
Hancock	143	7.5	61	1	14.3	33	9.7	109	7.0
Harrison	82	6.4	76	2	18.2	16	8.4	64	5.9
Hendricks	374	8.2	56	7	43.8	85	13.6	282	7.2
Henry	118	11.5	24	2	20.0	25	11.9	91	11.3
Howard	182	6.6	71	1	7.1	38	7.6	143	6.4
Huntington	149	12.4	19	1	20.0	42	21.4	106	10.6
Jackson	151	8.7	47	2	50.0	36	17.1	113	7.4
Jasper	120	8.6	50	3	42.9	20	10.7	97	8.0
Jay	17	2.4	92	0	0.0	5	4.3	12	2.0
Jefferson	63	5.9	82	1	20.0	13	7.6	49	5.5
Jennings	52	6.2	77	2	28.6	18	16.2	32	4.5
Johnson	253	6.6	72	1	16.7	71	10.6	181	5.7
Knox	86	9.5	41	0	0.0	30	15.2	56	7.9
Kosciusko	241	8.8	46	1	7.1	41	10.0	199	8.6
LaGrange	193	19.0	2	4	66.7	45	31.5	144	16.6
Lake	2,467	14.2	12	10	20.8	567	19.5	1,890	13.1
LaPorte	448	11.1	28	8	42.1	93	13.3	347	10.5
Lawrence	110	7.2	65	0	0.0	32	12.1	78	6.2
Madison	299	7.2	66	1	8.3	51	8.7	247	6.9

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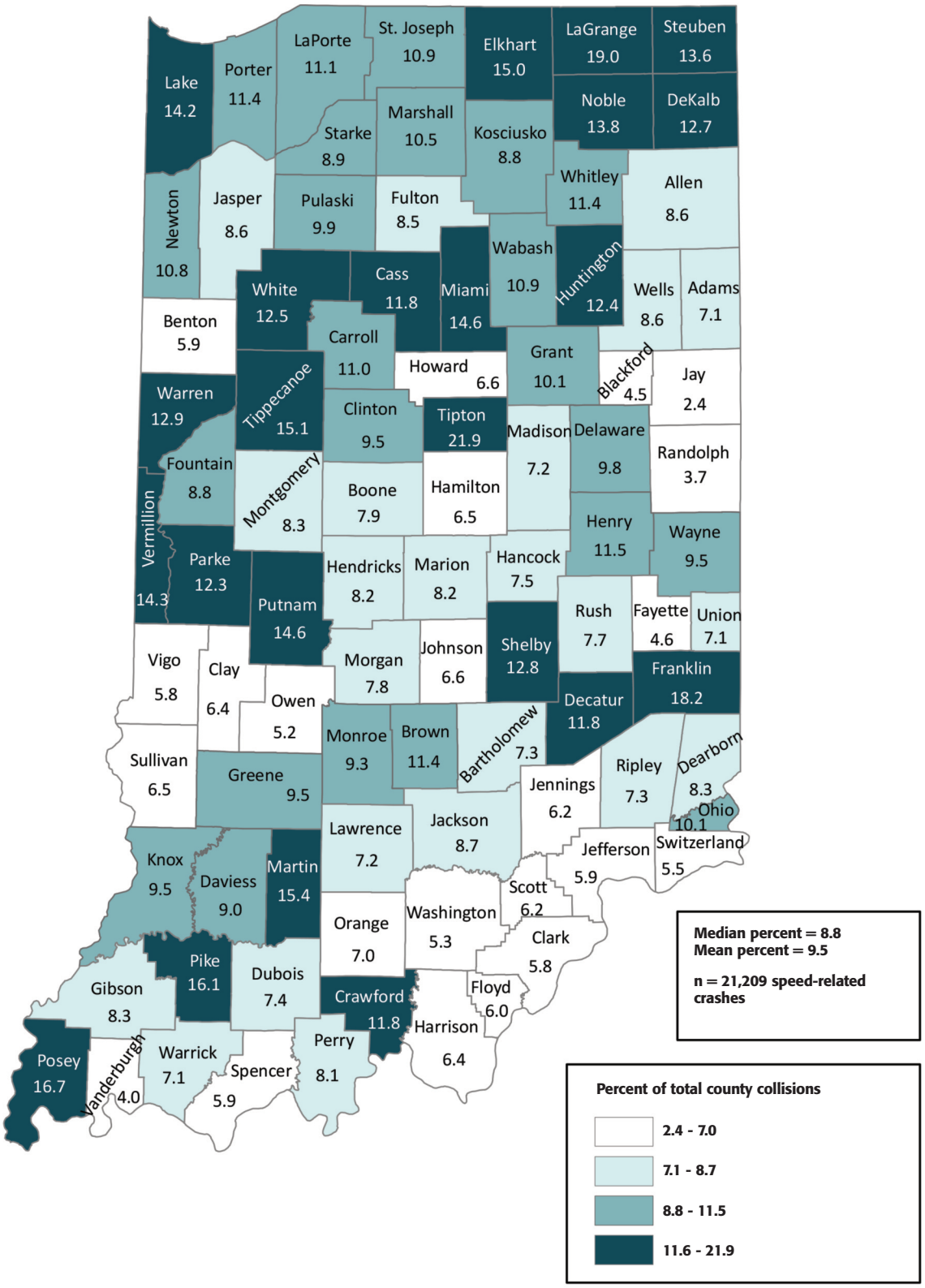
Table 2.3. *(continued)*

	All collisions			Fatal		Non-fatal injury		Property damage only	
	Speed-related collisions	Speed-related as % of total collisions	County rank (on %)	Count	Speed-related as % of total fatal collisions	Count	Speed-related as % of total non-fatal injury collisions	Count	Speed-related as % of total property damage collisions
Marion	3,085	8.2	55	28	30.1	685	10.7	2,372	7.7
Marshall	167	10.5	33	2	25.0	31	15.4	134	9.7
Martin	24	15.4	6	0	0.0	7	22.6	17	13.8
Miami	153	14.6	10	3	75.0	32	22.1	118	13.1
Monroe	405	9.3	42	10	62.5	98	12.4	297	8.3
Montgomery	82	8.3	53	1	20.0	17	11.5	64	7.7
Morgan	148	7.8	59	3	21.4	33	10.4	112	7.1
Newton	40	10.8	32	0	0.0	9	16.4	31	10.0
Noble	204	13.8	13	0	0.0	55	28.9	149	11.6
Ohio	16	10.1	35	1	50.0	2	11.1	13	9.4
Orange	37	7.0	70	1	50.0	14	17.9	22	4.9
Owen	30	5.2	87	1	25.0	9	10.6	20	4.1
Parke	62	12.3	20	1	14.3	13	19.1	48	11.2
Perry	38	8.1	57	1	100.0	13	17.3	24	6.1
Pike	32	16.1	5	1	25.0	9	21.4	22	14.4
Porter	589	11.4	25	5	29.4	132	13.1	452	10.9
Posey	98	16.7	4	0	0.0	27	39.1	71	13.8
Pulaski	44	9.9	36	2	100.0	5	11.6	37	9.3
Putnam	155	14.6	9	1	100.0	41	22.9	113	12.9
Randolph	18	3.7	91	0	0.0	2	3.1	16	3.8
Ripley	58	7.3	63	3	42.9	20	17.2	35	5.2
Rush	25	7.7	60	3	100.0	5	8.2	17	6.5
St. Joseph	1,031	10.9	31	6	27.3	198	14.2	827	10.3
Scott	39	6.2	78	4	66.7	9	6.5	26	5.3
Shelby	186	12.8	16	1	9.1	44	15.1	141	12.3
Spencer	32	5.9	81	0	0.0	8	11.1	24	5.1
Starke	53	8.9	44	1	20.0	11	15.7	41	7.8
Steuben	203	13.6	14	2	18.2	34	25.0	167	12.4
Sullivan	31	6.5	74	1	25.0	6	8.1	24	6.0
Switzerland	9	5.5	85	0	0.0	5	19.2	4	3.0
Tippecanoe	1,148	15.1	7	1	14.3	205	18.0	942	14.6
Tipton	86	21.9	1	2	66.7	20	24.4	64	20.8
Union	7	7.1	69	0	0.0	2	7.7	5	6.8
Vanderburgh	289	4.0	90	2	13.3	69	5.3	218	3.7
Vermillion	46	14.3	11	1	33.3	7	15.6	38	13.9
Vigo	228	5.8	84	4	30.8	44	7.3	180	5.4
Wabash	103	10.9	30	3	37.5	30	22.6	70	8.7
Warren	32	12.9	15	0	0.0	8	29.6	24	11.0
Warrick	109	7.1	67	0	0.0	29	12.9	80	6.2
Washington	36	5.3	86	1	33.3	10	8.0	25	4.5
Wayne	240	9.5	38	4	40.0	39	12.7	197	8.9
Wells	63	8.6	48	1	14.3	8	8.5	54	8.6
White	117	12.5	18	1	33.3	17	16.0	99	12.0
Whitley	113	11.4	27	1	20.0	28	17.4	84	10.1

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Percent calculations represent the percent of total county collisions (presented in Table 2.1) in each injury category that are *speed-related*.
2) *Non-fatal* injury collisions include collisions with *incapacitating, non-incapacitating,* and *possible* injuries.
3) A collision is identified as speed-related if any one of the following conditions is met: (1) *unsafe speed* or *speed too fast for weather conditions* is listed as the primary or contributing factor of the collision; (2) a vehicle driver is issued a speeding citation.

Map 2.3. Percentage of county collisions that were speed-related, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Table 2.4. Indiana collisions involving an alcohol-impaired driver, by severity and county, 2016

County	Total		Fatal		Non-fatal injury		Property damage	
	Count	Alcohol-impaired as % of total collisions	Count	Alcohol-impaired as % of total fatal collisions	Count	Alcohol-impaired as % of total non-fatal injury collisions	Count	Alcohol-impaired as % of total property damage collisions
All counties	**4,783**	**2.1**	**73**	**9.5**	**1,386**	**3.9**	**3,324**	**1.8**
Mean	52	2.5	1	8.5	15	4.6	36	2.1
Median	24	2.3	0	0.0	7	3.8	17	1.9
Minimum	2	0.6	0	0.0	0	0.0	1	0.4
Maximum	686	9.2	7	50.0	215	20.0	465	9.8
Adams	6	0.9	0	0.0	2	2.1	4	0.7
Allen	408	2.8	7	23.3	126	5.3	275	2.3
Bartholomew	59	2.6	0	0.0	24	3.8	35	2.2
Benton	3	2.0	0	0.0	0	0.0	3	2.3
Blackford	4	1.5	0	0.0	1	2.6	3	1.3
Boone	47	2.3	0	0.0	7	3.0	40	2.2
Brown	19	3.4	0	0.0	5	5.6	14	3.0
Carroll	10	2.1	0	0.0	1	1.5	9	2.2
Cass	25	2.2	1	12.5	4	2.4	20	2.0
Clark	98	1.8	1	10.0	27	3.4	70	1.5
Clay	26	3.3	1	20.0	10	8.8	15	2.2
Clinton	33	2.9	0	0.0	8	5.1	25	2.5
Crawford	7	2.0	0	0.0	2	3.8	5	1.7
Daviess	37	9.2	1	20.0	9	7.4	27	9.8
Dearborn	44	2.4	0	0.0	10	4.0	34	2.1
Decatur	17	1.7	0	0.0	5	3.5	12	1.4
DeKalb	32	2.4	0	0.0	13	7.8	19	1.6
Delaware	71	1.7	0	0.0	20	2.7	51	1.4
Dubois	45	2.9	0	0.0	17	8.6	28	2.1
Elkhart	107	1.4	1	6.3	23	2.4	83	1.2
Fayette	13	2.4	1	33.3	1	1.4	11	2.4
Floyd	68	2.2	2	25.0	24	5.5	42	1.6
Fountain	11	2.4	0	0.0	3	7.5	8	2.0
Franklin	14	2.5	0	0.0	0	0.0	14	3.0
Fulton	8	1.3	0	0.0	1	1.6	7	1.3
Gibson	37	3.3	1	10.0	13	6.8	23	2.5
Grant	45	1.9	4	44.4	8	2.5	33	1.6
Greene	19	2.0	0	0.0	4	2.7	15	1.9
Hamilton	173	2.0	3	20.0	45	4.0	125	1.7
Hancock	42	2.2	1	14.3	13	3.8	28	1.8
Harrison	23	1.8	0	0.0	4	2.1	19	1.8
Hendricks	74	1.6	0	0.0	17	2.7	57	1.5
Henry	35	3.4	1	10.0	8	3.8	26	3.2
Howard	70	2.6	2	14.3	20	4.0	48	2.2
Huntington	20	1.7	1	20.0	2	1.0	17	1.7
Jackson	40	2.3	0	0.0	8	3.8	32	2.1
Jasper	31	2.2	0	0.0	12	6.4	19	1.6
Jay	8	1.1	0	0.0	4	3.4	4	0.7
Jefferson	17	1.6	0	0.0	2	1.2	15	1.7
Jennings	20	2.4	2	28.6	1	0.9	17	2.4
Johnson	81	2.1	0	0.0	27	4.0	54	1.7
Knox	28	3.1	0	0.0	14	7.1	14	2.0
Kosciusko	50	1.8	4	28.6	18	4.4	28	1.2
LaGrange	23	2.3	0	0.0	7	4.9	16	1.8
Lake	345	2.0	3	6.3	118	4.1	224	1.6
LaPorte	124	3.1	4	21.1	39	5.6	81	2.4
Lawrence	23	1.5	0	0.0	8	3.0	15	1.2
Madison	103	2.5	2	16.7	21	3.6	80	2.2

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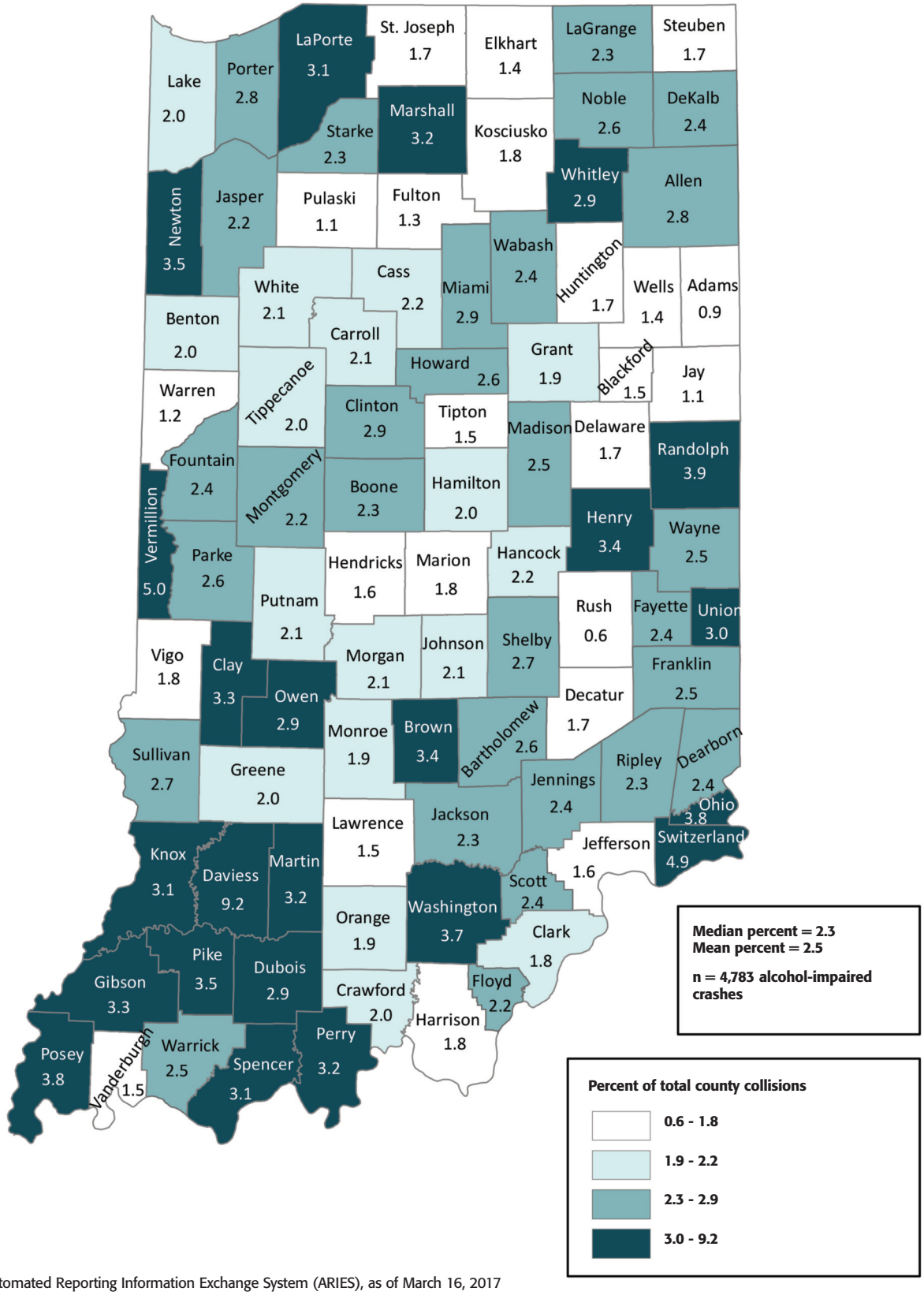
Table 2.4.*(continued)*

County	Total		Fatal		Non-fatal injury		Property damage	
	Count	Alcohol-impaired as % of total collisions	Count	Alcohol-impaired as % of total fatal collisions	Count	Alcohol-impaired as % of total non-fatal injury collisions	Count	Alcohol-impaired as % of total property damage collisions
Marion	686	1.8	6	6.5	215	3.4	465	1.5
Marshall	51	3.2	1	12.5	16	8.0	34	2.4
Martin	5	3.2	0	0.0	0	0.0	5	4.1
Miami	30	2.9	0	0.0	7	4.8	23	2.5
Monroe	84	1.9	1	6.3	21	2.6	62	1.7
Montgomery	22	2.2	0	0.0	8	5.4	14	1.7
Morgan	41	2.1	1	7.1	12	3.8	28	1.8
Newton	13	3.5	0	0.0	6	10.9	7	2.3
Noble	39	2.6	1	25.0	10	5.3	28	2.2
Ohio	6	3.8	0	0.0	1	5.6	5	3.6
Orange	10	1.9	1	50.0	4	5.1	5	1.1
Owen	17	2.9	0	0.0	3	3.5	14	2.9
Parke	13	2.6	1	14.3	6	8.8	6	1.4
Perry	15	3.2	0	0.0	0	0.0	15	3.8
Pike	7	3.5	0	0.0	2	4.8	5	3.3
Porter	145	2.8	2	11.8	49	4.9	94	2.3
Posey	22	3.8	0	0.0	5	7.2	17	3.3
Pulaski	5	1.1	1	50.0	0	0.0	4	1.0
Putnam	22	2.1	0	0.0	5	2.8	17	1.9
Randolph	19	3.9	0	0.0	7	10.8	12	2.9
Ripley	18	2.3	0	0.0	7	6.0	11	1.6
Rush	2	0.6	0	0.0	1	1.6	1	0.4
St. Joseph	163	1.7	3	13.6	30	2.1	130	1.6
Scott	15	2.4	0	0.0	5	3.6	10	2.0
Shelby	39	2.7	0	0.0	17	5.8	22	1.9
Spencer	17	3.1	0	0.0	3	4.2	14	3.0
Starke	14	2.3	1	20.0	5	7.1	8	1.5
Steuben	25	1.7	1	9.1	5	3.7	19	1.4
Sullivan	13	2.7	0	0.0	5	6.8	8	2.0
Switzerland	8	4.9	0	0.0	5	19.2	3	2.2
Tippecanoe	154	2.0	1	14.3	34	3.0	119	1.8
Tipton	6	1.5	1	33.3	1	1.2	4	1.3
Union	3	3.0	0	0.0	0	0.0	3	4.1
Vanderburgh	112	1.5	1	6.7	32	2.5	79	1.3
Vermillion	16	5.0	0	0.0	9	20.0	7	2.6
Vigo	72	1.8	2	15.4	23	3.8	47	1.4
Wabash	23	2.4	0	0.0	6	4.5	17	2.1
Warren	3	1.2	1	50.0	1	3.7	1	0.5
Warrick	39	2.5	1	12.5	11	4.9	27	2.1
Washington	25	3.7	0	0.0	9	7.2	16	2.9
Wayne	62	2.5	2	20.0	18	5.9	42	1.9
Wells	10	1.4	0	0.0	3	3.2	7	1.1
White	20	2.1	0	0.0	6	5.7	14	1.7
Whitley	29	2.9	1	20.0	17	10.6	11	1.3

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

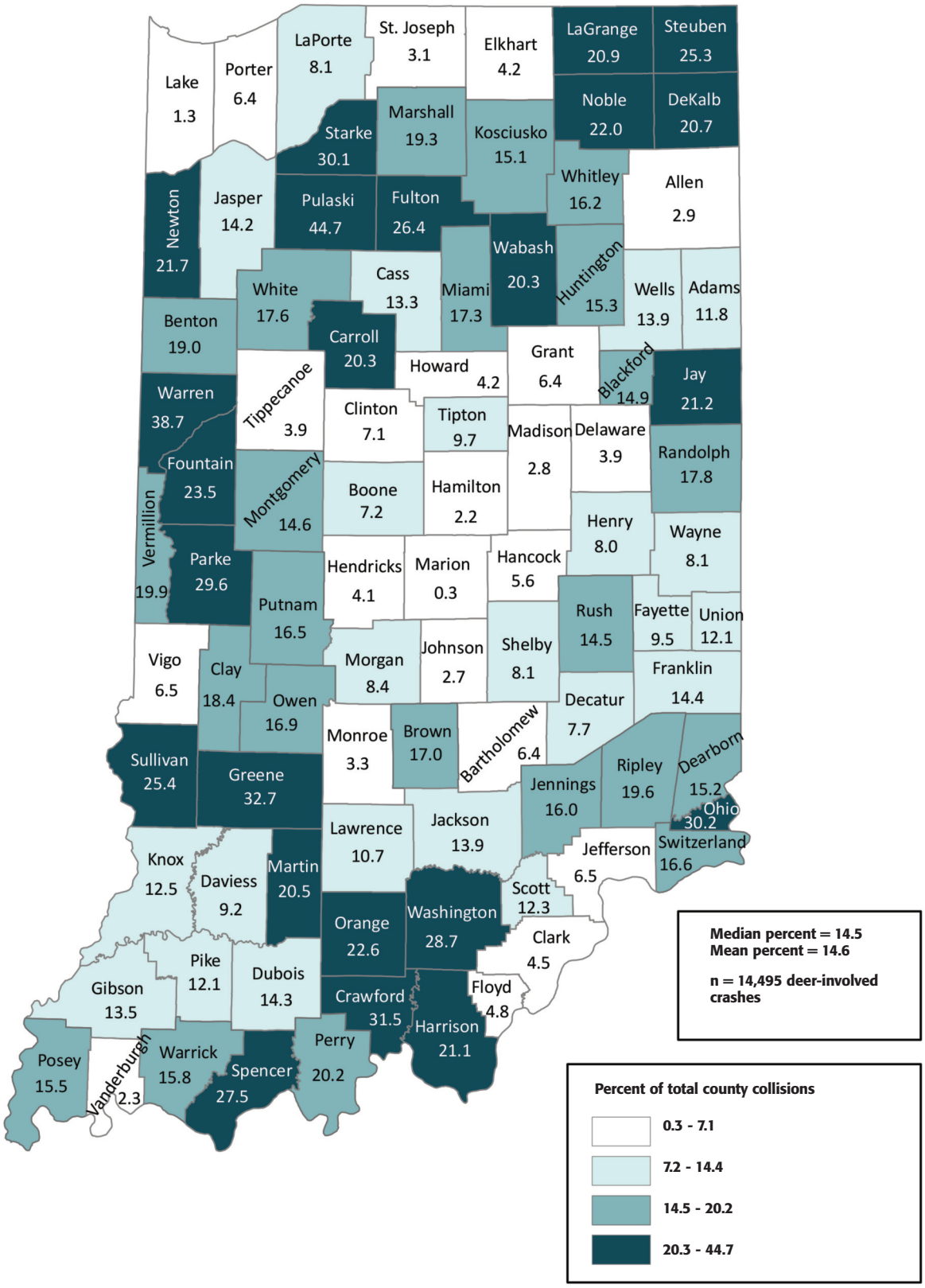
Notes:
1) Percent calculations represent the percent of total county collisions (presented in Table 2.1) in each injury category that are *alcohol-impaired*.
2) Includes collisions where at least one alcohol-impaired driver was involved.
3) *Non-fatal* injury includes *incapacitating, non-incapacitating,* and *possible* injury collisions.
4) A collision is considered *alcohol-impaired* when any vehicle driver involved has a BAC test result at or above 0.08 g/dL.

Map 2.4. Percentage of county collisions that involved an alcohol-impaired driver, 2016



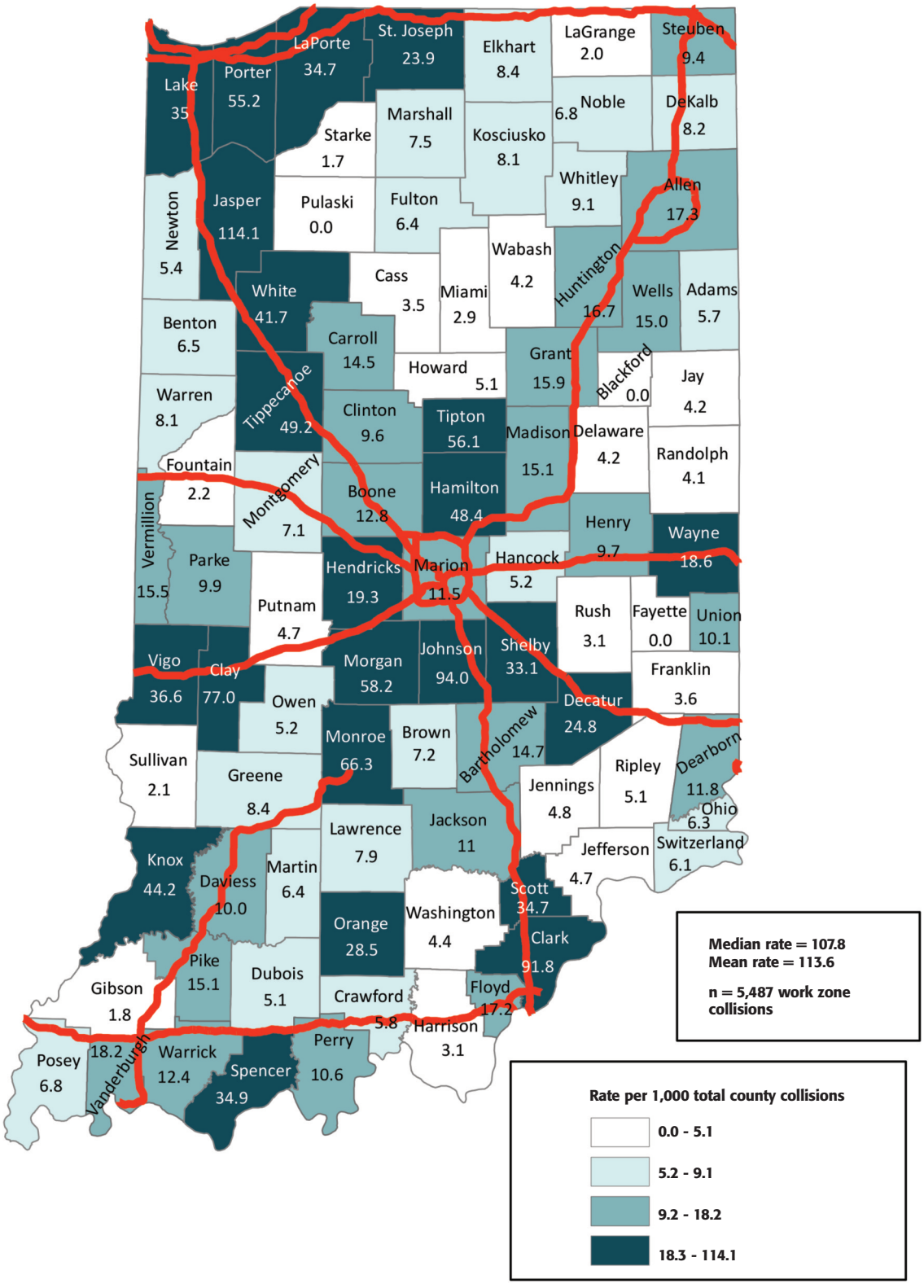
Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Map 2.5. Percentage of county collisions that involved deer, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Map 2.6. Work zone collisions per 1,000 total county collisions, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Table 2.5. Vehicle occupants injured in Indiana collisions, by injury status, restraint use, and county, 2016

	Fatal			Incapacitating			Non-incapacitating		
	Total	Unrestrained	% Unrestrained	Total	Unrestrained	% Unrestrained	Total	Unrestrained	% Unrestrained
All counties	**725**	**336**	**46.3**	**19,977**	**2,599**	**13.0**	**26,646**	**1,665**	**6.2**
Mean	8	4	46.1	217	28	16.6	290	18	8.7
Median	6	3	50.0	111	19	16	87	8	7
Minimum	0	0	0.0	10	1	0.0	6	0	0.0
Maximum	75	26	100.0	2,094	213	34.6	6,833	458	26.9
Adams	2	2	100.0	63	15	23.8	74	10	13.5
Allen	30	16	53.3	1,140	119	10.4	1,961	85	4.3
Bartholomew	14	7	50.0	407	41	10.1	445	17	3.8
Benton	2	2	100.0	18	5	27.8	12	0	0.0
Blackford	3	1	33.3	45	9	20.0	17	0	0.0
Boone	5	1	20.0	177	16	9.0	118	5	4.2
Brown	1	1	100.0	67	20	29.9	52	7	13.5
Carroll	5	5	100.0	72	13	18.1	18	3	16.7
Cass	9	4	44.4	148	22	14.9	97	7	7.2
Clark	10	3	30.0	542	54	10.0	523	21	4.0
Clay	4	1	25.0	128	19	14.8	38	3	7.9
Clinton	4	2	50.0	126	19	15.1	88	12	13.6
Crawford	2	0	0.0	51	12	23.5	20	4	20.0
Daviess	4	2	50.0	109	31	28.4	53	9	17.0
Dearborn	5	3	60.0	240	32	13.3	111	10	9.0
Decatur	15	11	73.3	104	29	27.9	94	10	10.6
DeKalb	7	4	57.1	143	25	17.5	84	6	7.1
Delaware	8	4	50.0	438	44	10.0	512	32	6.3
Dubois	3	1	33.3	118	18	15.3	132	5	3.8
Elkhart	13	9	69.2	746	88	11.8	453	36	7.9
Fayette	3	3	0.0	60	11	18.3	34	1	2.9
Floyd	7	5	71.4	321	37	11.5	285	8	2.8
Fountain	2	2	100.0	31	5	16.1	14	3	21.4
Franklin	3	1	33.3	98	15	15.3	27	3	11.1
Fulton	2	1	50.0	65	11	16.9	25	1	4.0
Gibson	10	6	60.0	147	27	18.4	117	9	7.7
Grant	6	3	50.0	172	29	16.9	228	20	8.8
Greene	7	3	42.9	130	22	16.9	62	8	12.9
Hamilton	12	4	33.3	683	59	8.6	731	15	2.1
Hancock	4	3	75.0	314	26	8.3	145	10	6.9
Harrison	13	10	76.9	203	26	12.8	85	6	7.1
Hendricks	17	5	29.4	474	48	10.1	357	28	7.8
Henry	10	7	70.0	199	22	11.1	114	15	13.2
Howard	15	7	46.7	368	47	12.8	327	27	8.3
Huntington	5	1	20.0	104	16	15.4	146	9	6.2
Jackson	4	0	0.0	133	19	14.3	145	16	11.0
Jasper	5	3	60.0	136	21	15.4	138	37	26.8
Jay	3	2	66.7	29	8	27.6	142	15	10.6
Jefferson	5	3	60.0	120	29	24.2	103	10	9.7
Jennings	7	5	71.4	97	11	11.3	76	1	1.3
Johnson	6	4	66.7	496	37	7.5	394	17	4.3
Knox	3	1	33.3	137	21	15.3	113	18	15.9
Kosciusko	15	5	33.3	43	11	25.6	519	33	6.4
LaGrange	5	1	20.0	35	5	14.3	161	18	11.2
Lake	35	18	51.4	2,094	213	10.2	1,660	75	4.5
LaPorte	16	10	62.5	492	52	10.6	472	31	6.6
Lawrence	6	1	16.7	203	28	13.8	161	12	7.5
Madison	12	6	50.0	530	62	11.7	246	14	5.7

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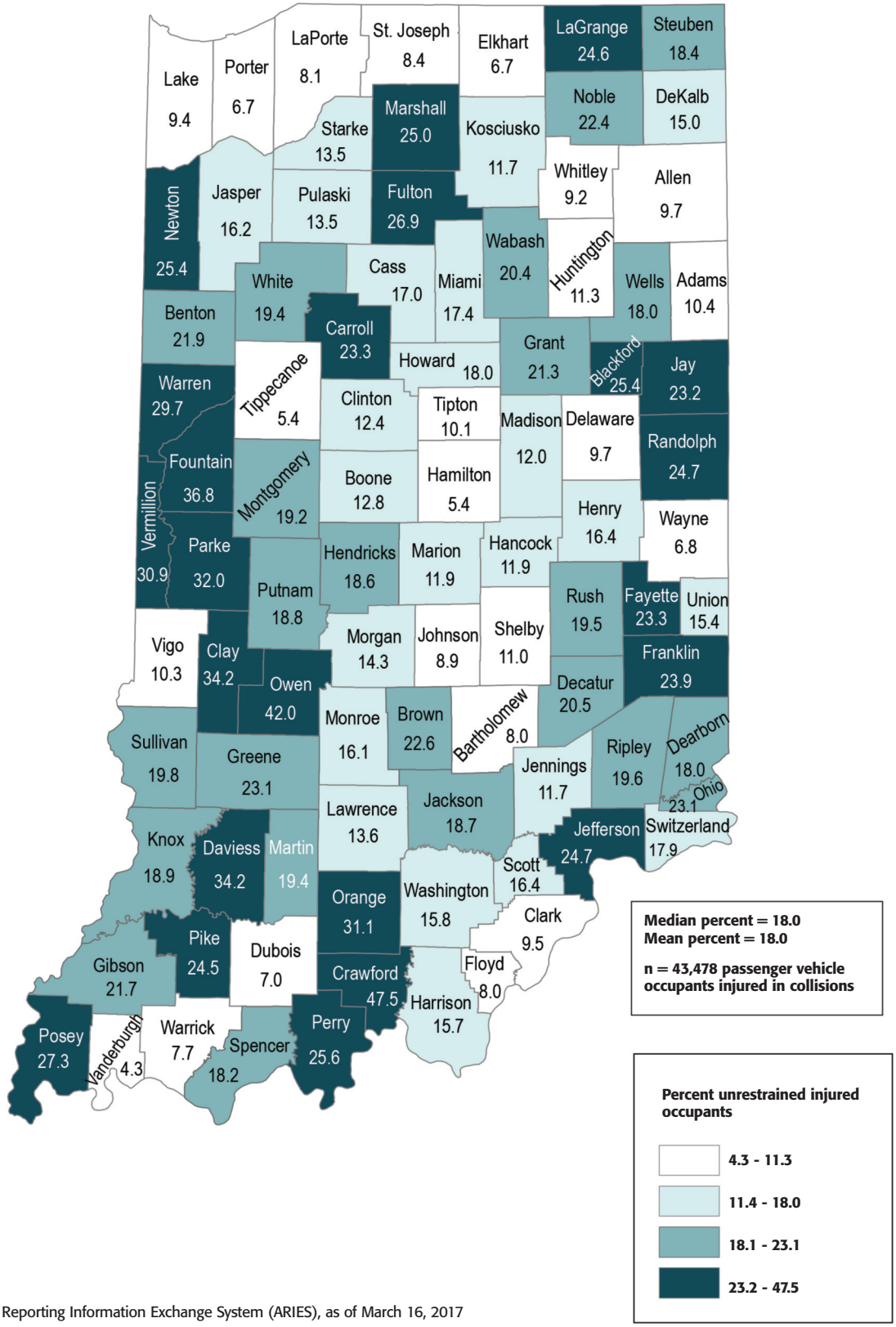
Table 2.5. *(continued)*

	Fatal			Incapacitating			Non-incapacitating		
	Total	Unrestrained	% Unrestrained	Total	Unrestrained	% Unrestrained	Total	Unrestrained	% Unrestrained
Marion	75	26	34.7	1,433	172	12.0	6,833	458	6.7
Marshall	9	3	33.3	139	20	14.4	155	18	11.6
Martin	2	0	0.0	26	9	34.6	17	2	11.8
Miami	4	3	75.0	128	16	12.5	64	8	12.5
Monroe	15	8	53.3	475	54	11.4	566	33	5.8
Montgomery	6	2	33.3	110	19	17.3	82	8	9.8
Morgan	13	8	61.5	273	44	16.1	160	12	7.5
Newton	3	1	33.3	52	11	21.2	19	1	5.3
Noble	3	2	66.7	150	25	16.7	108	4	3.7
Ohio	2	0	0.0	14	2	0.0	12	0	0.0
Orange	2	1	50.0	66	19	28.8	45	3	6.7
Owen	4	2	50.0	83	13	15.7	32	1	3.1
Parke	7	4	57.1	56	16	28.6	28	2	7.1
Perry	1	0	0.0	46	10	21.7	45	4	8.9
Pike	6	1	16.7	37	11	29.7	21	1	4.8
Porter	15	5	33.3	555	66	11.9	774	43	5.6
Posey	2	1	50.0	58	12	20.7	30	3	10.0
Pulaski	2	1	50.0	41	7	17.1	17	1	5.9
Putnam	1	0	0.0	162	30	18.5	76	4	5.3
Randolph	7	2	28.6	71	7	9.9	26	7	26.9
Ripley	9	5	55.6	103	23	22.3	51	6	11.8
Rush	3	2	66.7	51	11	21.6	28	2	7.1
St. Joseph	18	6	33.3	781	86	11.0	976	50	5.1
Scott	9	4	44.4	113	17	15.0	97	3	3.1
Shelby	8	3	37.5	223	36	16.1	156	14	9.0
Spencer	3	1	33.3	67	12	17.9	48	3	6.3
Starke	5	4	80.0	86	14	16.3	13	2	15.4
Steuben	12	5	41.7	104	20	19.2	72	10	13.9
Sullivan	4	2	50.0	64	10	15.6	34	4	11.8
Switzerland	2	1	50.0	26	3	11.5	6	1	16.7
Tippecanoe	7	0	0.0	112	14	12.5	1,308	62	4.7
Tipton	3	1	33.3	84	18	21.4	48	3	6.3
Union	0	0	0.0	10	1	10.0	22	4	18.2
Vanderburgh	15	4	26.7	60	4	6.7	1,661	60	3.6
Vermillion	3	1	33.3	37	7	18.9	23	4	17.4
Vigo	14	3	21.4	455	50	11.0	307	21	6.8
Wabash	10	3	30.0	93	11	11.8	86	10	11.6
Warren	2	1	50.0	24	5	20.8	16	0	0.0
Warrick	8	5	62.5	63	13	20.6	240	11	4.6
Washington	2	2	100.0	100	16	16.0	83	8	9.6
Wayne	10	6	60.0	227	40	17.6	153	11	7.2
Wells	6	3	50.0	67	16	23.9	64	14	21.9
White	3	1	33.3	107	25	23.4	40	5	12.5
Whitley	6	4	66.7	149	35	23.5	75	2	2.7

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Non-incapacitating* injuries include those reported as *non-incapacitating* and *possible*.
2) Includes only vehicle occupants (drivers and passengers). *Pedestrians, pedalcyclists* and *animal-drawn vehicle operators* are excluded.
3) Total counts include vehicle occupants identified as *restrained, unrestrained,* and *unknown* restraint usage.

Map 2.7. Percentage of unrestrained injured passenger vehicle occupants in Indiana collisions by county, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: *Passenger vehicles* are defined as *passenger cars, pickup trucks, sport utility vehicles,* and *vans*.

Table 2.6. Young drivers (ages 15-20) involved in Indiana collisions, by injury status and county, 2016

County	All drivers in collisions	Young drivers in collisions									
		Total		Fatal		Incapacitating		Non-incapacitating		Other/no injury	
		Count	As % of total drivers in collisions	Count	As % of all young drivers in collisions	Count	As % of all young drivers in collisions	Count	As % of all young drivers in collisions	Count	As % of all young drivers in collisions
All counties	**347,187**	**46,384**	**13.4**	**47**	**0.1**	**1,748**	**3.8**	**2,549**	**5.5**	**42,040**	**90.6**
Mean	3,774	504	14.7	1	0.2	19	5.7	28	5.4	457	88.6
Median	1,448	224	14.6	0	0.0	12	5.2	12	4.7	195	89.5
Minimum	135	25	10.4	0	0.0	0	0.0	0	0.0	18	66.7
Maximum	62,903	6,568	20.0	9	3.3	125	20.4	509	22.2	5,953	96.6
Adams	996	180	18.1	0	0.0	4	2.2	9	5.0	167	92.8
Allen	22,114	3,268	14.8	1	0.0	83	2.5	167	5.1	3,017	92.3
Bartholomew	3,632	498	13.7	3	0.6	28	5.6	54	10.8	413	82.9
Benton	196	32	16.3	1	3.1	2	6.3	4	12.5	25	78.1
Blackford	362	65	18.0	0	0.0	13	20.0	1	1.5	51	78.5
Boone	3,045	428	14.1	0	0.0	13	3.0	19	4.4	396	92.5
Brown	707	118	16.7	0	0.0	7	5.9	8	6.8	103	87.3
Carroll	590	108	18.3	0	0.0	12	11.1	4	3.7	92	85.2
Cass	1,677	285	17.0	1	0.4	8	2.8	7	2.5	269	94.4
Clark	8,572	997	11.6	0	0.0	51	5.1	52	5.2	894	89.7
Clay	1,150	180	15.7	0	0.0	15	8.3	8	4.4	157	87.2
Clinton	1,587	251	15.8	1	0.4	9	3.6	20	8.0	221	88.0
Crawford	428	55	12.9	0	0.0	3	5.5	3	5.5	49	89.1
Daviess	575	93	16.2	0	0.0	19	20.4	4	4.3	70	75.3
Dearborn	2,722	427	15.7	0	0.0	28	6.6	14	3.3	385	90.2
Decatur	1,461	205	14.0	0	0.0	11	5.4	14	6.8	180	87.8
DeKalb	1,915	257	13.4	1	0.4	15	5.8	10	3.9	231	89.9
Delaware	6,523	1,064	16.3	1	0.1	46	4.3	61	5.7	956	89.8
Dubois	2,221	345	15.5	0	0.0	10	2.9	17	4.9	318	92.2
Elkhart	11,832	1,558	13.2	0	0.0	64	4.1	36	2.3	1,458	93.6
Fayette	856	117	13.7	0	0.0	5	4.3	2	1.7	110	94.0
Floyd	5,004	698	13.9	1	0.1	25	3.6	32	4.6	640	91.7
Fountain	559	84	15.0	0	0.0	4	4.8	0	0.0	80	95.2
Franklin	717	134	18.7	1	0.7	15	11.2	1	0.7	117	87.3
Fulton	805	102	12.7	0	0.0	4	3.9	3	2.9	95	93.1
Gibson	1,659	240	14.5	1	0.4	22	9.2	15	6.3	202	84.2
Grant	3,480	456	13.1	0	0.0	16	3.5	16	3.5	424	93.0
Greene	1,214	184	15.2	1	0.5	14	7.6	10	5.4	159	86.4
Hamilton	14,657	2,034	13.9	0	0.0	58	2.9	79	3.9	1,897	93.3
Hancock	3,130	488	15.6	0	0.0	41	8.4	23	4.7	424	86.9
Harrison	1,778	274	15.4	1	0.4	17	6.2	21	7.7	235	85.8
Hendricks	7,551	1,205	16.0	2	0.2	49	4.1	40	3.3	1,114	92.4
Henry	1,551	213	13.7	1	0.5	18	8.5	13	6.1	181	85.0
Howard	4,474	630	14.1	1	0.2	37	5.9	35	5.6	557	88.4
Huntington	1,641	241	14.7	0	0.0	13	5.4	21	8.7	207	85.9
Jackson	2,409	326	13.5	0	0.0	16	4.9	15	4.6	295	90.5
Jasper	1,886	267	14.2	0	0.0	15	5.6	16	6.0	236	88.4
Jay	947	119	12.6	0	0.0	1	0.8	20	16.8	98	82.4
Jefferson	1,642	235	14.3	0	0.0	8	3.4	15	6.4	212	90.2
Jennings	1,208	195	16.1	0	0.0	7	3.6	9	4.6	179	91.8
Johnson	6,621	982	14.8	0	0.0	45	4.6	41	4.2	896	91.2
Knox	1,332	251	18.8	0	0.0	15	6.0	13	5.2	223	88.8
Kosciusko	4,008	629	15.7	0	0.0	1	0.2	68	10.8	560	89.0
LaGrange	1,301	198	15.2	2	1.0	4	2.0	27	13.6	165	83.3
Lake	27,982	3,120	11.2	2	0.1	125	4.0	116	3.7	2,877	92.2
LaPorte	5,800	665	11.5	1	0.2	29	4.4	35	5.3	600	90.2
Lawrence	2,149	301	14.0	0	0.0	19	6.3	19	6.3	263	87.4
Madison	6,437	854	13.3	0	0.0	52	6.1	22	2.6	780	91.3

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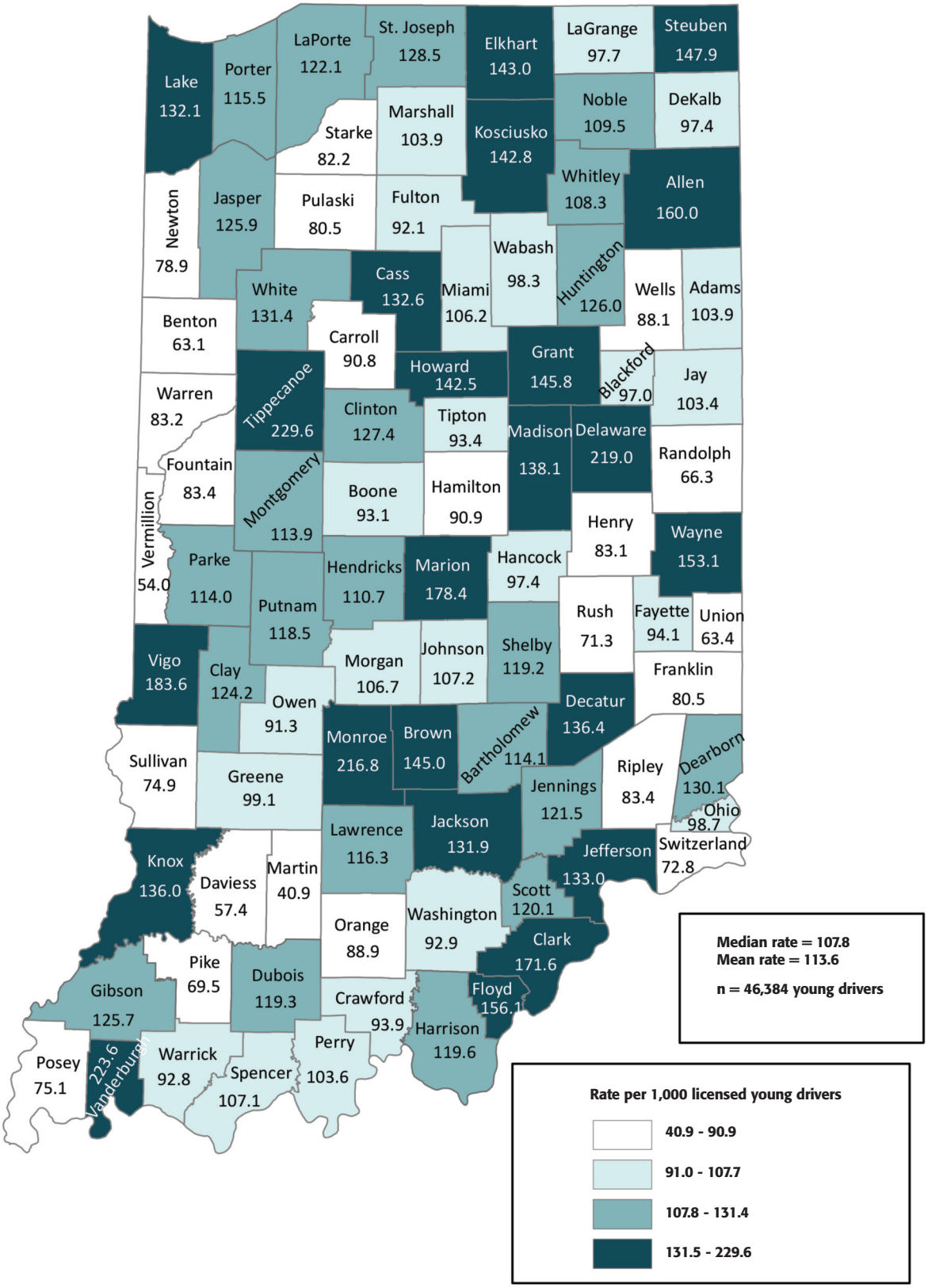
Table 2.6. *(continued)*

County	All drivers in collisions	Young drivers in collisions									
		Total		Fatal		Incapacitating		Non-incapacitating		Other/no injury	
		Count	As % of total drivers in collisions	Count	As % of all young drivers in collisions	Count	As % of all young drivers in collisions	Count	As % of all young drivers in collisions	Count	As % of all young drivers in collisions
Marion	62,903	6,568	10.4	9	0.1	97	1.5	509	7.7	5,953	90.6
Marshall	2,156	294	13.6	1	0.3	11	3.7	13	4.4	269	91.5
Martin	212	25	11.8	0	0.0	0	0.0	1	4.0	24	96.0
Miami	1,394	196	14.1	1	0.5	11	5.6	9	4.6	175	89.3
Monroe	6,646	1,184	17.8	2	0.2	56	4.7	58	4.9	1,068	90.2
Montgomery	1,434	234	16.3	1	0.4	6	2.6	11	4.7	216	92.3
Morgan	3,018	465	15.4	1	0.2	32	6.9	16	3.4	416	89.5
Newton	467	66	14.1	0	0.0	5	7.6	2	3.0	59	89.4
Noble	1,960	312	15.9	0	0.0	15	4.8	8	2.6	289	92.6
Ohio	190	30	15.8	1	3.3	2	6.7	2	6.7	25	83.3
Orange	700	102	14.6	0	0.0	8	7.8	9	8.8	85	83.3
Owen	826	108	13.1	0	0.0	8	7.4	4	3.7	96	88.9
Parke	598	84	14.0	0	0.0	6	7.1	4	4.8	74	88.1
Perry	646	97	15.0	1	1.0	3	3.1	5	5.2	88	90.7
Pike	271	48	17.7	0	0.0	2	4.2	3	6.3	43	89.6
Porter	8,302	1,130	13.6	0	0.0	39	3.5	70	6.2	1,021	90.4
Posey	786	113	14.4	0	0.0	7	6.2	4	3.5	102	90.3
Pulaski	514	59	11.5	0	0.0	1	1.7	1	1.7	57	96.6
Putnam	1,579	236	14.9	1	0.4	23	9.7	11	4.7	201	85.2
Randolph	647	93	14.4	0	0.0	7	7.5	4	4.3	82	88.2
Ripley	1,047	155	14.8	0	0.0	13	8.4	4	2.6	138	89.0
Rush	434	68	15.7	0	0.0	7	10.3	4	5.9	57	83.8
St. Joseph	14,379	1,649	11.5	0	0.0	50	3.0	70	4.2	1,529	92.7
Scott	1,010	150	14.9	1	0.7	13	8.7	11	7.3	125	83.3
Shelby	2,065	292	14.1	1	0.3	20	6.8	19	6.5	252	86.3
Spencer	733	138	18.8	0	0.0	8	5.8	10	7.2	120	87.0
Starke	772	99	12.8	0	0.0	13	13.1	1	1.0	85	85.9
Steuben	1,921	248	12.9	0	0.0	12	4.8	11	4.4	225	90.7
Sullivan	657	90	13.7	0	0.0	3	3.3	4	4.4	83	92.2
Switzerland	211	34	16.1	0	0.0	5	14.7	0	0.0	29	85.3
Tippecanoe	11,719	1,815	15.5	0	0.0	10	0.6	156	8.6	1,649	90.9
Tipton	579	93	16.1	1	1.1	12	12.9	4	4.3	76	81.7
Union	135	27	20.0	0	0.0	3	11.1	6	22.2	18	66.7
Vanderburgh	12,642	1,766	14.0	0	0.0	5	0.3	144	8.2	1,617	91.6
Vermillion	440	47	10.7	0	0.0	2	4.3	2	4.3	43	91.5
Vigo	5,875	858	14.6	1	0.1	37	4.3	23	2.7	797	92.9
Wabash	1,323	172	13.0	1	0.6	5	2.9	14	8.1	152	88.4
Warren	300	44	14.7	0	0.0	1	2.3	3	6.8	40	90.9
Warrick	2,337	375	16.0	0	0.0	5	1.3	28	7.5	342	91.2
Washington	910	146	16.0	0	0.0	12	8.2	15	10.3	119	81.5
Wayne	3,569	470	13.2	0	0.0	22	4.7	14	3.0	434	92.3
Wells	1,017	149	14.7	0	0.0	8	5.4	9	6.0	132	88.6
White	1,341	186	13.9	0	0.0	12	6.5	6	3.2	168	90.3
Whitley	1,419	213	15.0	1	0.5	15	7.0	8	3.8	189	88.7

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Non-incapacitating* injuries include those reported as *non-incapacitating* and *possible* injuries.
2) *Other/no injury* counts include injury type values identified as *not reported, refused, unknown,* invalid and missing codes.

Map 2.8. Young drivers (ages 15-20) involved in collisions per 1,000 licensed young drivers, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Table 2.7. Indiana collisions involving motorcycles, by severity and county, 2016

County	Total		Fatal		Non-fatal injury		Property damage only	
	Count	Motorcycle collisions as % of total collisions	Count	Motorcycle collisions as % of total fatal collisions	Count	Motorcycle collisions as % of total non-fatal injury collisions	Count	Motorcycle collisions as % of total property damage collisions
All counties	**3,216**	**1.4**	**101**	**13.8**	**2,058**	**5.8**	**1,057**	**0.6**
Mean	35	1.8	1	12.3	22	7.4	11	0.7
Median	19	1.6	1	10.0	12	6.9	5	0.6
Minimum	1	0.7	0	0.0	0	0.0	0	0.0
Maximum	417	6.9	11	50.0	274	24.7	132	3.4
Adams	10	1.4	1	50.0	5	5.3	4	0.7
Allen	188	1.3	3	10.0	113	4.8	72	0.6
Bartholomew	33	1.5	1	7.1	23	3.7	9	0.6
Benton	1	0.7	0	0.0	0	0.0	1	0.8
Blackford	3	1.1	0	0.0	2	5.1	1	0.4
Boone	24	1.2	1	20.0	10	4.3	13	0.7
Brown	38	6.9	0	0.0	22	24.7	16	3.4
Carroll	7	1.5	0	0.0	5	7.6	2	0.5
Cass	26	2.3	2	25.0	17	10.2	7	0.7
Clark	65	1.2	2	20.0	35	4.4	28	0.6
Clay	12	1.5	0	0.0	8	7.1	4	0.6
Clinton	23	2.0	0	0.0	8	5.1	15	1.5
Crawford	12	3.5	1	50.0	9	17.0	2	0.7
Daviess	8	2.0	0	0.0	8	6.6	0	0.0
Dearborn	31	1.7	1	20.0	17	6.8	13	0.8
Decatur	18	1.8	2	na	13	9.2	3	0.4
DeKalb	22	1.6	0	0.0	17	10.2	5	0.4
Delaware	57	1.3	0	0.0	39	5.3	18	0.5
Dubois	25	1.6	0	0.0	15	7.6	10	0.7
Elkhart	120	1.6	4	25.0	68	7.2	48	0.7
Fayette	6	1.1	0	0.0	3	4.1	3	0.6
Floyd	37	1.2	1	12.5	23	5.3	13	0.5
Fountain	8	1.8	0	0.0	5	12.5	3	0.7
Franklin	15	2.7	0	0.0	11	12.2	4	0.9
Fulton	11	1.8	0	0.0	5	7.8	6	1.1
Gibson	18	1.6	2	20.0	11	5.7	5	0.5
Grant	48	2.0	0	0.0	27	8.5	21	1.0
Greene	10	1.0	1	20.0	7	4.7	2	0.2
Hamilton	87	1.0	1	6.7	49	4.4	37	0.5
Hancock	27	1.4	0	0.0	21	6.2	6	0.4
Harrison	22	1.7	2	18.2	11	5.8	9	0.8
Hendricks	51	1.1	2	12.5	31	5.0	18	0.5
Henry	26	2.5	2	20.0	19	9.0	5	0.6
Howard	58	2.1	3	21.4	42	8.4	13	0.6
Huntington	21	1.8	1	20.0	12	6.1	8	0.8
Jackson	27	1.6	1	25.0	18	8.6	8	0.5
Jasper	22	1.6	1	14.3	13	7.0	8	0.7
Jay	11	1.6	1	33.3	7	6.0	3	0.5
Jefferson	30	2.8	2	40.0	21	12.3	7	0.8
Jennings	9	1.1	0	0.0	6	5.4	3	0.4
Johnson	64	1.7	2	33.3	45	6.7	17	0.5
Knox	15	1.7	1	33.3	12	6.1	2	0.3
Kosciusko	34	1.2	2	14.3	23	5.6	9	0.4
LaGrange	15	1.5	1	16.7	13	9.1	1	0.1
Lake	163	0.9	6	12.5	105	3.6	52	0.4
LaPorte	63	1.6	3	15.8	42	6.0	18	0.5
Lawrence	36	2.4	0	0.0	24	9.1	12	1.0
Madison	68	1.6	3	25.0	43	7.3	22	0.6

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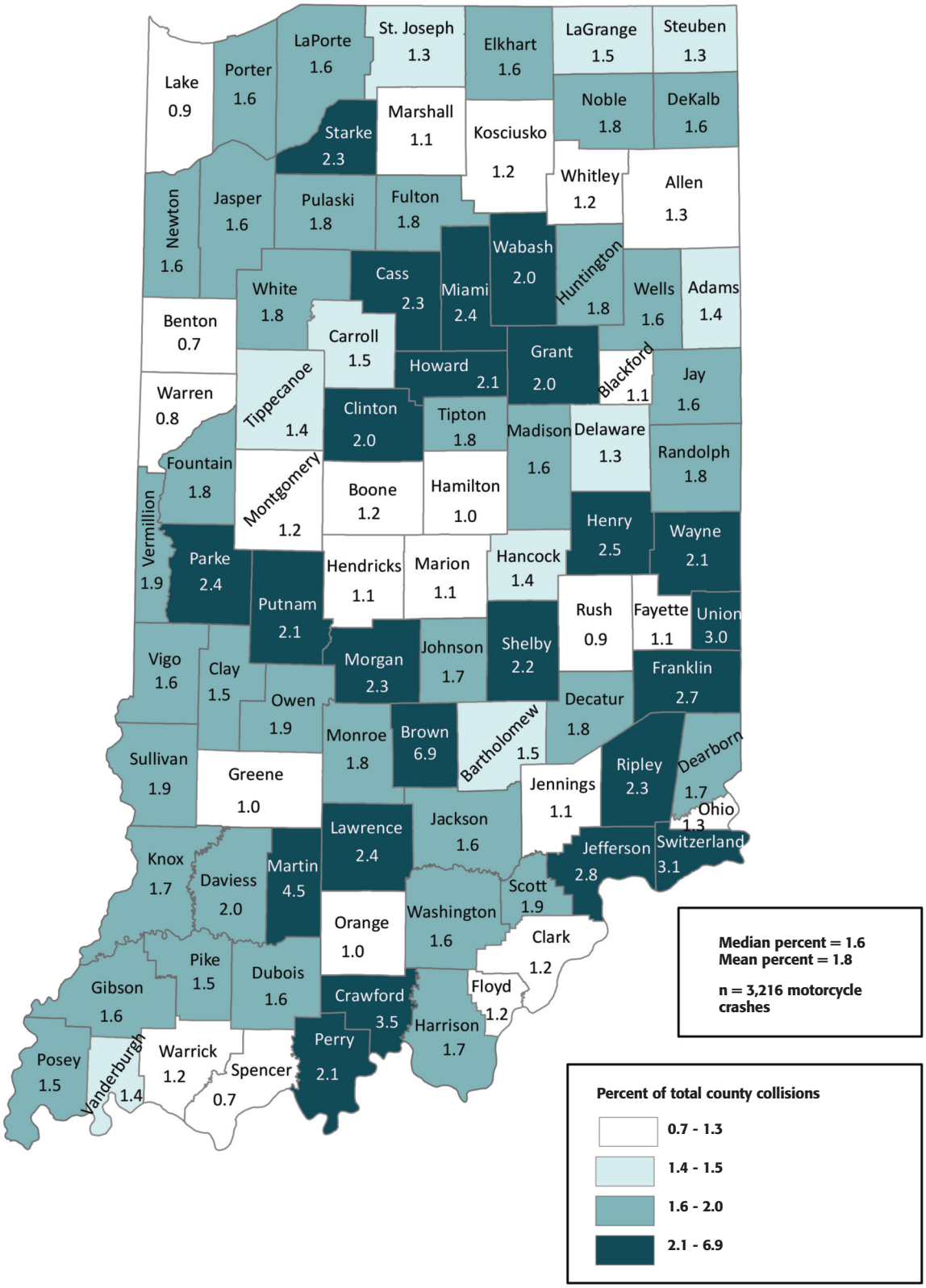
Table 2.7. *(continued)*

County	Total		Fatal		Non-fatal injury		Property damage only	
	Count	Motorcycle collisions as % of total collisions	Count	Motorcycle collisions as % of total fatal collisions	Count	Motorcycle collisions as % of total non-fatal injury collisions	Count	Motorcycle collisions as % of total property damage collisions
Marion	417	1.1	11	11.8	274	4.3	132	0.4
Marshall	17	1.1	0	0.0	12	6.0	5	0.4
Martin	7	4.5	0	0.0	5	16.1	2	1.6
Miami	25	2.4	2	50.0	12	8.3	11	1.2
Monroe	78	1.8	4	25.0	56	7.1	18	0.5
Montgomery	12	1.2	1	20.0	8	5.4	3	0.4
Morgan	44	2.3	1	7.1	28	8.8	15	1.0
Newton	6	1.6	0	0.0	4	7.3	2	0.6
Noble	27	1.8	1	25.0	13	6.8	13	1.0
Ohio	2	1.3	0	0.0	1	5.6	1	0.7
Orange	5	1.0	0	0.0	4	5.1	1	0.2
Owen	11	1.9	0	0.0	6	7.1	5	1.0
Parke	12	2.4	2	28.6	7	10.3	3	0.7
Perry	10	2.1	0	0.0	10	13.3	0	0.0
Pike	3	1.5	0	0.0	3	7.1	0	0.0
Porter	85	1.6	4	23.5	59	5.8	22	0.5
Posey	9	1.5	0	0.0	4	5.8	5	1.0
Pulaski	8	1.8	0	0.0	4	9.3	4	1.0
Putnam	22	2.1	0	0.0	17	9.5	5	0.6
Randolph	9	1.8	1	12.5	5	7.7	3	0.7
Ripley	18	2.3	1	14.3	13	11.2	4	0.6
Rush	3	0.9	0	0.0	3	4.9	0	0.0
St. Joseph	126	1.3	3	13.6	78	5.6	45	0.6
Scott	12	1.9	0	0.0	6	4.3	6	1.2
Shelby	32	2.2	1	9.1	27	9.2	4	0.3
Spencer	4	0.7	0	0.0	3	4.2	1	0.2
Starke	14	2.3	1	20.0	8	11.4	5	1.0
Steuben	20	1.3	1	9.1	11	8.1	8	0.6
Sullivan	9	1.9	0	0.0	6	8.1	3	0.8
Switzerland	5	3.1	1	50.0	2	7.7	2	1.5
Tippecanoe	107	1.4	2	28.6	79	6.9	26	0.4
Tipton	7	1.8	0	0.0	4	4.9	3	1.0
Union	3	3.0	0	0.0	2	7.7	1	1.4
Vanderburgh	105	1.4	2	13.3	69	5.3	34	0.6
Vermillion	6	1.9	1	33.3	3	6.7	2	0.7
Vigo	65	1.6	2	15.4	31	5.1	32	1.0
Wabash	19	2.0	0	0.0	14	10.5	5	0.6
Warren	2	0.8	0	0.0	2	7.4	0	0.0
Warrick	19	1.2	1	12.5	14	6.3	4	0.3
Washington	11	1.6	1	33.3	8	6.4	2	0.4
Wayne	54	2.1	0	0.0	32	10.5	22	1.0
Wells	12	1.6	0	0.0	9	9.6	3	0.5
White	17	1.8	0	0.0	13	12.3	4	0.5
Whitley	12	1.2	1	20.0	6	3.7	5	0.6

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

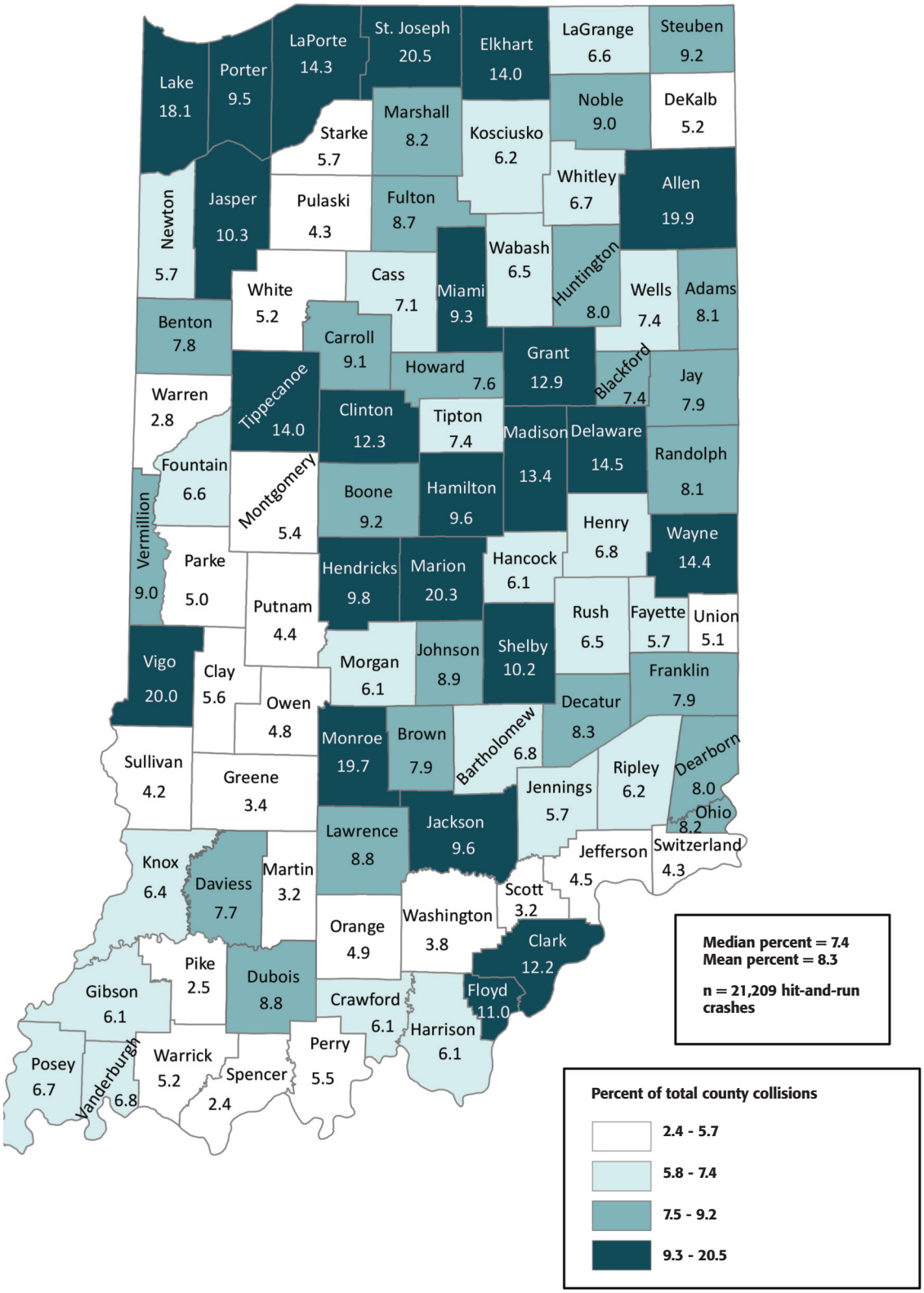
Notes:
1) Percent calculations represent the percent of total county collisions (presented in Table 2.1) in each injury category that involved a *motorcycle* or *moped*.
2) *Non-fatal* injury collisions include collisions with *incapacitating, non-incapacitating* and *possible* injuries.
3) Motorcycles are defined as vehicles reported as *motorcycle, moped, class A* and *B motor driven cycles,* and *motorized bicycle* riders.

Map 2.9. Percentage of county collisions that involved a motorcycle, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Map 2.10. Percentage of county collisions that involved a hit-and-run driver, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Table 2.8. County ranks by collision metric, 2016

Low — High

County	Collision metric						County rank composite
	Fatalities per 100K population	Speed-related collisions as % of total collisions	Alcohol-impaired collisions as % of total collisions	Motorcycle collisions as % of total collisions	Unrestrained injuries as % total injuries	Young drivers as % of total drivers in collisions	
Adams	86	68	91	64	72	6	83
Allen	73	49	26	70	75	43	68
Bartholomew	40	64	31	61	84	67	74
Benton	20	80	65	92	28	12	57
Blackford	16	89	84	80	13	7	56
Boone	83	58	46	78	63	58	82
Brown	85	26	10	1	26	11	5
Carroll	14	29	59	62	22	5	12
Cass	19	22	54	15	50	10	7
Clark	77	83	69	74	77	86	92
Clay	34	75	12	58	5	28	23
Clinton	58	40	24	22	64	23	29
Crawford	36	21	62	3	1	81	17
Daviess	47	43	1	24	4	15	4
Dearborn	69	54	44	41	46	26	47
Decatur	1	23	75	35	31	60	27
DeKalb	42	17	41	44	58	73	46
Delaware	76	37	78	69	76	14	76
Dubois	84	62	23	50	86	30	66
Elkhart	81	8	85	56	89	76	85
Fayette	55	88	42	82	21	69	78
Floyd	66	79	52	77	83	63	87
Fountain	59	45	39	36	3	36	25
Franklin	52	3	35	7	20	4	2
Fulton	70	51	87	37	11	83	69
Gibson	11	52	13	51	29	49	18
Grant	41	34	68	23	30	77	44
Greene	21	39	64	85	24	35	43
Hamilton	88	73	60	86	91	64	90
Hancock	71	61	53	66	67	29	74
Harrison	8	76	73	39	56	32	51
Hendricks	65	56	79	79	42	21	71
Henry	26	24	11	8	51	66	11
Howard	27	71	33	19	47	56	36
Huntington	51	19	77	38	70	44	59
Jackson	74	47	47	54	41	72	66
Jasper	25	50	51	52	53	53	51
Jay	50	92	89	55	23	84	84
Jefferson	45	82	80	6	16	52	50
Jennings	12	77	40	83	69	16	57
Johnson	89	72	57	40	80	41	81
Knox	80	41	18	42	39	2	26
Kosciusko	24	46	70	72	68	25	61
LaGrange	46	2	49	60	18	34	20
Lake	68	12	63	88	78	90	86
LaPorte	39	28	19	53	82	89	62
Lawrence	53	65	83	11	60	61	64
Madison	72	66	36	47	65	74	79

continued on next page

Table 2.8. *(continued)*

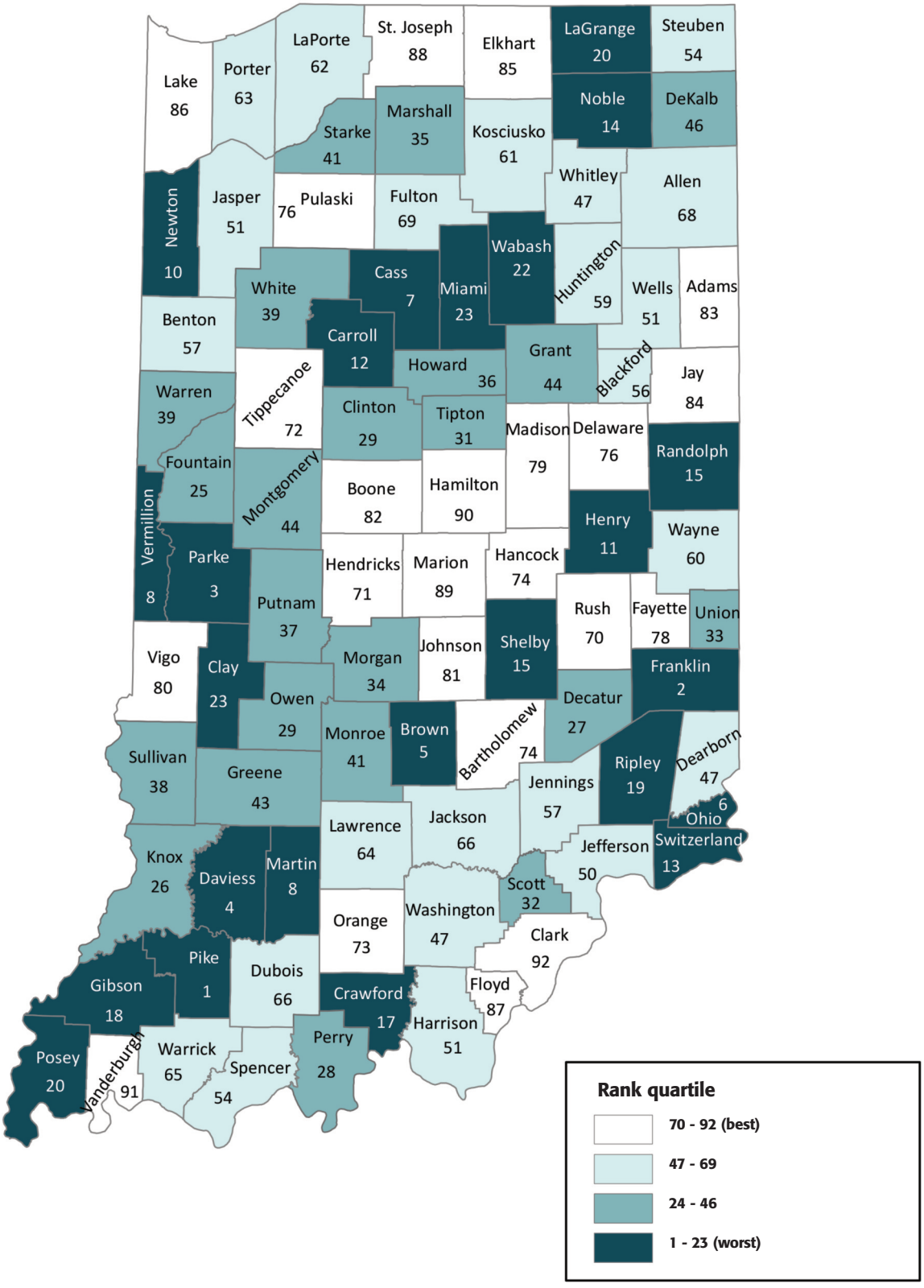
Low — High

County	Collision metric						County rank composite
	Fatalities per 100K population	Speed-related collisions as % of total collisions	Alcohol-impaired collisions as % of total collisions	Motorcycle collisions as % of total collisions	Unrestrained injuries as % total injuries	Young drivers as % of total drivers in collisions	
Marion	64	55	71	81	66	92	89
Marshall	31	33	15	84	15	70	35
Martin	30	6	14	2	36	85	8
Miami	61	10	25	10	49	57	23
Monroe	62	42	66	34	54	8	41
Montgomery	44	53	50	75	38	13	44
Morgan	28	59	55	13	59	33	34
Newton	23	32	8	48	13	55	10
Noble	78	13	30	30	27	22	14
Ohio	7	35	5	71	24	24	6
Orange	67	70	67	87	7	48	73
Owen	18	87	21	25	2	78	29
Parke	3	20	32	9	6	59	3
Perry	87	57	16	18	12	37	28
Pike	2	5	9	59	19	9	1
Porter	60	25	27	43	88	71	63
Posey	82	4	6	57	10	50	20
Pulaski	43	36	90	32	62	87	76
Putnam	91	9	58	20	40	39	37
Randolph	9	91	4	29	17	51	15
Ripley	6	63	48	14	34	42	19
Rush	37	60	92	89	35	27	70
St. Joseph	79	31	74	68	81	88	88
Scott	4	78	43	26	52	40	32
Shelby	15	16	29	16	71	54	15
Spencer	49	81	17	91	44	3	54
Starke	22	44	45	12	61	82	41
Steuben	5	14	76	67	43	80	54
Sullivan	32	74	28	27	33	68	38
Switzerland	35	85	3	4	48	17	13
Tippecanoe	90	7	61	65	90	31	72
Tipton	29	1	82	33	74	18	31
Union	92	69	20	5	57	1	33
Vanderburgh	75	90	81	63	92	62	91
Vermillion	33	11	2	28	8	91	8
Vigo	54	84	72	45	73	47	80
Wabash	10	30	38	21	32	79	22
Warren	17	15	88	90	9	45	39
Warrick	56	67	34	73	85	19	65
Washington	63	86	7	49	55	20	47
Wayne	48	38	37	17	87	75	60
Wells	13	48	86	46	45	46	51
White	57	18	56	31	37	65	39
Whitley	38	27	22	76	79	38	47

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

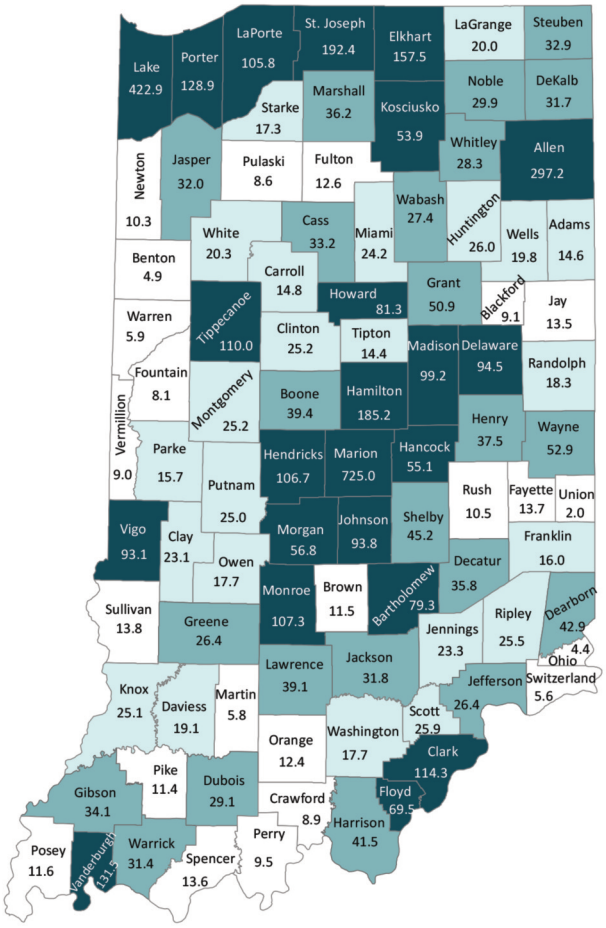
Notes:
1) A collision is identified as speed-related if any one of the following conditions is met: (1) unsafe speed or speed too fast for weather conditions is listed as the primary or contributing factor of the collision; (2) a vehicle driver is issued a speeding citation.
2) A collision is considered alcohol-impaired when any vehicle driver involved has a BAC test result at or above 0.08 g/dL.
3) *Motorcycle* collisions defined as collisions with at least one *motorcycle, moped, class A and B motor driven cycles*, or *motorized bicycle* is involved.
4) Young drivers are drivers ages 15 to 20.
5) Ties received the same rank.
6) County rank composite is the rank of the average county ranks across the six collision metrics presented in previous tables.
7) Color scale depicts rankings from high (1) to low (92) for each individual collision metric.

Map 2.11. County rank, composite (average, six metrics), 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Map 2.12. Estimated costs ($ millions) of Indiana collisions, by county, 2016

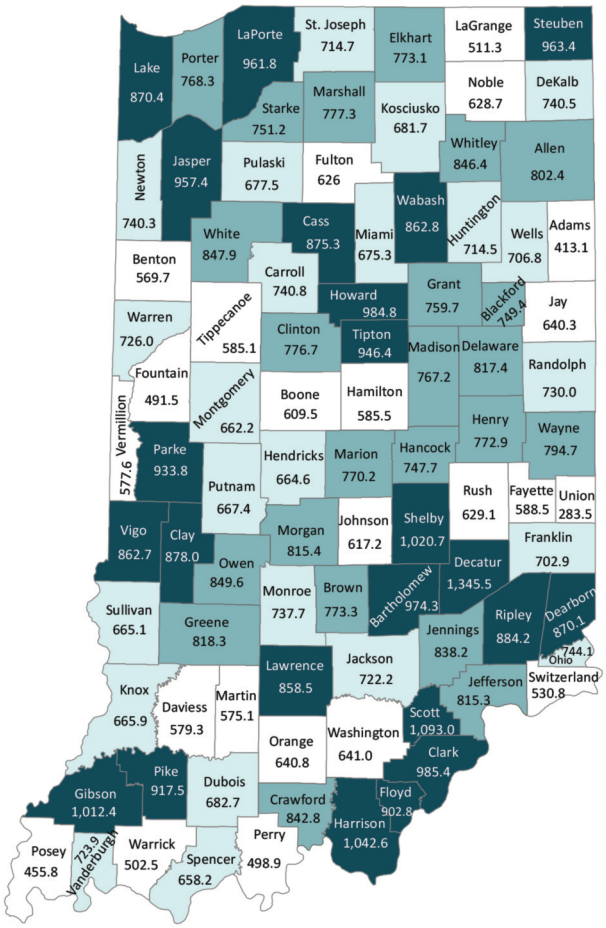


Median cost = $26.2 million
Mean cost = $55.1 million

Cost of county collisions ($ millions)

- 2.0 - 13.8
- 13.9 - 26.2
- 26.3 - 52.9
- 53.0 - 725.0

Map 2.13. Estimated costs per capita of Indiana collisions, by county, 2016

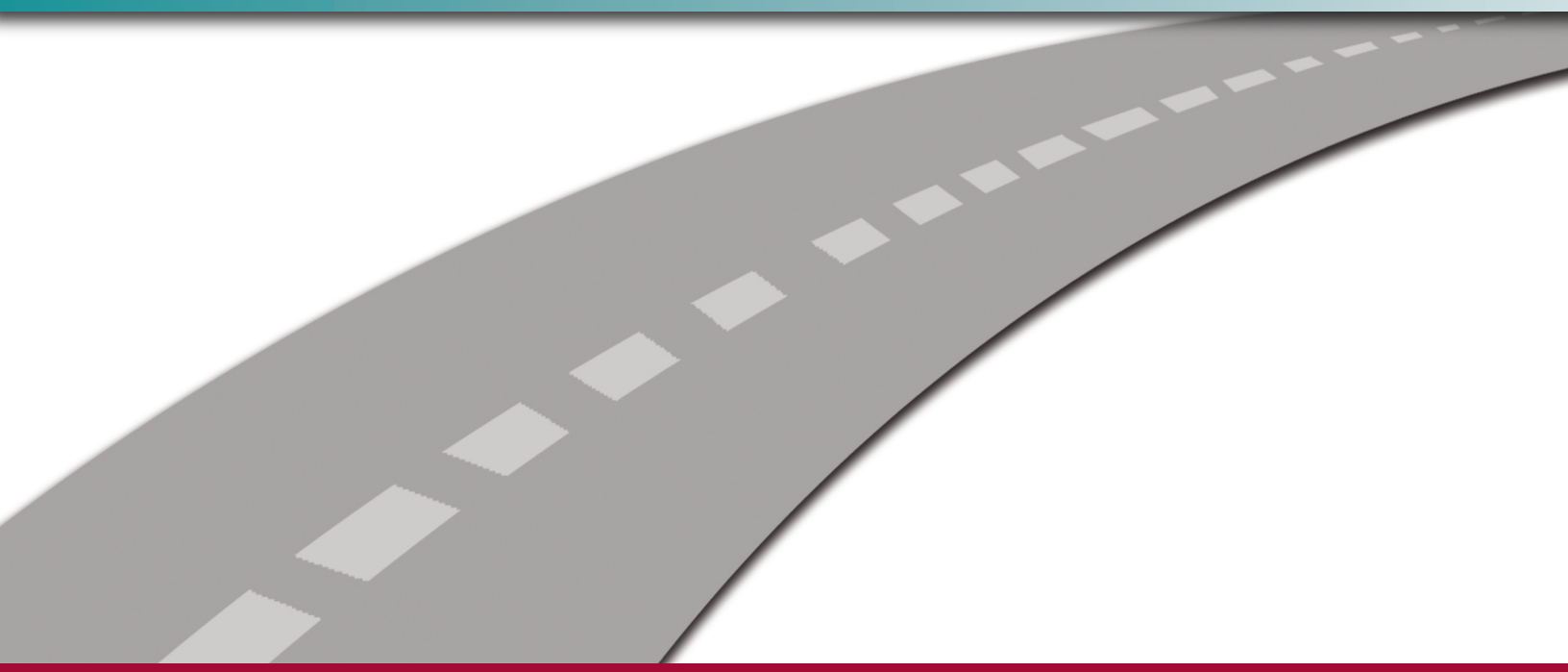


Median cost = $745.9 per capita
Mean cost = $752.2 per capita

- 283.5 - 641.0
- 641.1 - 745.9
- 746.0 - 849.6
- 849.7 - 1345.5

Sources:
Collisions: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017
Population 2016 estimates U.S. Census Bureau, accessed from http://www.stats.indiana.edu/ June 27, 2017

COLLISIONS



COLLISIONS, 2016

This section summaries single-year (2015 to 2016) and 5-year (2012-2016) collision trends in Indiana. In 2016, 223,734 traffic collisions occurred in Indiana, a 3.3 percent increase from 2015. Fatal collisions increased 2.1 percent from 752 in 201 to 768 in 2016. From 2012 to 2016, total collisions rose 4.3 percent annually (Table 3.1). The rate of fatal collisions decreased slightly from 3.5 per 1,000 collisions in 2015 to 3.4 in 2016 (Figure 3.1).

Non-motorists

In 2016, collisions involving pedestrians rose 4.8 percent from 2015. The rate of pedestrian collisions per 1,000 collisions increased slightly from 7.9 to 8.0. Collisions involving pedalcyclists decreased by 3.9 percent between 2015 and 2016. The rate of collisions involving pedalcyclists also decreased from 4.4 per 1,000 collisions to 4.1 between 2015 and 2016 (Figure 3.2).

Month, Day, and Time

The largest number of collisions per month in 2016 occurred in the late fall and early winter (October, November, December, and January). In 2016, December accounted for the largest monthly total collisions. October, November, and December accounted for the highest monthly fatal collisions (Table 3.2).

Collisions were most common on weekdays during 3pm - 5:59pm. In 2016, the highest proportion of fatal collisions occurred on Tuesdays and Fridays between the hours of 12am and 2:59am, and on Sundays during the same time frame (Table 3.3).

On average, monthly counts of daytime collisions are higher than counts of nighttime collisions. Average monthly daytime collisions in 2016 were 12,836 compared to 5,808 nighttime collisions. Both daytime and nighttime counts exceeded monthly averages in late fall and early winter months of October, November, December, and January (Figure 3.3). Monthly average fatal collisions are slightly higher during the day (33) than night (31). Both the lowest number of daytime and nighttime fatal collisions occurred in March (Figure 3.4).

In 2016, *alcohol-impaired* collisions represented 2.1 percent of all collisions (Table 3.4). Collisions that involved speeding accounted for 9.5 percent of total collisions, and *hit-and-run* collisions accounted for 13.4 percent of total collisions. *Speed-related* collisions were proportionally most likely to occur during winter and spring months (December–March). The highest proportion of *alcohol-impaired* collisions occurred in March, April, and May. In 2016, *speed-related* collisions represented 25.8 percent (198 of 768) of fatal collisions; *alcohol-impaired* collisions accounted for 9.5 percent (73 of 768) of fatal collisions (not shown in table).

With regard to time of day, the highest proportion of *hit-and-run, alcohol-impaired,* and *speed-related* collisions occurred from 12am – 5:59am across all days of the week, in particular on Saturday and Sunday (Table 3.5). *Distracted, any type* collisions were highest during the afternoon period (noon to 5:59pm) most days of the week.

Primary Factor

In 2016, driver-related factors accounted for 87 percent of collisions and 95 percent of fatal collisions (calculated from Table 3.6). *Driver unsafe actions* represented the largest number of collisions in 2016. Within the *driver unsafe actions* category, primary factors classified as *following too closely* and *failure to yield right of way* accounted for the most collisions. Proportional to all fatal collisions, *ran off road* was the most common primary factor within the *driver loss of control* category. Rates of fatal injury collisions were higher among primary factors attributed to driver actions (3.8) than those with primary factors attributed to vehicles or the environment. In 2016, 3.7 of 1,000 collisions where the driver was identified with a *cognitive/physical impairment* were fatal injury collisions (Table 3.6).

Fatal collisions were less likely than non-fatal collisions to have been attributable to *driver unsafe actions. Driver loss of control* accounted for 30 percent of all fatal collisions, but only 10 percent of non-fatal collisions. *Environmental factors* (10 percent) were more likely to have been the primary factor in non-fatal collisions than in fatal collisions (Figure 3.5).

Census Locale and Road Class

Collision counts in 2016 were higher in Indiana *urban* (145,072) and *suburban* (26,741) areas than surrounding ***exurban*** and *rural* locales. However, rates of fatal injury collisions per 1,000 total collisions were higher in exurban (8.5) and rural (7.5) locales than in areas identified as *suburban* and *urban*. (Figure 3.6). In general during 2012 to 2016, collision counts were highest on *local/city roads* (104,058 in 2016) and lowest on *interstates*. Rates of fatal injury collisions were higher on *US routes, county roads*, and *state roads* than on other road types (Figure 3.7).

Road Parameters and Manner of Collisions

When observing collisions by junction type, 73 percent of fatal collisions occurred at road segments with *no junction* (calculated from table). Collisions that occurred on a *curved* road had a higher rate of fatal injury per 1,000 collisions (7.4 in 2016) than those on a *straight* road (3.1) (Table 3.7). Rear end as the manner of collision accounted for 25 percent of all collisions. *Ran off road* crashes accounted for 36 percent of fatal collisions (calculated from table), and had a fatal injury per 1,000 collision rate of 8.4 in 2016 (Table 3.8).

Traffic Control Type and Environmental Conditions

Collisions that involved traffic control types identified as *railroad crossing* (20.5), *no passing zone* (10.4), and *lane control* (5.2) had the highest rates of fatal injury collisions per 1,000 collisions (Table 3.9). Thirty percent of fatal collisions occurred on *dark (not lighted)* roads. Collisions on roads that were dark (not lighted) had the highest rate of fatal injury collisions (7.4 per 1,000 collisions). *Fog/smoke/smog* (7.3) had the highest rate of fatal injury collisions per 1,000 collisions (Table 3.10).

Work Zone Collisions

After declining between 2012 and 2013, the number of collisions occurring in work zones rose from 2,878 in 2013 to 3,487 in 2016. The work zone collision rate was 24.5 per 1,000 collisions in 2016, up from 22.1 in 2015 (Figure 3.8). In 2016, the fatal injury collision rate for work zones (2.7) was lower than for non-work zone collisions (3.5). Work zone collisions occurring in the construction type of *intermittent/moving work* had the highest rate of fatal injury collisions, followed by *work on shoulder* (Table 3.11).

In 2016, work zone collision rates per 1,000 total collisions were highest in *suburban* (36.9) areas. Fatal injury collision rates were also higher in *suburban* (6.1 per 1,000 work zone collisions) areas than other locales (Figure 3.9). Work zone collision rates were highest on *interstates* (124) and lowest on *county roads* (4.8). In 2016, rates of fatal injury collisions were highest on *state roads* (4.7 per 1,000 work zone collisions) (Figure 3.10).

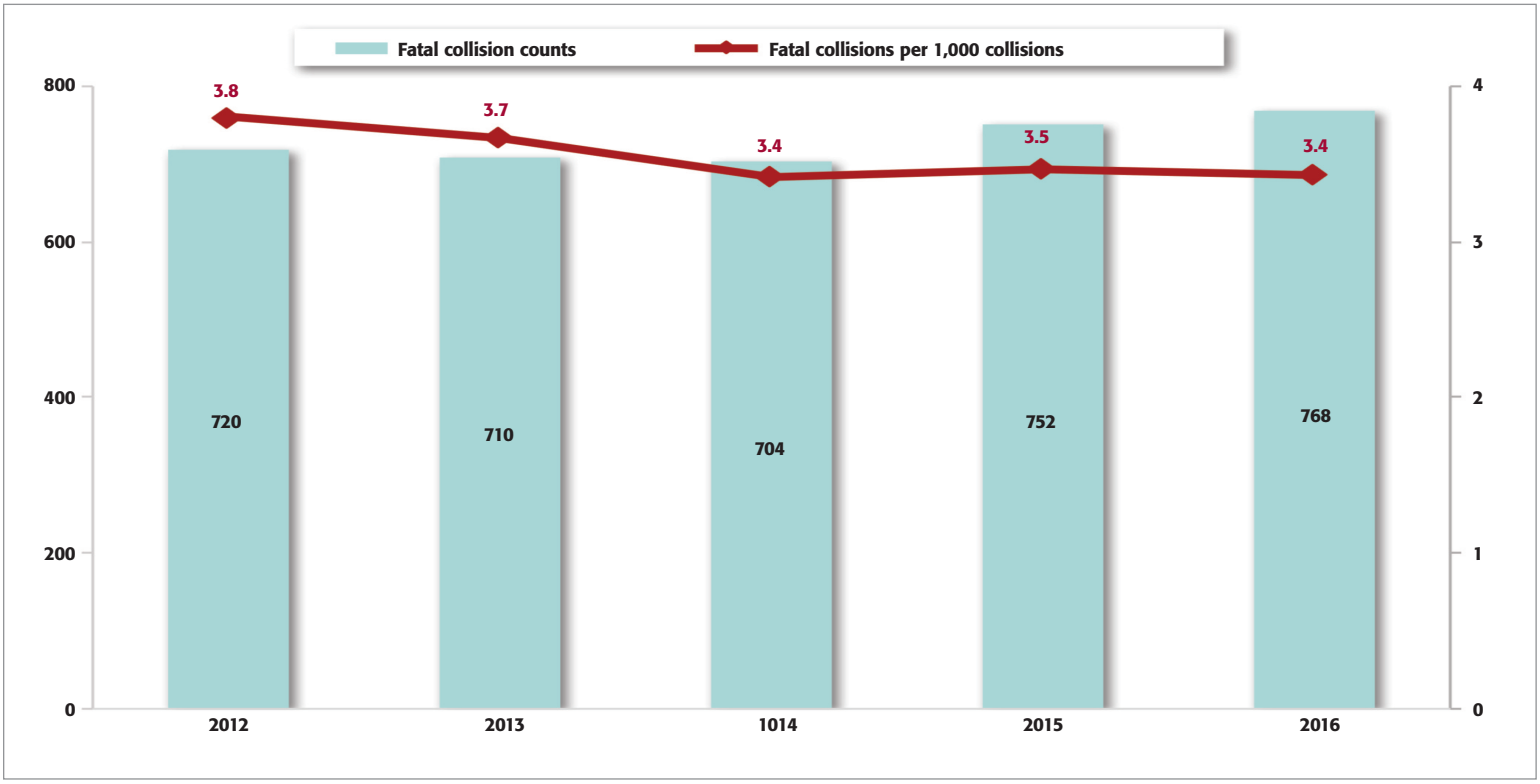
While the majority of work zone collisions (74 percent, calculated from table) occurred during daylight, fatal injury work zone collision rates were highest at *dark (not lighted)* (7.2). In 2016, the weather conditions with the highest rate of fatal injury in work zone collisions were *fog/smoke/smog* (50 per 1,000 collisions) (Table 3.12). While *lane control* collisions (3,008) represented the largest number of work zone collisions that occurred under traffic control type, the highest rate of fatal injury in work zone collision rates occurred under *yield sign* (10.4 per 1,000 collisions) (Table 3.13).

Table 3.1. Indiana traffic collisions, by collision severity, 2012-2016

						Annual rate of change	
	2012	2013	2014	2015	2016	2015-16	2012-16
All collisions	**189,183**	**193,236**	**205,769**	**216,483**	**223,734**	**3.3%**	**4.3%**
Fatal	720	710	704	752	768	2.1%	1.6%
Non-fatal	34,138	32,852	33,860	34,466	35,323	2.5%	0.9%
Property damage only	154,325	159,674	171,205	181,265	187,643	3.5%	5.0%

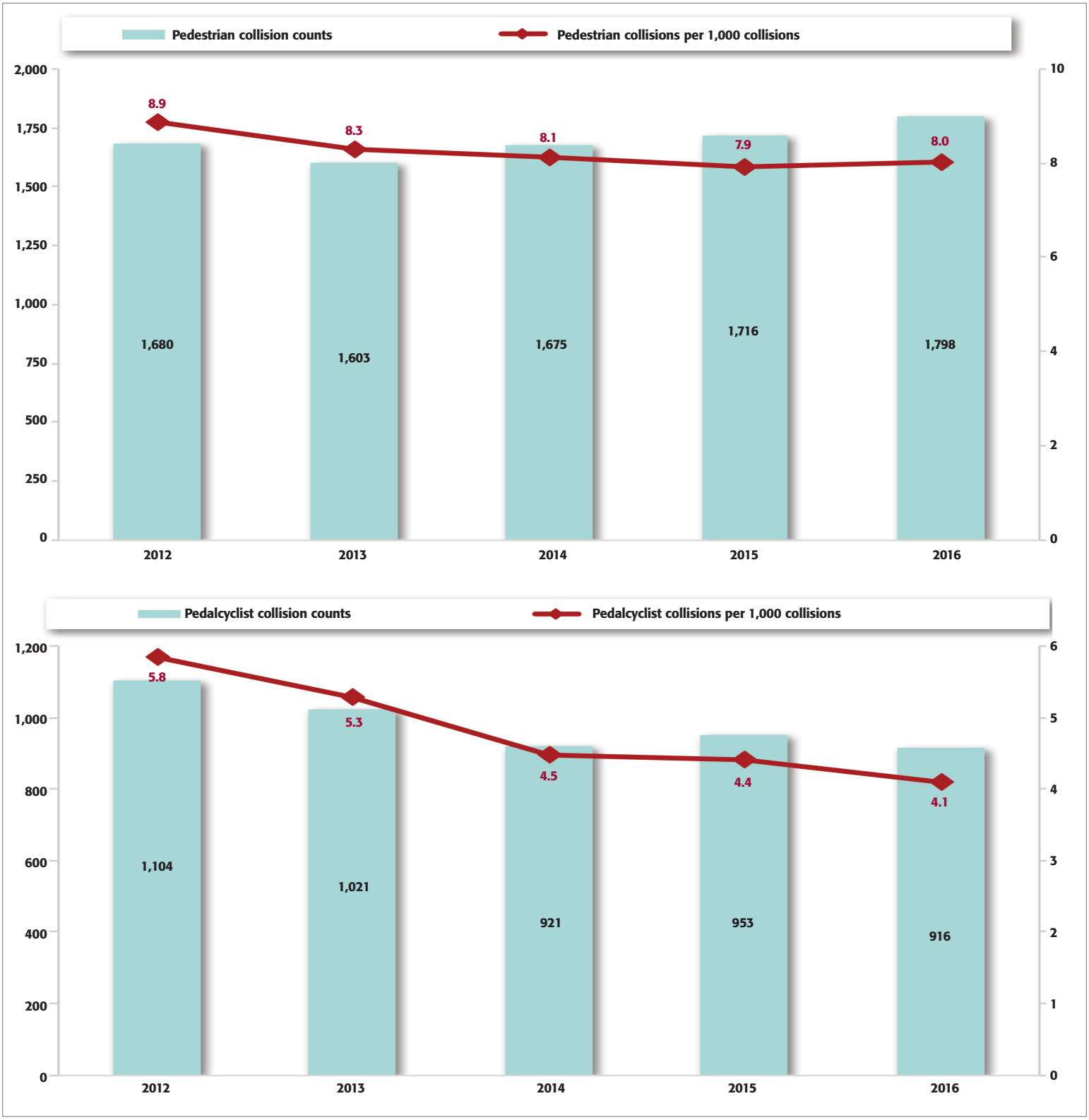
Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Figure 3.1. Indiana fatal traffic collisions, 2012-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Figure 3.2. Indiana collisions involving pedestrians and pedalcyclists, 2012-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Table 3.2. Indiana traffic collisions, by month, 2015-2016

Month	Fatal collisions			Total collisions			% Change (2015-16)	
	2015	2016	Change	2015	2016	Change	Fatal	Total
Jan	54	51	-3	19,692	19,369	-323	-5.6%	-1.6%
Feb	45	53	8	19,783	17,780	-2,003	17.8%	-10.1%
Mar	49	65	16	16,435	16,378	-57	32.7%	-0.3%
Apr	54	56	2	15,364	17,528	2,164	3.7%	14.1%
May	71	63	-8	17,362	18,047	685	-11.3%	3.9%
Jun	75	66	-9	17,146	17,877	731	-12.0%	4.3%
Jul	67	69	2	17,308	17,680	372	3.0%	2.1%
Aug	70	59	-11	17,103	19,321	2,218	-15.7%	13.0%
Sep	75	69	-6	17,702	18,619	917	-8.0%	5.2%
Oct	85	71	-14	19,233	19,460	227	-16.5%	1.2%
Nov	53	76	23	20,477	20,493	16	43.4%	0.1%
Dec	54	70	16	18,878	21,182	2,304	29.6%	12.2%
Total	**752**	**768**	**16**	**216,483**	**223,734**	**7,251**	**2.1%**	**3.3%**

Low < < > > High

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Table 3.3. Indiana traffic collisions, by day of the week, and time of day, 2016

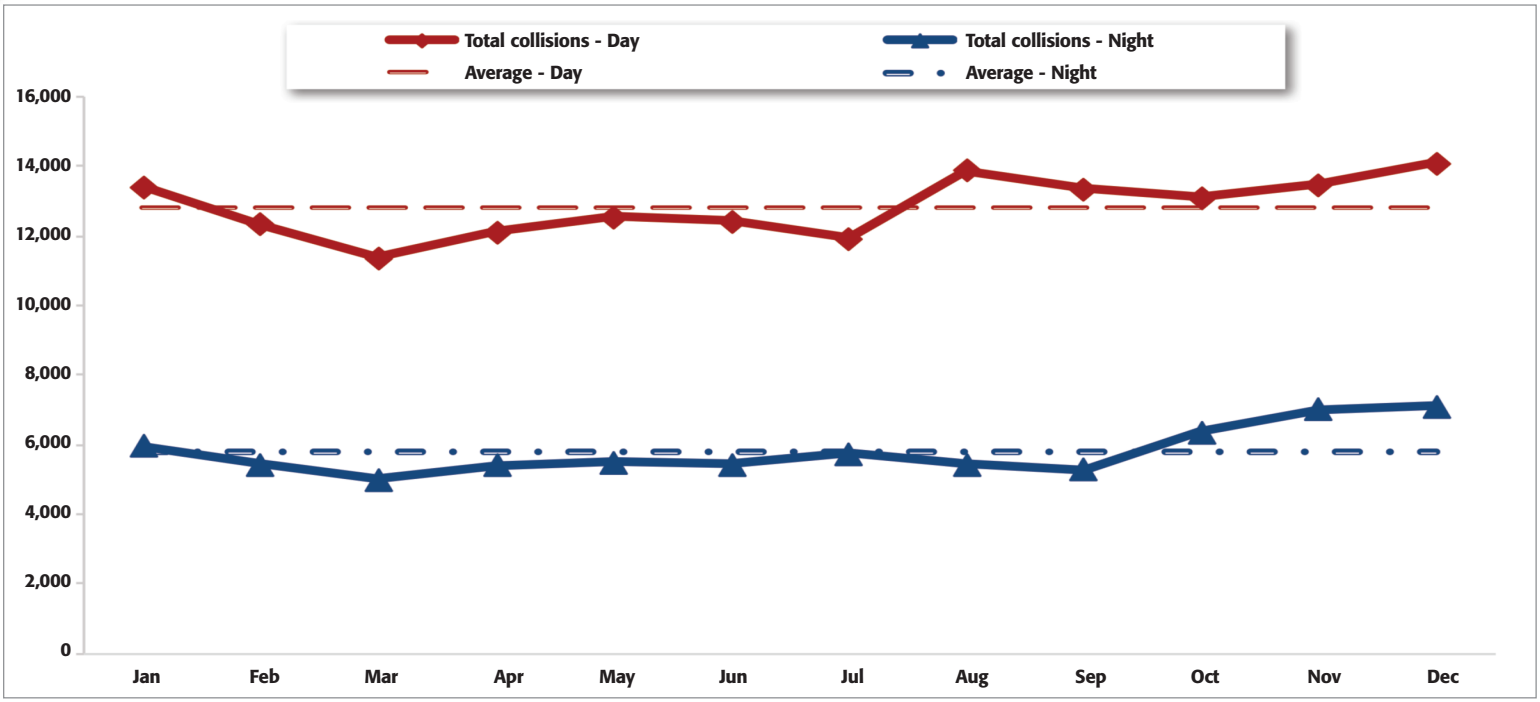
Day of the week	Time of day								All hours
	12am - 2:59am	3am - 5:59am	6am - 8:59am	9am - 11:59am	12pm - 2:59pm	3pm - 5:59pm	6pm - 8:59pm	9pm - 11:59pm	
Total collisions	**9,519**	**10,019**	**28,622**	**29,871**	**40,685**	**54,858**	**31,750**	**18,410**	**223,734**
Sunday	2,110	1,630	1,574	2,783	4,708	4,989	3,786	2,151	23,731
Monday	969	1,280	4,737	4,251	5,573	8,328	4,316	2,262	31,716
Tuesday	1,007	1,330	5,565	4,961	5,906	8,790	4,341	2,088	33,988
Wednesday	1,010	1,350	5,092	4,544	6,008	8,829	4,675	2,263	33,771
Thursday	1,027	1,357	4,883	4,341	5,794	8,677	4,559	2,390	33,028
Friday	1,191	1,333	4,404	4,490	6,848	9,867	5,576	3,847	37,556
Saturday	2,205	1,739	2,367	4,501	5,848	5,378	4,497	3,409	29,944
Fatal collisions	**78**	**73**	**83**	**78**	**108**	**126**	**114**	**108**	**768**
Sunday	20	12	6	11	15	23	23	11	121
Monday	5	12	12	10	14	22	20	17	112
Tuesday	11	7	15	9	10	10	9	13	84
Wednesday	5	9	10	11	21	13	15	11	95
Thursday	8	10	13	13	18	13	17	15	107
Friday	13	8	20	12	15	17	18	24	127
Saturday	16	15	7	12	15	28	12	17	122
% Fatal	**0.82%**	**0.73%**	**0.29%**	**0.26%**	**0.27%**	**0.23%**	**0.36%**	**0.59%**	**0.34%**
Sunday	0.95%	0.74%	0.38%	0.40%	0.32%	0.46%	0.61%	0.51%	0.51%
Monday	0.52%	0.94%	0.25%	0.24%	0.25%	0.26%	0.46%	0.75%	0.35%
Tuesday	1.09%	0.53%	0.27%	0.18%	0.17%	0.11%	0.21%	0.62%	0.25%
Wednesday	0.50%	0.67%	0.20%	0.24%	0.35%	0.15%	0.32%	0.49%	0.28%
Thursday	0.78%	0.74%	0.27%	0.30%	0.31%	0.15%	0.37%	0.63%	0.32%
Friday	1.09%	0.60%	0.45%	0.27%	0.22%	0.17%	0.32%	0.62%	0.34%
Saturday	0.73%	0.86%	0.30%	0.27%	0.26%	0.52%	0.27%	0.50%	0.41%

Low High

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Data limited to collisions where day and time were reported

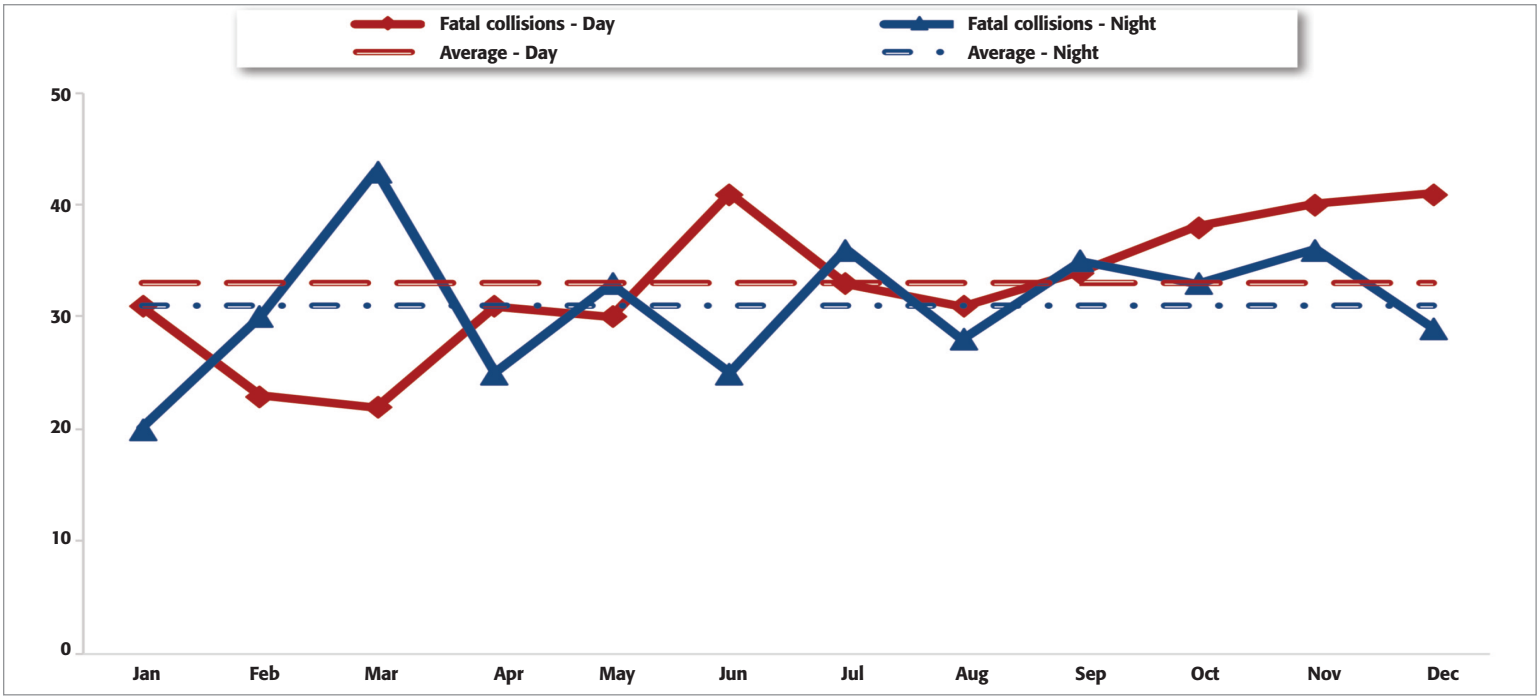
Figure 3.3. Indiana traffic collisions, by month and day/night, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Day is defined as 6am - 5:59pm. Night is defined as 6pm - 5:59am.

Figure 3.4. Indiana fatal collisions, by month and day/night, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Day is defined as 6am - 5:59pm. Night is defined as 6pm - 5:59am.

Table 3.4. Collisions by month and collision circumstances, 2016

Month	Total	Alcohol-impaired		Aggressive driving		Speed-related		Disregard signal		Hit-and-run		Distracted, any type		Distracted, cell phone	
		Count	As % month total	Count	As % month total	Count	As % month total	Count	As % month total	Count	As % month total	Count	As % month total	Count	As % month total
Jan	19,369	433	2.2	680	3.5	3,608	18.6	347	1.8	2,507	12.9	712	3.7	84	0.4
Feb	17,780	380	2.1	565	3.2	2,908	16.4	326	1.8	2,252	12.7	778	4.4	78	0.4
Mar	16,378	417	2.5	539	3.3	1,400	8.5	317	1.9	2,396	14.6	817	5.0	91	0.6
Apr	17,528	433	2.5	570	3.3	1,540	8.8	363	2.1	2,400	13.7	921	5.3	115	0.7
May	18,047	467	2.6	497	2.8	1,103	6.1	365	2.0	2,575	14.3	993	5.5	103	0.6
Jun	17,877	373	2.1	512	2.9	1,031	5.8	372	2.1	2,405	13.5	1,023	5.7	122	0.7
Jul	17,680	425	2.4	538	3.0	1,152	6.5	366	2.1	2,491	14.1	945	5.3	112	0.6
Aug	19,321	387	2.0	553	2.9	1,302	6.7	411	2.1	2,634	13.6	1,062	5.5	125	0.6
Sep	18,619	352	1.9	528	2.8	1,153	6.2	387	2.1	2,500	13.4	1,028	5.5	99	0.5
Oct	19,460	404	2.1	558	2.9	1,130	5.8	392	2.0	2,561	13.2	1,018	5.2	132	0.7
Nov	20,493	354	1.7	523	2.6	1,223	6.0	420	2.0	2,503	12.2	929	4.5	127	0.6
Dec	21,182	358	1.7	710	3.4	3,659	17.3	371	1.8	2,789	13.2	788	3.7	101	0.5
Total	**223,734**	**4,783**	**2.1**	**6,773**	**3.0**	**21,209**	**9.5**	**4,437**	**2.0**	**30,013**	**13.4**	**11,014**	**4.9**	**1,289**	**0.6**

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Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Color comparisons are applied within collision-type categories.
2) Counts of different collisions circumstances will not sum to the total number of collisions.
3) See glossary for definitions of *alcohol-impaired, aggressive driving, speed-related, disregard signal, hit-and-run,* and *distracted, cell phone* collisions.

Table 3.5. Indiana traffic collisions, by day, hour, and collision circumstances, 2016

Day	Time	All collisions	Alcohol-impaired		Aggressive driving		Speed-related		Disregard signal		Hit-and-run		Distracted, any type		Distracted, cell phone	
		Total	Count	As % of day/time total	Count	As % of day/time total	Count	As % of day/time total	Count	As % of day/time total	Count	As % of day/time total	Count	As % of day/time total	Count	As % of day/time total
Mon	12am - 5:59am	2,249	131	5.8	50	2.2	283	12.6	29	1.3	432	19.2	79	3.5	10	0.4
	6am - 11:59am	6,578	196	3.0	244	3.7	629	9.6	148	2.2	1,047	15.9	350	5.3	47	0.7
	12pm - 5:59pm	8,988	20	0.2	245	2.7	904	10.1	223	2.5	874	9.7	404	4.5	43	0.5
	6pm - 11:59pm	13,901	85	0.6	407	2.9	894	6.4	272	2.0	1,599	11.5	761	5.5	76	0.5
Tue	12am - 5:59am	2,337	117	5.0	59	2.5	320	13.7	24	1.0	432	18.5	87	3.7	12	0.5
	6am - 11:59am	6,429	202	3.1	194	3.0	523	8.1	133	2.1	1,019	15.9	341	5.3	51	0.8
	12pm - 5:59pm	10,526	38	0.4	310	2.9	1,408	13.4	229	2.2	1,015	9.6	456	4.3	37	0.4
	6pm - 11:59pm	14,696	84	0.6	488	3.3	1,002	6.8	265	1.8	1,692	11.5	801	5.5	84	0.6
Wed	12am - 5:59am	2,360	117	5.0	65	2.8	320	13.6	39	1.7	458	19.4	84	3.6	18	0.8
	6am - 11:59am	6,938	245	3.5	213	3.1	643	9.3	147	2.1	1,071	15.4	338	4.9	52	0.7
	12pm - 5:59pm	9,636	24	0.2	276	2.9	1,229	12.8	199	2.1	949	9.8	431	4.5	52	0.5
	6pm - 11:59pm	14,837	104	0.7	513	3.5	1,181	8.0	253	1.7	1,664	11.2	807	5.4	79	0.5
Thu	12am - 5:59am	2,384	140	5.9	63	2.6	323	13.5	24	1.0	455	19.1	78	3.3	12	0.5
	6am - 11:59am	6,949	283	4.1	229	3.3	601	8.6	148	2.1	1,156	16.6	326	4.7	35	0.5
	12pm - 5:59pm	9,224	28	0.3	268	2.9	797	8.6	221	2.4	1,000	10.8	421	4.6	44	0.5
	6pm - 11:59pm	14,471	76	0.5	442	3.1	790	5.5	290	2.0	1,586	11.0	785	5.4	83	0.6
Fri	12am - 5:59am	2,524	234	9.3	66	2.6	310	12.3	32	1.3	513	20.3	102	4.0	19	0.8
	6am - 11:59am	9,423	373	4.0	302	3.2	953	10.1	178	1.9	1,582	16.8	477	5.1	73	0.8
	12pm - 5:59pm	8,894	46	0.5	239	2.7	652	7.3	204	2.3	915	10.3	424	4.8	48	0.5
	6pm - 11:59pm	16,715	118	0.7	500	3.0	916	5.5	251	1.5	1,838	11.0	989	5.9	88	0.5
Sat	12am - 5:59am	3,944	444	11.3	125	3.2	702	17.8	57	1.4	1,001	25.4	133	3.4	30	0.8
	6am - 11:59am	7,906	441	5.6	232	2.9	857	10.8	150	1.9	1,429	18.1	359	4.5	60	0.8
	12pm - 5:59pm	6,868	73	1.1	159	2.3	932	13.6	159	2.3	867	12.6	318	4.6	31	0.5
	6pm - 11:59pm	11,226	171	1.5	325	2.9	807	7.2	235	2.1	1,467	13.1	585	5.2	57	0.5
Sun	12am - 5:59am	3,740	527	14.1	116	3.1	549	14.7	61	1.6	1,083	29.0	127	3.4	29	0.8
	6am - 11:59am	5,937	253	4.3	175	2.9	779	13.1	139	2.3	969	16.3	280	4.7	46	0.8
	12pm - 5:59pm	4,357	78	1.8	110	2.5	595	13.7	120	2.8	656	15.1	212	4.9	25	0.6
	6pm - 11:59pm	9,697	135	1.4	358	3.7	1,310	13.5	207	2.1	1,244	12.8	459	4.7	48	0.5
Mon	(Total)	31,716	432	1.4	946	3.0	2,710	8.5	672	2.1	3,952	12.5	1,594	5.0	176	0.6
Tue	(Total)	33,988	441	1.3	1,051	3.1	3,253	9.6	651	1.9	4,158	12.2	1,685	5.0	184	0.5
Wed	(Total)	33,771	490	1.5	1,067	3.2	3,373	10.0	638	1.9	4,142	12.3	1,660	4.9	201	0.6
Thu	(Total)	33,028	527	1.6	1,002	3.0	2,511	7.6	683	2.1	4,197	12.7	1,610	4.9	174	0.5
Fri	(Total)	37,556	771	2.1	1,107	2.9	2,831	7.5	665	1.8	4,848	12.9	1,992	5.3	228	0.6
Sat	(Total)	29,944	1,129	3.8	841	2.8	3,298	11.0	601	2.0	4,764	15.9	1,395	4.7	178	0.6
Sun	(Total)	23,731	993	4.2	759	3.2	3,233	13.6	527	2.2	3,952	16.7	1,078	4.5	148	0.6
		223,734	**4,783**	**2.1**	**6,773**	**3.0**	**21,209**	**9.5**	**4,437**	**2.0**	**30,013**	**13.4**	**11,014**	**4.9**	**1,289**	**0.6**

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Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

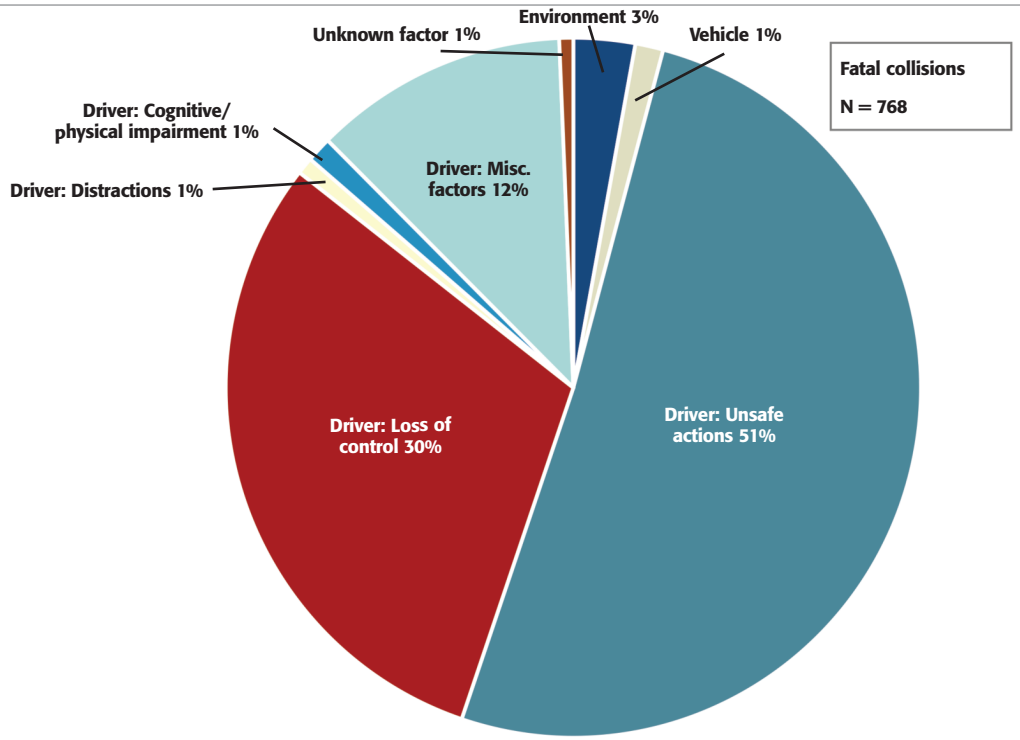
Notes:
1) Total daily counts exclude collisions with invalid time reported.
2) Color comparisons are applied within collision-type categories.
3) Counts of different collisions circumstances will not sum to the total number of collisions.
4) See glossary for definitions of *alcohol-impaired, aggressive driving, speed-related, disregard signal, hit-and-run,* and *distracted, cell phone* collisions.

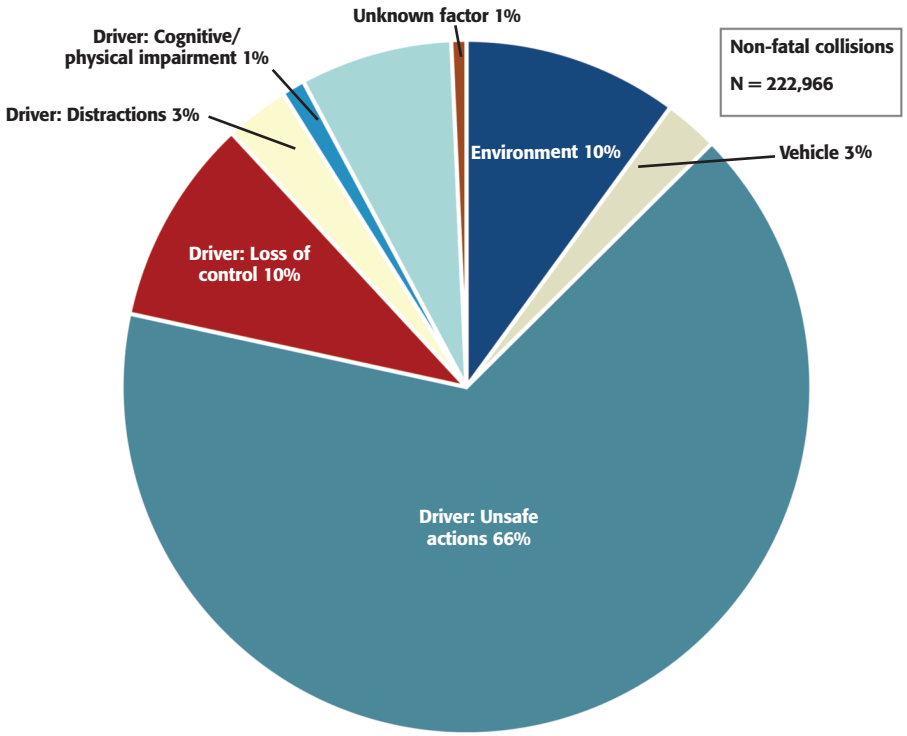
Table 3.6. Indiana collisions, by primary factor and collision severity, 2016

Primary factor	Collisions, by severity				Fatal collisions per 1,000 collisions
	Total	Fatal	Non-fatal	Property damage	
Driver: Unsafe actions	**147,072**	**392**	**23,710**	**122,970**	**2.7**
Following too closely	39,559	13	6,087	33,459	0.3
Failure to yield right of way	35,803	120	8,341	27,342	3.4
Unsafe backing	20,699	4	315	20,380	0.2
Unsafe lane movement	9,459	22	1,016	8,421	2.3
Speed too fast for weather conditions	9,314	16	1,384	7,914	1.7
Disregard signal/Reg sign	8,071	45	2,789	5,237	5.6
Improper turning	7,464	3	492	6,969	0.4
Improper lane usage	5,399	3	464	4,932	0.6
Unsafe speed	5,199	61	1,456	3,682	11.7
Left of center	3,862	91	1,107	2,664	23.6
Improper passing	1,969	3	204	1,762	1.5
Wrong way on one way	274	11	55	208	40.1
Driver: Loss of control	**21,809**	**233**	**5,062**	**16,514**	**10.7**
Ran off road	18,627	214	4,427	13,986	11.5
Overcorrecting/over steering	3,182	19	635	2,528	6.0
Driver: Distractions	**6,675**	**6**	**1,186**	**5,483**	**0.9**
Unspecified distraction	6,186	4	1,090	5,092	0.6
Cell phone/other electronic device	489	2	96	391	4.1
Driver: Cognitive/Physical impairment	**2,431**	**9**	**835**	**1,587**	**3.7**
Driver asleep or fatigued	1,638	3	416	1,219	1.8
Driver illness	793	6	419	368	7.6
Driver: Miscellaneous factors	**16,024**	**91**	**2,484**	**13,449**	**5.7**
Other (unspecified)	15,204	43	1,887	13,274	2.8
Influenced by pedestrian action	820	48	597	175	58.5
Driver factors (all)	**194,011**	**731**	**33,277**	**160,003**	**3.8**
Vehicle factors	**5,654**	**10**	**740**	**4,904**	**1.8**
Environmental factors	**22,490**	**22**	**1,254**	**21,214**	**1.0**
Unknown	**1,579**	**5**	**52**	**1,522**	**3.2**
All collisions	**223,734**	**768**	**35,323**	**187,643**	**3.4**

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Figure 3.5. Indiana traffic collisions, by primary factor and severity, 2016

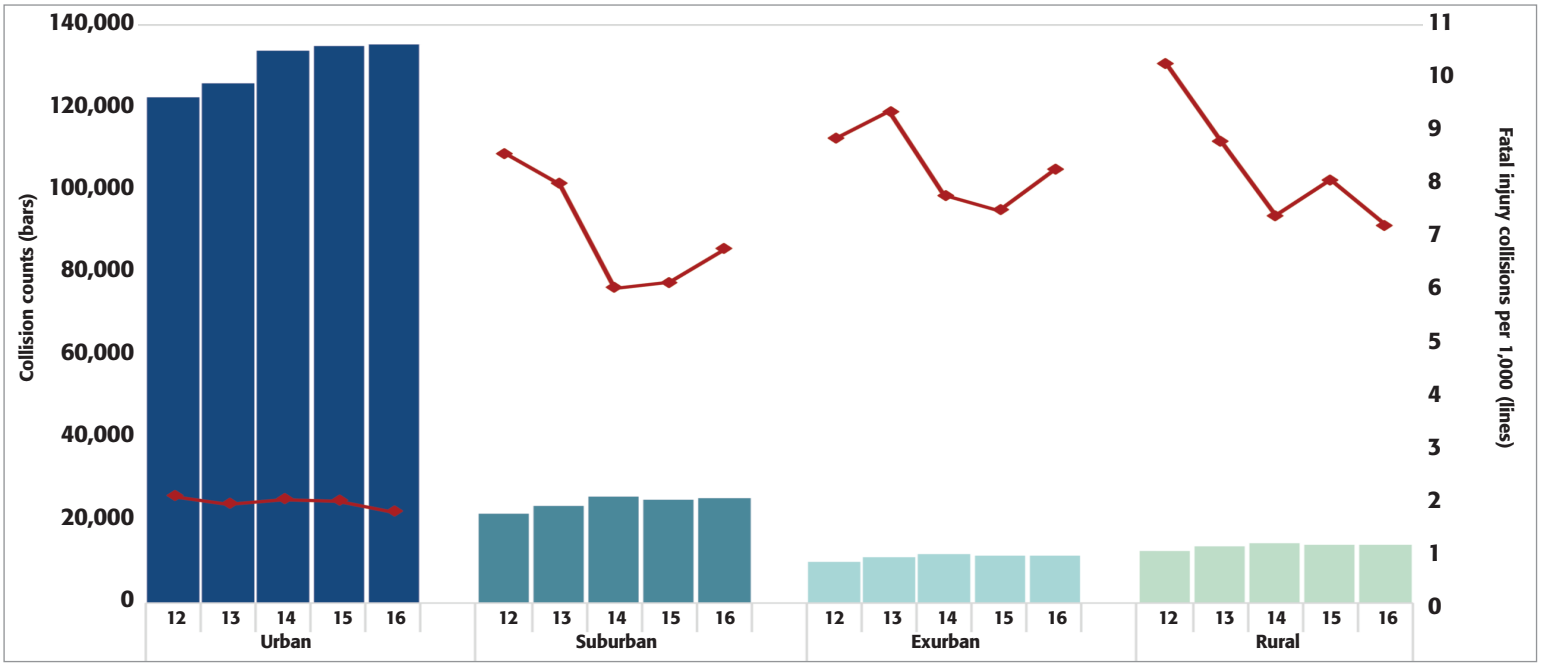




Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) See Table 6 for definitions of factor categories related to driver actions.
2) Limited to collisions for which the primary factor is known.

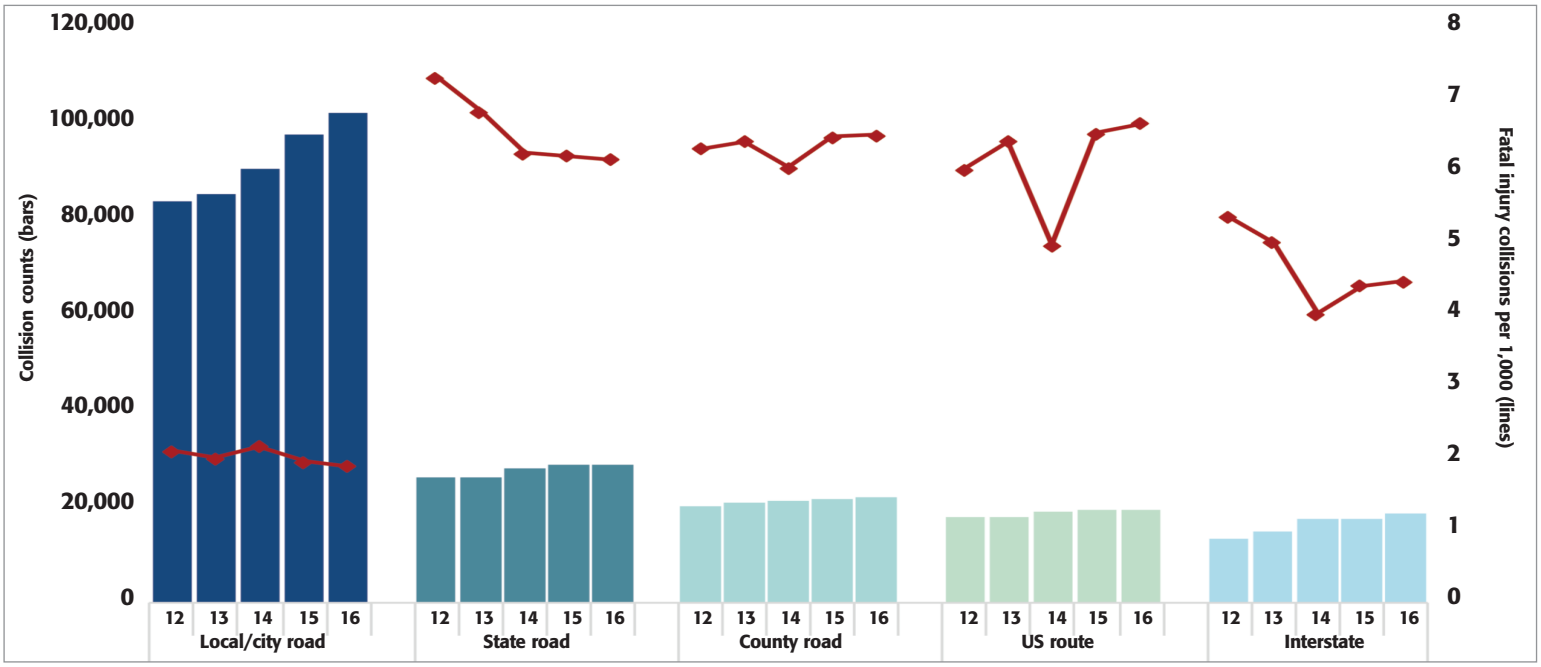
Figure 3.6. Indiana traffic collisions and fatal injury collision rates, by locale, 2012-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Includes only collisions where valid locale was identified
2) *Fatal injury* collision rate is calculated per 1,000 total collisions in each locale.
3) See glossary for Census locale definitions

Figure 3.7. Indiana traffic collisions and fatal injury collision rates, by road class, 2012-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Excludes unknown road class

Table 3.7: Indiana traffic collisions, by severity and road parameters, 2016

	Collisions, by severity				Fatal collisions per 1,000 collisions
	Total	Fatal	Non-fatal	Property damage	
Total collisions	**223,734**	**768**	**35,323**	**187,643**	**3.4**
By junction type					
No junction involved	148,544	564	20,497	127,483	3.8
Four-way intersection	44,125	122	9,770	34,233	2.8
T-intersection	22,470	58	3,818	18,594	2.6
Ramp	3,867	12	556	3,299	3.1
Traffic circle/roundabout	1,613	1	103	1,509	0.6
Interchange	1,510	3	258	1,249	2.0
Y-intersection	699	0	134	565	0.0
Five point or more	507	3	117	387	5.9
Railroad crossings	356	5	66	285	14.0
Trail crossings	10	0	3	7	0.0
Unknown	33	0	1	32	0.0
By road character					
Straight	**195,562**	**605**	**31,004**	**163,953**	**3.1**
Level	166,398	494	26,216	139,688	3.0
Graded	23,320	82	3,759	19,479	3.5
Hillcrest	5,844	29	1,029	4,786	5.0
Curve	**21,350**	**159**	**4,022**	**17,169**	**7.4**
Level	13,278	103	2,365	10,810	7.8
Graded	6,772	48	1,398	5,326	7.1
Hillcrest	1,300	8	259	1,033	6.2
Non-roadway crash	**6,434**	**2**	**281**	**6,151**	**0.3**
Unknown	388	2	16	370	5.2
Roadway surface type					
Asphalt	197,658	701	31,687	165,270	3.5
Concrete	22,115	52	3,252	18,811	2.4
Gravel	2,733	8	263	2,462	2.9
Other	869	5	106	758	5.8
Unknown	359	2	15	342	5.6

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Fatal collision rate is calculated per 1,000 total collisions in each roadway surface type category.

Table 3.8. Indiana traffic collisions, by severity and manner of collision, 2016

Manner of collisions	Collisions, by severity				Fatal collisions per 1,000 collisions
	Total	Fatal	Non-fatal	Property damage	
Total collisions	**223,734**	**768**	**35,323**	**187,643**	**3.4**
Rear end	56,282	55	9,288	46,939	1.0
Ran off road	32,894	275	7,377	25,242	8.4
Right angle	29,301	143	8,003	21,155	4.9
Same direction sideswipe	21,768	12	1,314	20,442	0.6
Backing	21,375	5	388	20,982	0.2
Collision with Deer	12,600	5	240	12,355	0.4
Left turn	11,065	24	2,319	8,722	2.2
Head on	6,281	112	2,003	4,166	17.8
Opposite direction sideswipe	5,164	14	646	4,504	2.7
Right turn	2,946	3	318	2,625	1.0
Collision with Object in Road	2,563	19	266	2,278	7.4
Non-collision	1,759	14	490	1,255	8.0
Left/right turn	2,349	2	276	2,071	0.9
Collision with Animal Other	1,289	0	72	1,217	0.0
Rear to rear	360	0	38	322	0.0
Other collisions manner	13,899	80	2,211	11,608	5.8
Unknown	1,839	5	74	1,760	2.7

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: *Fatal* collision rate is calculated per 1,000 total collisions by each manner of collision.

Table 3.9. Indiana collisions, by severity and traffic control type, 2016

Traffic control type	Collisions, by severity				Fatal collisions per 1,000 collisions
	Total	Fatal	Non-fatal	Property damage	
Total collisions	**223,734**	**768**	**35,323**	**187,643**	**3.4**
Lane control	54,751	284	9,093	45,374	5.2
Traffic control signal	40,989	62	8,240	32,687	1.5
Stop sign	21,576	82	4,600	16,894	3.8
No passing zone	2,218	23	470	1,725	10.4
Yield sign	1,888	9	256	1,623	4.8
Other regulatory sign/marking	925	4	196	725	4.3
Flashing signal	488	2	98	388	4.1
Roundabout intersection	369	0	25	344	0.0
Railroad crossing	195	4	28	163	20.5
Person directing traffic	193	0	32	161	0.0
Other	623	5	67	551	8.0
None	98,940	291	12,185	86,464	2.9
Unknown	579	2	33	544	3.5

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: *Fatal* collision rate is calculated per 1,000 total collisions by each traffic control type.

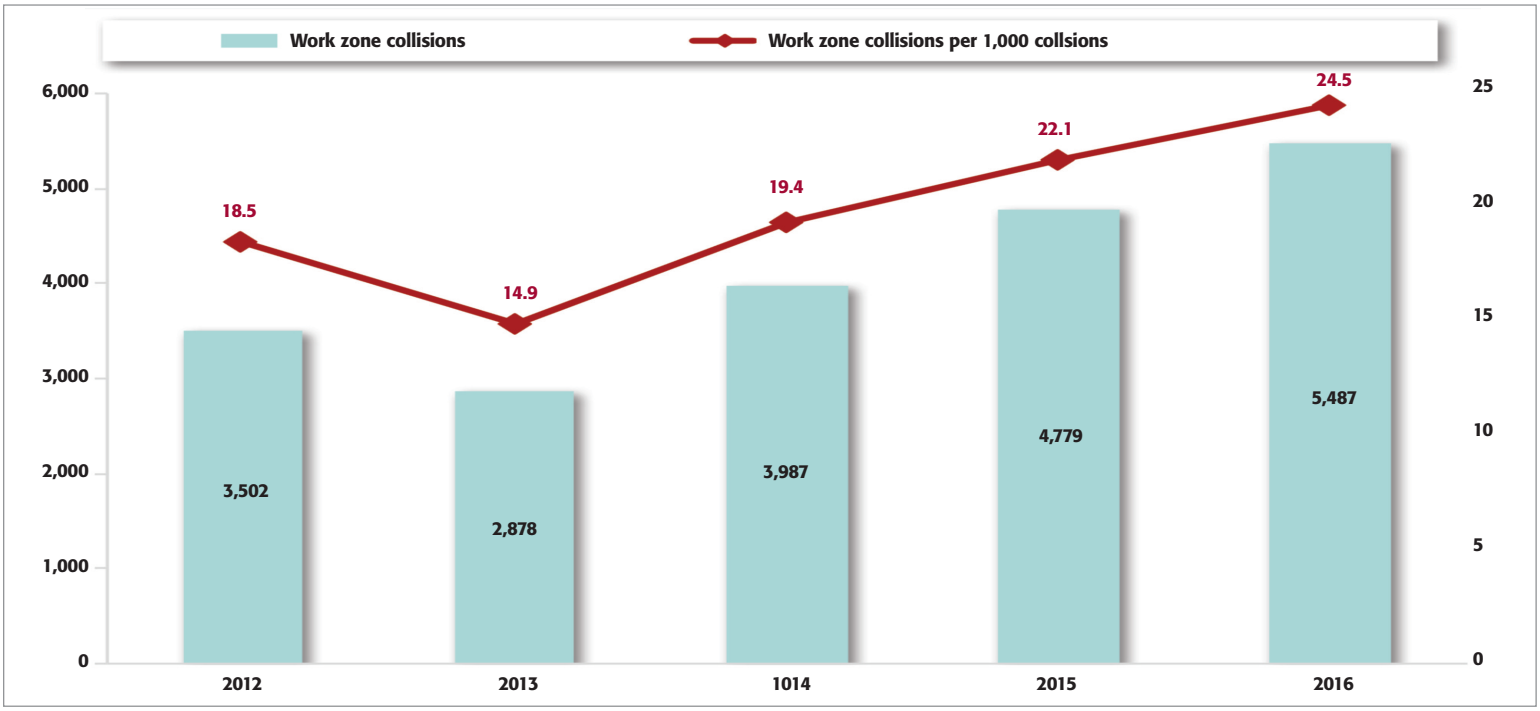
Table 3.10. Indiana traffic collisions, by severity and environmental conditions, 2016

	Collisions, by severity				Fatal collisions per 1,000 collisions
	Total	Fatal	Non-fatal	Property damage	
All collisions	**223,734**	**768**	**35,323**	**187,643**	**3.4**
By light conditions					
Daylight	149,295	373	24,202	124,720	2.5
Dark (Lighted)	31,165	126	5,002	26,037	4.0
Dark (Not Lighted)	31,160	230	4,506	26,424	7.4
Dawn/dusk	10,419	31	1,584	8,804	3.0
Unknown	1,695	8	29	1,658	4.7
By weather conditions					
Clear	143,584	516	23,254	119,814	3.6
Cloudy	43,001	156	6,678	36,167	3.6
Rain	21,860	64	3,566	18,230	2.9
Snow	8,463	10	1,014	7,439	1.2
Blowing Sand/Soil/Snow	2,878	4	341	2,533	1.4
Sleet/Hail/Freezing Rain	2,081	7	252	1,822	3.4
Fog/Smoke/Smog	953	7	153	793	7.3
Severe Cross Wind	312	1	50	261	3.2
Unknown	602	3	15	584	5.0
By road surface conditions					
Dry	169,033	612	27,302	141,119	3.6
Wet	34,073	109	5,561	28,403	3.2
Snow/slush	10,368	11	1,159	9,198	1.1
Ice	8,111	26	1,006	7,079	3.2
Water (standing or moving)	817	4	128	685	4.9
Loose material on road	602	3	138	461	5.0
Muddy	134	0	14	120	0.0
Unknown	596	3	15	578	5.0

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: *Fatal* collision rate is calculated per 1,000 total collisions in each environmental condition category.

Figure 3.8. Indiana work zone collisions, 2012-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

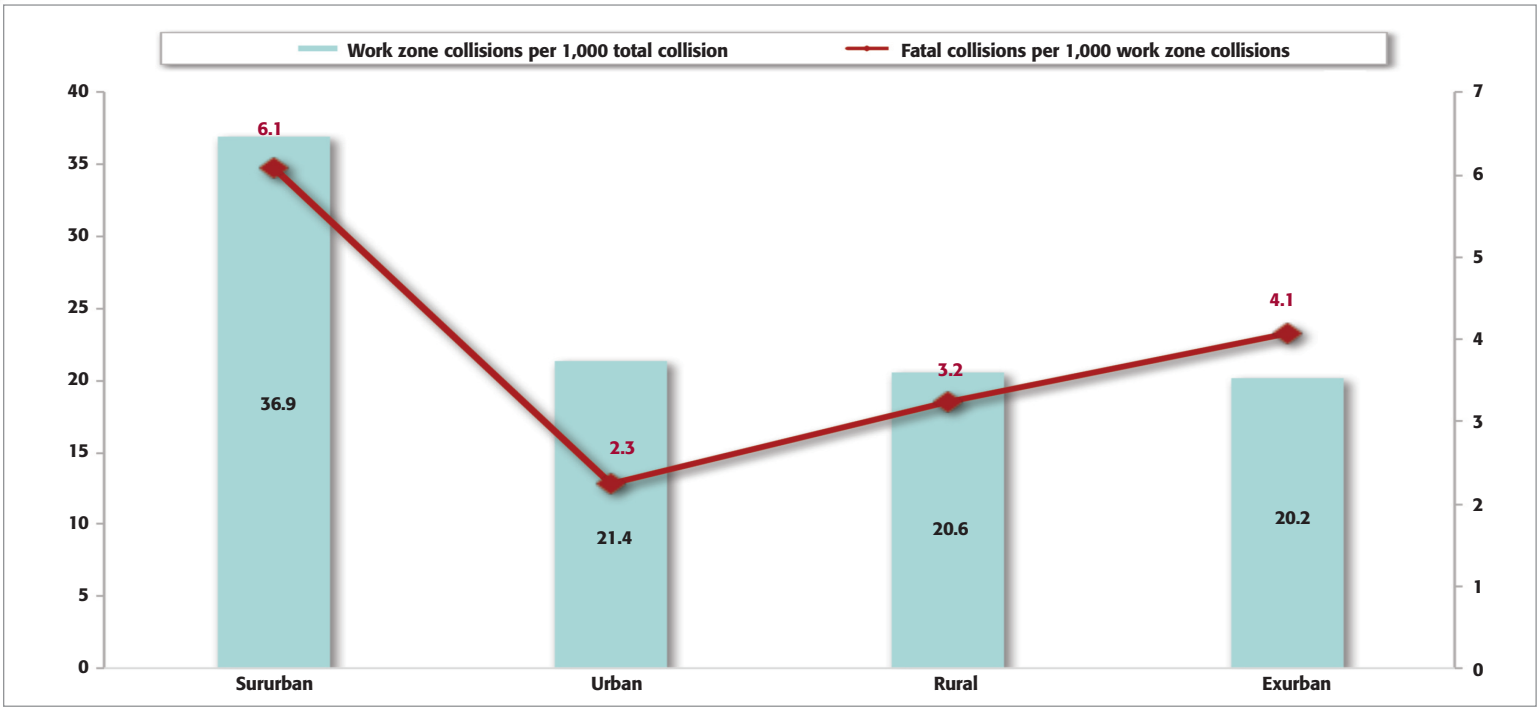
Table 3.11. Indiana collisions in work zones, by severity and construction type, 2016

	Collisions, by severity				Fatal collisions per 1,000 work zone collisions
	Total	Fatal	Non-fatal	Property damage	
All collisions	**223,734**	**768**	**35,323**	**187,643**	**3.4**
All construction types	5,487	15	804	4,668	2.7
Not in construction zone	218,247	753	34,519	182,975	3.5
Construction zone type					
Lane closure	2,784	7	407	2,370	2.5
Work on shoulder	1,149	4	187	958	3.5
Intermittent or moving work	745	4	120	621	5.4
Cross over/lane shift	795	0	90	705	0.0
Unknown	14	0	0	14	0.0

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: *Fatal* collision rate is calculated per 1,000 total collisions in each construction zone type.

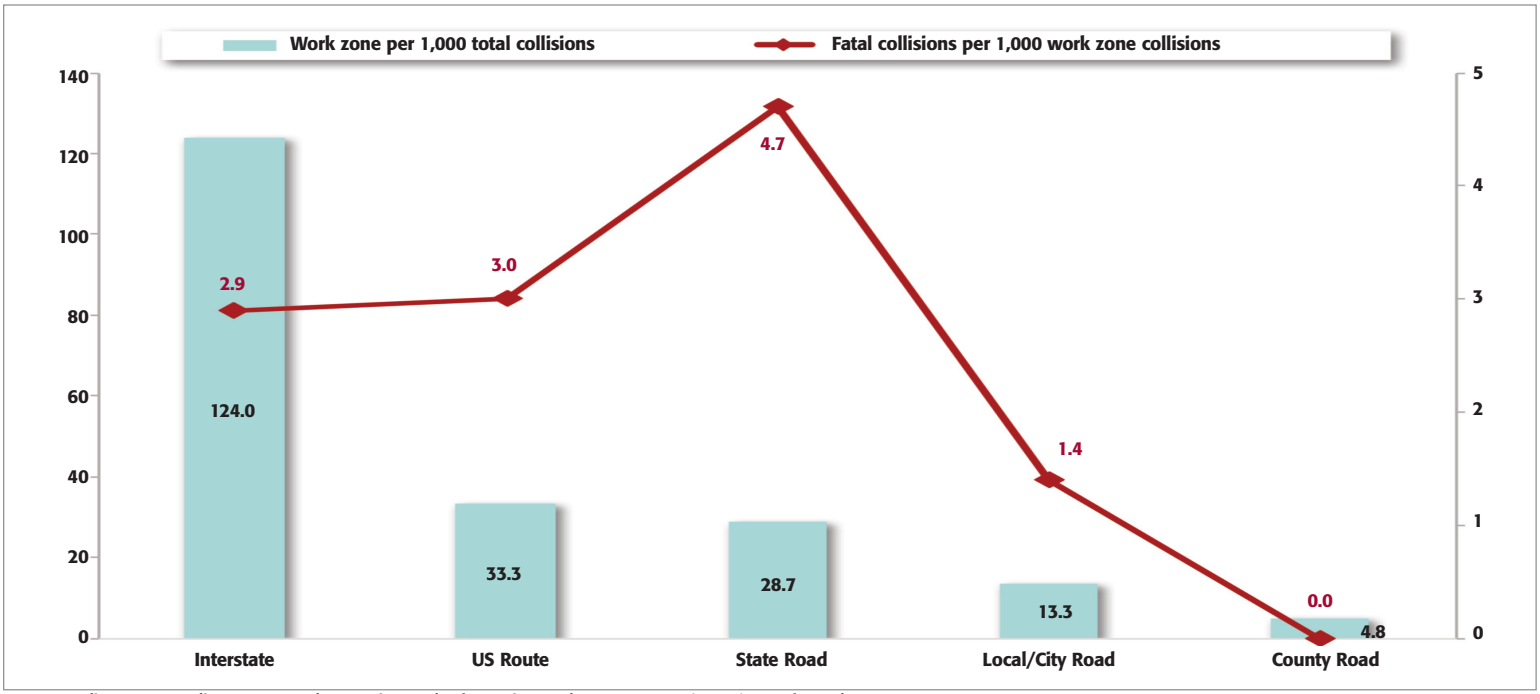
Figure 3.9. Indiana work zone collisions, by locale, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Includes only collisions with valid locale reported
2) See glossary for Census locale definitions

Figure 3.10. Indiana work zone collisions, by road class, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Includes only collisions with valid road class reported

Table 3.12. Indiana work zone collisions, by severity and environmental conditions, 2016

	Work zone collisions, by severity				Fatal collisions per 1,000 work zone collisions
	Total	Fatal	Non-fatal	Property damage	
All work zone collisions	**5,487**	**15**	**804**	**4,668**	**2.7**
By light conditions					
Daylight	4,044	9	579	3,456	2.2
Dark (not lighted)	695	5	100	590	7.2
Dark (lighted)	550	1	89	460	1.8
Dawn/dusk	190	0	36	154	0.0
Unknown	8	0	0	8	0.0
By weather conditions					
Clear	3,950	9	574	3,367	2.3
Cloudy	991	4	139	848	4.0
Rain	445	1	73	371	2.2
Snow	36	0	9	27	0.0
Blowing Sand/Soil/Snow	21	0	4	17	0.0
Fog/Smoke/Smog	20	1	4	15	50.0
Sleet/Hail/Freezing Rain	14	0	1	13	0.0
Severe Cross Wind	6	0	0	6	0.0
Unknown	4	0	0	4	0.0
By road surface conditions					
Dry	4,708	14	670	4,024	3.0
Wet	629	1	113	515	1.6
Snow/Slush	46	0	7	39	0.0
Ice	39	0	5	34	0.0
Loose Material on Road	36	0	4	32	0.0
Water (Standing or Moving)	20	0	3	17	0.0
Muddy	5	0	2	3	0.0
Unknown	4	0	0	4	0.0

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: *Fatal* collision rate is calculated per 1,000 total work zone collisions in each environmental condition category.

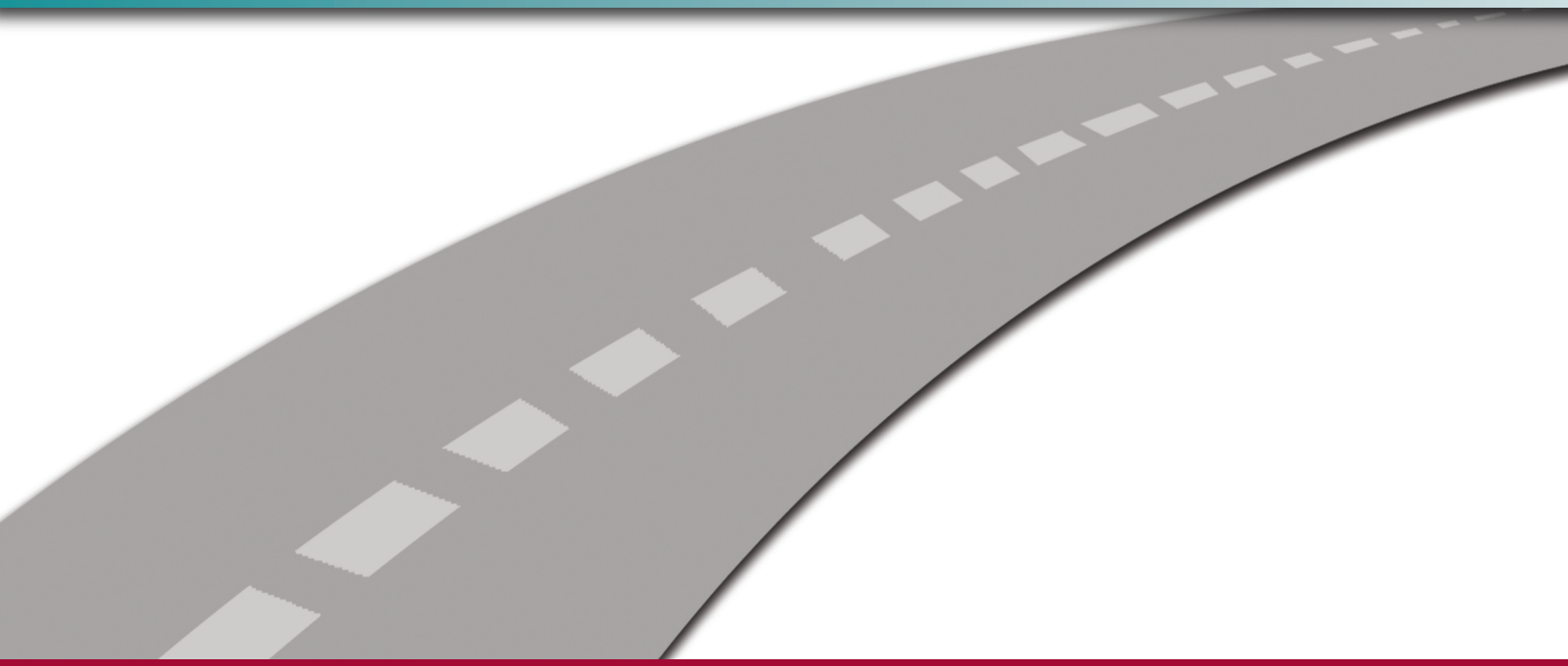
Table 3.13. Indiana work zone collisions, by severity and traffic control type, 2016

	Work zone collisions, by severity				Fatal collisions per 1,000 work zone collisions
	Total	Fatal	Non-fatal	Property damage	
All work zone collisions	**5,487**	**15**	**804**	**4,668**	**2.7**
Traffic control type					
Lane Control	3,008	8	404	2,596	2.7
Traffic Control Signal	797	3	149	645	3.8
Stop Sign	207	1	38	168	4.8
Other Regulatory Sign/Marking	115	0	20	95	0.0
Yield Sign	96	1	13	82	10.4
Person directing traffic	75	0	10	65	0.0
No Passing Zone	21	0	3	18	0.0
Roundabout Intersection	13	0	0	13	0.0
Railroad crossing	6	0	0	6	0.0
Flashing signal/overhead beacon	4	0	1	3	0.0
Other	62	0	10	52	0.0
None	1,078	2	156	920	1.9
Unknown	5	0	0	5	0.0

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: *Fatal* collision rate is calculated per 1,000 total work zone collisions in each traffic control type category.

VEHICLES



VEHICLES, 2016

The vehicle section summarizes data on motor vehicles involved in Indiana collisions in 2016. Special emphasis is given to *passenger vehicles (passenger cars, pickup trucks, sport utility vehicles*, and *vans*), *large trucks,* and *motorcycles* (these account for 99 of all vehicles in crashes). Additional detail on motorcycles is provided in the Motorcycles section of this publication. Vehicle data are presented by collision severity, month, day of week, vehicle use, object collided with, collision primary factors, speeding and alcohol involvement.

In 2016, there were 390,218 motor vehicles involved in collisions in Indiana, a 4 percent increase from 2012 (Table 4.1) and a 20 percent increase from 2012 (calculated from table). Passenger vehicles represented 94 percent of vehicles in all Indiana collisions, but only 80 percent of vehicles in fatal collisions (Table 4.2). The proportion of both motorcycles and large trucks was consistently disproportionately high in fatal collisions between 2012 and 2016. Table 4.2 shows that motorcycles and large trucks represented 1 percent and 4 percent of vehicles in all collisions, and 9 percent and 10 percent in fatal collisions, respectively.

Month and Day of Week

Between 2012 and 2016, winter months (including December, January, and November) consistently had the highest number of passenger vehicles involved in total collisions, while the months with highest number of passenger vehicles in fatal collisions varied across seasons (Table 4.3). In 2016, passenger vehicle involvement in fatal collisions was highest during the month of December (108) and lowest during the month of January (62). Large truck involvement in collisions, generally, is higher during winter months and lower during spring months (Table 4.4). In 2016, large truck involvement in fatal collisions was highest during the month of April, while October had the largest number of large trucks in fatal crashes in 2015.

When looking at passenger vehicle involvement in all collisions by days of the week, Friday was consistently the day with the highest number of passenger vehicles involved in total collisions between 2012 and 2016, and Sunday was consistently the lowest day of passenger vehicle involvement (Table 4.5). Passenger vehicle involvement in fatal collisions was less predictable by day of week. In 2016, passenger vehicle involvement in fatal collisions was highest on Saturdays (171) and lowest on Tuesdays (101). Large trucks, generally, follow a pattern of high involvement in both total collisions and fatal collisions during the work week and low involvement on the weekend. With the exception of 2016 fatal collisions, Sunday was consistently the day with the lowest number of large trucks involved in both total and fatal collisions between 2012 and 2016 (Table 4.6). In 4 out of 5 years between 2012 and 2016, large truck involvement in all Indiana collisions was highest on Tuesdays.

Single- and Multi-vehicle Collisions

Passenger vehicles involved in fatal collisions were more likely to be in a single-vehicle crash than passenger vehicles involved in all collisions across all vehicle types except vans. While 19 percent of pickup trucks involved in non-fatal collisions were involved in a single-vehicle crash, 37 percent of pickup trucks involved in fatal collisions were in a single-vehicle crash (Table 4.7). The opposite is true for large trucks. Approximately 87 percent of large trucks involved in fatal collisions were in a multi-vehicle crash.

Vehicle Use

Most (93 percent) vehicles involved in collisions were for personal use (Table 4.8). Overall, vehicles were involved in 3.1 fatal collisions per 1,000 collisions. Commercial use vehicles represented 10 percent of the vehicles involved in fatal collisions, but only 4 percent of vehicles involved in all collisions. Commercial use vehicles (which include large trucks) and buses (not including school) had the highest fatality rates per 1,000 vehicles in all collisions at 8.2 and 4.6, respectively.

Object Collided With (First)

Note: Officers examining the full sequence of events occurring in collisions often determine that vehicles collide with more than one object in a single collision. This analysis is limited to the first object collided with as reported by the investigating officer.

Of the 367,311 passenger vehicles involved in collisions, 299,296 (82 percent) collided with another motor vehicle, 17,810 (5 percent) ran off the roadway, and 13,735 (4 percent) collided with a deer (Table 4.9). When looking at fatal collisions, 554 of 962 (58 percent) passenger vehicles collided with another motor vehicle, 178 (19 percent) ran off the roadway, and 64 (7 percent) collided with a pedestrian.

Speeding and Alcohol Involvement

Figures 4.1 and 4.2 illustrate the percent of vehicles speeding in 2016 crashes by vehicle type. More than 10 percent of the 3,309 motorcycles and 6 percent of the 42,774 pickup trucks in all collisions were speeding (Figure 4.1). Motorcycles (24 percent), passenger cars (19 percent), and pickup trucks (19 percent) accounted for the highest proportions of speeding vehicles in fatal crashes (Figure 4.2).

Figures 4.3 and 4.4 show the percent of vehicles with an alcohol-impaired driver in 2016 crashes by vehicle type. About 3 percent of motorcycles and 2 percent of pickup trucks in all collisions had a driver that was legally impaired (Figure 4.3). Pickup trucks (10 percent) and passenger cars (7 percent) accounted for the highest proportions of vehicles in fatal crashes with an alcohol-impaired driver (Figure 4.4).

Primary Factor

Figure 4.5 shows the percent of vehicles attributable in multi-vehicle fatal collisions by primary factors related to driver behaviors (representing 95 percent of all primary factors in collisions). Overall, 55 percent (218 of 395) of passenger cars in 2016 multi-vehicle fatal crashes were attributable. Passenger cars (57 percent) had the highest rate of attributability in multi-vehicle fatal crashes with a primary contributing factor related to *unsafe driver actions.* Pickup trucks (57 percent) and motorcycles (60 percent) had the highest rates of attributability in multi-vehicle fatal crashes with a primary contributing factor of drivers reported to be *distracted or cognitively/physically impaired.*

Table 4.1. Vehicles involved in Indiana collisions, by vehicle type and collision severity, 2012-2016

Collision severity/vehicle type	Count of vehicles					Annual rate of change	
	2012	2013	2014	2015	2016	2015-16	2012-16
All collisions	**324,951**	**330,090**	**352,925**	**374,351**	**390,218**	**4.2%**	**4.7%**
Passenger vehicle	305,254	310,636	329,935	352,274	367,311	4.3%	4.7%
Passenger car	*199,300*	*206,528*	*221,672*	*242,113*	*256,824*	*6.1%*	*6.5%*
Pickup truck	*41,345*	*40,905*	*42,872*	*43,152*	*42,774*	*-0.9%*	*0.9%*
Sport utility vehicle	*45,011*	*44,765*	*48,499*	*49,027*	*50,476*	*3.0%*	*2.9%*
Van	*19,598*	*18,438*	*16,892*	*17,982*	*17,237*	*-4.1%*	*-3.2%*
Motorcycle	4,213	3,596	3,483	3,343	3,309	-1.0%	-5.9%
Large truck	13,107	13,315	16,338	15,917	16,550	4.0%	6.0%
School bus	769	720	898	725	747	3.0%	-0.7%
Other	1,608	1,823	2,271	2,092	2,301	10.0%	9.4%
Fatal	**1,124**	**1,133**	**1,155**	**1,165**	**1,209**	**3.8%**	**1.8%**
Passenger vehicle	844	883	858	903	962	6.5%	3.3%
Passenger car	*511*	*532*	*525*	*561*	*609*	*8.6%*	*4.5%*
Pickup truck	*159*	*169*	*163*	*158*	*161*	*1.9%*	*0.3%*
Sport utility vehicle	*118*	*125*	*124*	*126*	*142*	*12.7%*	*4.7%*
Van	*56*	*57*	*46*	*58*	*50*	*-13.8%*	*-2.8%*
Motorcycle	149	116	124	105	107	1.9%	-7.9%
Large truck	126	123	158	149	126	-15.4%	0.0%
School bus	1	0	3	3	1	-66.7%	0.0%
Other	4	11	12	5	13	160.0%	34.3%
Non-fatal injury	**60,168**	**57,793**	**59,911**	**61,706**	**63,888**	**3.5%**	**1.5%**
Passenger vehicle	55,098	53,189	54,960	57,102	59,207	3.7%	1.8%
Passenger car	*35,941*	*35,253*	*36,952*	*38,878*	*41,071*	*5.6%*	*3.4%*
Pickup truck	*7,141*	*6,560*	*6,642*	*6,744*	*6,669*	*-1.1%*	*-1.7%*
Sport utility vehicle	*8,390*	*8,032*	*8,420*	*8,459*	*8,569*	*1.3%*	*0.5%*
Van	*3,626*	*3,344*	*2,946*	*3,021*	*2,898*	*-4.1%*	*-5.4%*
Motorcycle	2,981	2,492	2,410	2,187	2,118	-3.2%	-8.2%
Large truck	1,741	1,765	2,135	2,060	2,182	5.9%	5.8%
School bus	83	77	91	71	87	22.5%	1.2%
Other	265	270	315	286	294	2.8%	2.6%
Property damage	**263,659**	**271,164**	**291,859**	**311,480**	**325,121**	**4.4%**	**5.4%**
Passenger vehicle	249,312	256,564	274,117	294,269	307,142	4.4%	5.4%
Passenger car	*162,848*	*170,743*	*184,195*	*202,674*	*215,144*	*6.2%*	*7.2%*
Pickup truck	*34,045*	*34,176*	*36,067*	*36,250*	*35,944*	*-0.8%*	*1.4%*
Sport utility vehicle	*36,503*	*36,608*	*39,955*	*40,442*	*41,765*	*3.3%*	*3.4%*
Van	*15,916*	*15,037*	*13,900*	*14,903*	*14,289*	*-4.1%*	*-2.7%*
Motorcycle	1,083	988	949	1,051	1,084	3.1%	0.0%
Large truck	11,240	11,427	14,045	13,708	14,242	3.9%	6.1%
School bus	685	643	804	651	659	1.2%	-1.0%
Other	1,339	1,542	1,944	1,801	1,994	10.7%	10.5%

Source: Indiana State Police Automated Reporting Information Exchange System, as of March 16, 2017

Notes:
1) Vehicle types reported as *non-motorists (animal drawn vehicle, bicycle, and pedestrian), unknown,* or NULL values are excluded.
2) Other vehicles include those reported as *bus/seats 15+ persons with driver, bus/seats 9-15 persons with driver, combination vehicle, farm vehicle,* and *motor home/recreational vehicle.*
3) Motorcycles include *motorcycles, class A and class B motor-driven cycles,* and *motorized bicycles.*
4) Large trucks are defined as vehicles reported as *single 2 axle, 6 tires; single 3 or more axles; truck/trailer – not semi; tractor – cab only, no trailer; tractor/one semi-trailer; tractor/double trailer;* and, *tractor/triple trailer.*

Table 4.2. Percent of vehicles involved in Indiana collisions, by vehicle type and collision severity, 2012-2016

Collision severity/vehicle type	Count of vehicles					Annual rate of change	
	2012	2013	2014	2015	2016	2015-16	2012-16
All collisions	**324,951**	**330,090**	**352,925**	**374,351**	**390,218**	**4.2%**	**4.7%**
Passenger vehicle	93.9%	94.1%	93.5%	94.1%	94.1%	0.0%	0.1%
Passenger car	*61.3%*	*62.6%*	*62.8%*	*64.7%*	*65.8%*	*1.8%*	*1.8%*
Pickup truck	*12.7%*	*12.4%*	*12.1%*	*11.5%*	*11.0%*	*-4.9%*	*-3.7%*
Sport utility vehicle	*13.9%*	*13.6%*	*13.7%*	*13.1%*	*12.9%*	*-1.2%*	*-1.7%*
Van	*6.0%*	*5.6%*	*4.8%*	*4.8%*	*4.4%*	*-8.0%*	*-7.5%*
Motorcycle	1.3%	1.1%	1.0%	0.9%	0.8%	-5.0%	-10.1%
Large truck	4.0%	4.0%	4.6%	4.3%	4.2%	-0.3%	1.3%
School bus	0.2%	0.2%	0.3%	0.2%	0.2%	-1.2%	-5.2%
Other	0.5%	0.6%	0.6%	0.6%	0.6%	5.5%	4.5%
Fatal	**1,124**	**1,133**	**1,155**	**1,165**	**1,209**	**3.8%**	**1.8%**
Passenger vehicle	75.1%	77.9%	74.3%	77.5%	79.6%	2.7%	1.5%
Passenger car	*45.5%*	*47.0%*	*45.5%*	*48.2%*	*50.4%*	*4.6%*	*2.6%*
Pickup truck	*14.1%*	*14.9%*	*14.1%*	*13.6%*	*13.3%*	*-1.8%*	*-1.5%*
Sport utility vehicle	*10.5%*	*11.0%*	*10.7%*	*10.8%*	*11.7%*	*8.6%*	*2.8%*
Van	*5.0%*	*5.0%*	*4.0%*	*5.0%*	*4.1%*	*-16.9%*	*-4.5%*
Motorcycle	13.3%	10.2%	10.7%	9.0%	8.9%	-1.8%	-9.6%
Large truck	11.2%	10.9%	13.7%	12.8%	10.4%	-18.5%	-1.8%
School bus	0.1%	0.0%	0.3%	0.3%	0.1%	0.0%	-1.8%
Other	0.4%	1.0%	1.0%	0.4%	1.1%	150.5%	31.8%
Non-fatal injury	**60,168**	**57,793**	**59,911**	**61,706**	**63,888**	**3.5%**	**1.5%**
Passenger vehicle	91.6%	92.0%	91.7%	92.5%	92.7%	0.1%	0.3%
Passenger car	*59.7%*	*61.0%*	*61.7%*	*63.0%*	*64.3%*	*2.0%*	*1.9%*
Pickup truck	*11.9%*	*11.4%*	*11.1%*	*10.9%*	*10.4%*	*-4.5%*	*-3.2%*
Sport utility vehicle	*13.9%*	*13.9%*	*14.1%*	*13.7%*	*13.4%*	*-2.2%*	*-1.0%*
Van	*6.0%*	*5.8%*	*4.9%*	*4.9%*	*4.5%*	*-7.3%*	*-6.9%*
Motorcycle	5.0%	4.3%	4.0%	3.5%	3.3%	-6.5%	-9.6%
Large truck	2.9%	3.1%	3.6%	3.3%	3.4%	2.3%	4.2%
School bus	0.1%	0.1%	0.2%	0.1%	0.1%	18.4%	-0.3%
Other	0.4%	0.5%	0.5%	0.5%	0.5%	-0.7%	1.1%
Property damage	**263,659**	**271,164**	**291,859**	**311,480**	**325,121**	**4.4%**	**5.4%**
Passenger vehicle	94.6%	94.6%	93.9%	94.5%	94.5%	0.0%	0.0%
Passenger car	*61.8%*	*63.0%*	*63.1%*	*65.1%*	*66.2%*	*1.7%*	*1.7%*
Pickup truck	*12.9%*	*12.6%*	*12.4%*	*11.6%*	*11.1%*	*-5.0%*	*-3.8%*
Sport utility vehicle	*13.8%*	*13.5%*	*13.7%*	*13.0%*	*12.8%*	*-1.1%*	*-1.9%*
Van	*6.0%*	*5.5%*	*4.8%*	*4.8%*	*4.4%*	*-8.1%*	*-7.6%*
Motorcycle	0.4%	0.4%	0.3%	0.3%	0.3%	-1.2%	-5.1%
Large truck	4.3%	4.2%	4.8%	4.4%	4.4%	-0.5%	0.7%
School bus	0.3%	0.2%	0.3%	0.2%	0.2%	-3.0%	-6.0%
Other	0.5%	0.6%	0.7%	0.6%	0.6%	6.1%	4.8%

Source: Indiana State Police Automated Reporting Information Exchange System, as of March 16, 2017

Notes:
1) Vehicle types reported as *non-motorists (animal drawn vehicle, bicycle, and pedestrian), unknown,* or NULL values are excluded.
2) Other vehicles include those reported as *bus/seats 15+ persons with driver, bus/seats 9-15 persons with driver, combination vehicle, farm vehicle,* and *motor home/recreational vehicle.*
3) Motorcycles include *motorcycles, class A and class B motor-driven cycles,* and *motorized bicycles.*
4) Large trucks are defined as vehicles reported as *single 2 axle, 6 tires; single 3 or more axles; truck/trailer – not semi; tractor – cab only, no trailer; tractor/one semi-trailer; tractor/double trailer;* and, *tractor/triple trailer.*

Table 4.3. Passenger vehicles in total and fatal traffic collisions in Indiana, by month, 2012-2016

Month	Passenger vehicles in total collisions					Passenger vehicles in fatal collisions				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Jan	27,080	24,677	35,998	30,563	30,447	65	79	80	65	62
Feb	22,814	22,558	30,799	31,779	28,573	60	59	48	52	77
Mar	23,937	25,299	24,561	26,337	27,067	62	71	58	62	82
Apr	22,763	22,897	23,290	25,572	29,117	52	71	57	63	63
May	26,172	26,652	26,038	28,737	29,974	66	54	60	83	80
Jun	24,581	24,750	24,722	28,220	29,815	85	52	75	88	84
Jul	23,546	24,405	24,203	28,503	29,343	87	68	67	75	71
Aug	25,854	25,515	25,775	28,507	32,586	84	81	101	81	71
Sep	24,417	25,953	26,016	29,580	31,393	74	90	69	84	79
Oct	28,570	28,406	30,416	31,171	31,681	67	83	83	106	86
Nov	25,950	28,792	29,951	32,367	32,935	61	87	71	72	99
Dec	29,570	30,732	28,166	30,938	34,380	81	88	89	72	108
Total	**305,254**	**310,636**	**329,935**	**352,274**	**367,311**	**844**	**883**	**858**	**903**	**962**
High	***Dec***	***Dec***	***Jan***	***Nov***	***Dec***	***Jul***	***Sep***	***Aug***	***Oct***	***Dec***
Low	***Apr***	***Feb***	***Apr***	***Apr***	***Mar***	***Apr***	***Jun***	***Feb***	***Feb***	***Jan***

Low **High**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Conditional formatting color-scales are illustrated to show months from low to high for the entire 5-year period.
2) Passenger vehicles are defined as *passenger cars, sport utility vehicles, pickup trucks,* and *vans*.

Table 4.4. Large trucks in total and fatal traffic collisions in Indiana, by month, 2012-2016

Month	Large trucks in total collisions					Large trucks in fatal collisions				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Jan	1,277	1,171	2,386	1,499	1,509	10	25	29	10	9
Feb	954	924	1,800	1,666	1,327	10	8	7	11	5
Mar	1,057	1,186	1,254	1,355	1,225	6	13	12	14	9
Apr	935	978	1,114	1,079	1,329	8	12	5	5	18
May	1,069	1,089	1,109	1,126	1,231	12	3	15	13	7
Jun	1,122	994	1,261	1,303	1,350	13	11	13	16	10
Jul	1,090	1,088	1,174	1,322	1,387	11	8	19	10	15
Aug	1,092	1,124	1,220	1,245	1,467	13	4	12	12	10
Sep	1,059	1,080	1,209	1,380	1,351	18	10	10	14	12
Oct	1,201	1,280	1,412	1,370	1,496	10	7	11	18	12
Nov	1,070	1,145	1,282	1,323	1,360	6	11	8	17	10
Dec	1,181	1,256	1,117	1,249	1,518	9	11	17	9	9
Total	**13,107**	**13,315**	**16,338**	**15,917**	**16,550**	**126**	**123**	**158**	**149**	**126**
High	***Jan***	***Oct***	***Jan***	***Feb***	***Dec***	***Sep***	***Jan***	***Jan***	***Oct***	***Apr***
Low	***Apr***	***Feb***	***May***	***Apr***	***Mar***	***Mar***	***May***	***Apr***	***Apr***	***Feb***

Low **High**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Conditional formatting color-scales are illustrated to show months from low to high for the entire 5-year period.
2) Large trucks are defined as vehicles reported as *single 2 axle, 6 tires; single 3 or more axles; truck/trailer – not semi; tractor – cab only, no trailer; tractor/one semi-trailer; tractor/double trailer;* and, *tractor/triple trailer.*

Table 4.5. Passenger vehicles in total and fatal traffic collisions in Indiana, by day of week, 2012-2016

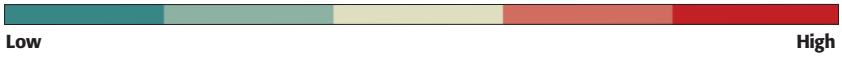
Day of week	Passenger vehicles in total collisions					Passenger vehicles in fatal collisions				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Sun	29,293	30,140	31,328	35,104	37,044	101	132	108	123	133
Mon	43,654	43,477	45,238	51,220	51,875	110	115	102	108	131
Tue	43,944	45,830	50,037	52,866	55,856	105	141	108	134	101
Wed	44,630	46,017	49,062	52,823	55,562	114	96	121	134	119
Thur	46,581	47,685	50,873	52,054	54,961	128	124	143	129	139
Fri	56,266	56,284	59,591	59,929	63,533	133	110	135	142	168
Sat	40,886	41,203	43,806	48,278	48,480	153	165	141	133	171
Total	**305,254**	**310,636**	**329,935**	**352,274**	**367,311**	**844**	**883**	**858**	**903**	**962**
High	***Fri***	***Fri***	***Fri***	***Fri***	***Fri***	***Sat***	***Sat***	***Thur***	***Fri***	***Sat***
Low	***Sun***	***Sun***	***Sun***	***Sun***	***Sun***	***Sun***	***Wed***	***Mon***	***Mon***	***Tue***

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Conditional formatting color-scales are illustrated to show days from low to high for the entire 5-year period.
2) Passenger vehicles are defined as *passenger cars, sport utility vehicles, pickup trucks,* and *vans*.

Table 4.6. Large trucks in total and fatal traffic collisions in Indiana, by day of week, 2012-2016

Day of week	Large trucks in total collisions					Large trucks in fatal collisions				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Sun	597	681	893	780	905	12	4	10	3	9
Mon	2,154	2,287	2,619	2,759	2,665	12	24	25	18	23
Tue	2,332	2,438	2,997	3,000	3,230	20	22	20	40	17
Wed	2,386	2,293	2,988	2,904	3,029	24	14	24	24	23
Thur	2,354	2,379	2,929	2,762	2,883	21	32	41	25	18
Fri	2,404	2,258	2,653	2,533	2,573	25	18	26	27	29
Sat	880	979	1,259	1,179	1,265	12	9	12	12	7
Total	**13,107**	**13,315**	**16,338**	**15,917**	**16,550**	**126**	**123**	**158**	**149**	**126**
High	***Fri***	***Tue***	***Tue***	***Tue***	***Tue***	***Fri***	***Thur***	***Thur***	***Tue***	***Fri***
Low	***Sun***	***Sun***	***Sun***	***Sun***	***Sun***	***Sun***	***Sun***	***Sun***	***Sun***	***Sat***



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Conditional formatting color-scales are illustrated to show days from low to high for the entire 5-year period.
2) Large trucks are defined as vehicles reported as *single 2 axle, 6 tires; single 3 or more axles; truck/trailer – not semi; tractor – cab only, no trailer; tractor/one semi-trailer; tractor/double trailer;* and, *tractor/triple trailer.*

Table 4.7. Vehicles involved in fatal and non-fatal collisions, by vehicle type and number of vehicles involved, 2016

Collision severity/ vehicles involved	Passenger car		Pickup truck		SUV		Van		Large truck	
	Count	%	Count	%	Count	%	Count	%	Count	%
Fatal	**609**	**100.0%**	**161**	**100.0%**	**142**	**100.0%**	**50**	**100.0%**	**126**	**100.0%**
Single-vehicle	214	35.1%	60	37.3%	47	33.1%	6	12.0%	17	13.5%
Multiple-vehicle	395	64.9%	101	62.7%	95	66.9%	44	88.0%	109	86.5%
Non-fatal	**256,215**	**100.0%**	**42,613**	**100.0%**	**50,334**	**100.0%**	**17,187**	**100.0%**	**16,424**	**100.0%**
Single-vehicle	39,180	15.3%	7,990	18.8%	7,270	14.4%	2,302	13.4%	3,215	19.6%
Multiple-vehicle	217,035	84.7%	34,623	81.2%	43,064	85.6%	14,885	86.6%	13,209	80.4%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: *Non-fatal* collisions includes *non-fatal injury* and *property damage only* collisions.

Table 4.8. Vehicles involved in Indiana collisions, by vehicle use and collision severity, 2016

Vehicle use	Vehicles involved in:				
	All collisions		Fatal collisions		Vehicles in fatal collisions per 1,000 in all collisions
	Count	% of total	Count	% of total	
Personal	363,258	93.1%	1,064	88.0%	2.9
Commercial	14,708	3.8%	121	10.0%	8.2
Police	2,762	0.7%	3	0.2%	1.1
Rental, not leased	1,644	0.4%	3	0.2%	1.8
Other	1,609	0.4%	5	0.4%	3.1
School	1,208	0.3%	2	0.2%	1.7
Bus, not school	434	0.1%	2	0.2%	4.6
Highway Department	382	0.1%	1	0.1%	2.6
Ambulance	352	0.1%	1	0.1%	2.8
Public utilities	256	0.1%	0	0.0%	0.0
Fire	254	0.1%	0	0.0%	0.0
Military	41	0.0%	0	0.0%	0.0
Unknown	3,310	0.8%	7	0.6%	2.1
Total vehicles	**390,218**	**100.0%**	**1,209**	**100.0%**	**3.1**

= Indicates vehicle use fatal crash rate is above the overall fatal crash rate of 3.1 per 1,000 vehicles involved in Indiana collisions.

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Unknown vehicle use* includes vehicles reported as *unknown*. Null values are excluded.
2) *Commercial* use includes buses, taxis, carriers, etc.
3) *Other* use includes government, postal, etc.
4) *Public utilities* use includes gas, electric, etc.
5) *Bus, not school* includes charter, intercity, shuttles and transit.
6) *School* includes *school buses, maintenance vehicles,* etc.
7) Excludes non-motor vehicle types reported as *bicycles, pedestrians* and *animal-drawn vehicles.*

Table 4.9. Passenger vehicles involved in Indiana collisions, by (first) object collided with and collision severity, 2016

(First) Object collided with	Vehicles involved in:				
	All collisions		Fatal collisions		Vehicles in fatal collisions per 1,000 in all collisions
	Count	% of total	Count	% of total	
Another motor vehicle	299,296	81.5%	554	57.6%	1.9
Ran off roadway	17,810	4.8%	178	18.5%	10.0
Deer	13,735	3.7%	2	0.2%	0.1
Other	6,562	1.8%	22	2.3%	3.4
Parked motor vehicle	2,514	0.7%	1	0.1%	0.4
Ditch	2,011	0.5%	13	1.4%	6.5
Utility pole	1,872	0.5%	8	0.8%	4.3
Curb	1,799	0.5%	11	1.1%	6.1
Tree	1,691	0.5%	17	1.8%	10.1
Other post/pole or support	1,687	0.5%	3	0.3%	1.8
Pedestrian	1,546	0.4%	64	6.7%	41.4
Animal other than deer	1,245	0.3%	0	0.0%	0.0
Guardrail face	1,207	0.3%	4	0.4%	3.3
Concrete traffic barrier	1,203	0.3%	3	0.3%	2.5
Crossing center line/median	1,113	0.3%	27	2.8%	24.3
Wall/building/tunnel	1,001	0.3%	0	0.0%	0.0
Fence	907	0.2%	5	0.5%	5.5
Bicycle	868	0.2%	12	1.2%	13.8
Mailbox	773	0.2%	1	0.1%	1.3
Light/luminaire support	652	0.2%	1	0.1%	1.5
Highway traffic sign post	534	0.1%	2	0.2%	3.7
Animal drawn vehicle	524	0.1%	3	0.3%	5.7
Embankment	514	0.1%	6	0.6%	11.7
Thrown or falling object	433	0.1%	0	0.0%	0.0
Guardrail end	407	0.1%	1	0.1%	2.5
Equipment/mechanical failure	336	0.1%	0	0.0%	0.0
Bridge rail	251	0.1%	1	0.1%	4.0
Cable barrier	237	0.1%	0	0.0%	0.0
Overturn/rollover	232	0.1%	4	0.4%	17.2
Separation of units	232	0.1%	0	0.0%	0.0
Fell from vehicle (non-collision)	230	0.1%	4	0.4%	17.4
Culvert	230	0.1%	3	0.3%	13.0
Other traffic barrier	174	0.0%	0	0.0%	0.0
Cargo/equipment shift or loss	150	0.0%	0	0.0%	0.0
Impact attenuator/crash cushion	150	0.0%	3	0.3%	20.0
Fire/explosion	104	0.0%	0	0.0%	0.0
Off roadway	80	0.0%	1	0.1%	12.5
Work zone maintenance equipment	79	0.0%	0	0.0%	0.0
Bridge pier or abutment	79	0.0%	0	0.0%	0.0
Railway vehicle/train/engine	72	0.0%	3	0.3%	41.7
Overhead sign post	57	0.0%	0	0.0%	0.0
Jackknife	54	0.0%	0	0.0%	0.0
Bridge overhead structure	51	0.0%	0	0.0%	0.0
Downhill runaway	35	0.0%	0	0.0%	0.0
Bridge parapet end	26	0.0%	0	0.0%	0.0
Immersion	26	0.0%	0	0.0%	0.0
Unknown	2,522	0.7%	5	0.5%	2.0
Total vehicles	**367,311**	**100.0%**	**962**	**100.0%**	**2.6**

= Indicates object collided with fatal crash rate is above the overall fatal crash rate of 2.6 per 1,000 passenger vehicles involved in Indiana collisions.

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: Passenger vehicles are defined as *passenger cars, sport utility vehicles, pickup trucks,* and *vans*.

Figure 4.1. Percent of vehicles speeding in Indiana collisions, by vehicle type, 2016

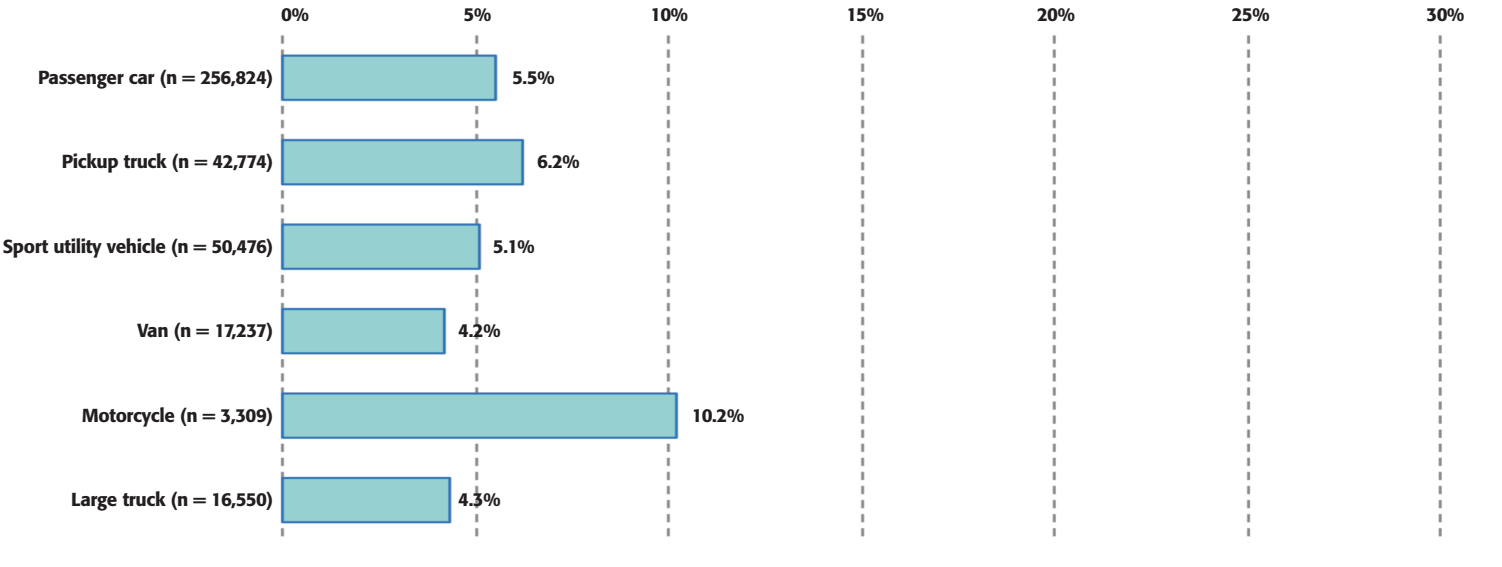
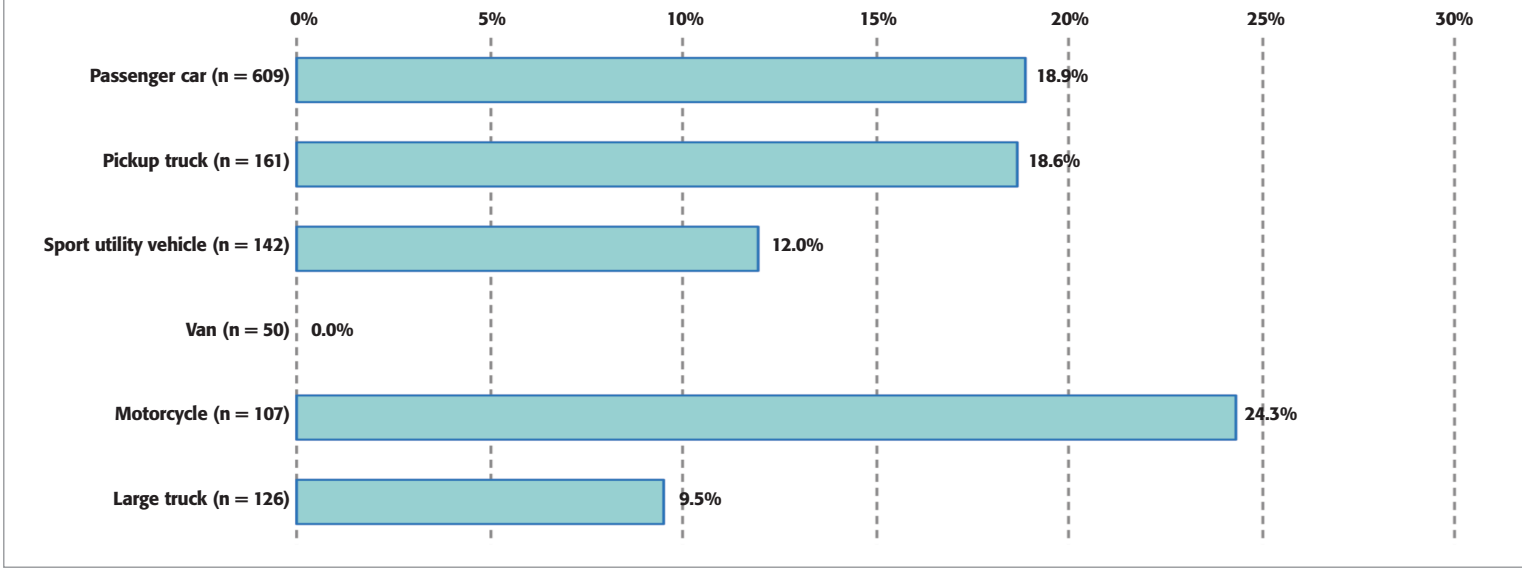


Figure 4.2. Percent of vehicles in Indiana fatal collisions that were speeding, by vehicle type, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Large trucks are defined as vehicles reported as *single 2 axle, 6 tires; single 3 or more axles; truck/trailer – not semi; tractor – cab only, no trailer; tractor/one semi-trailer; tractor/double trailer;* and, *tractor/triple trailer.*
2) Motorcycles include *motorcycles, class A and class B motor-driven cycles,* and *motorized bicycles.*
3) Vehicle types reported as non-motorists (*animal-drawn vehicle, bicycle, and pedestrian), bus/seats 15+ persons with driver, bus/seats 9-15 persons with driver, combination vehicle, farm vehicle, motor home/recreational vehicle, unknown,* or NULL values are exluded.
4) Passenger vehicles are defined as *passenger cars, sport utility vehicles, pickup trucks,* and *vans*.

Figure 4.3. Percent of vehicles with an alcohol-impaired driver in Indiana collisions, by vehicle type, 2016

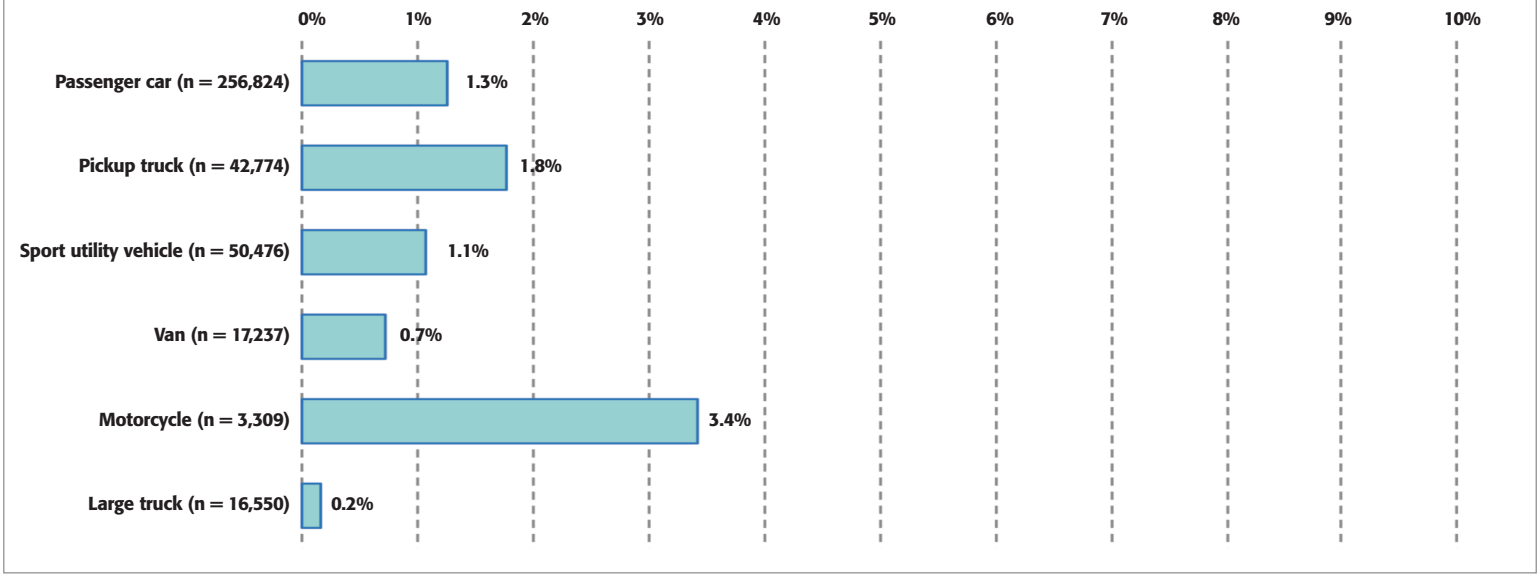
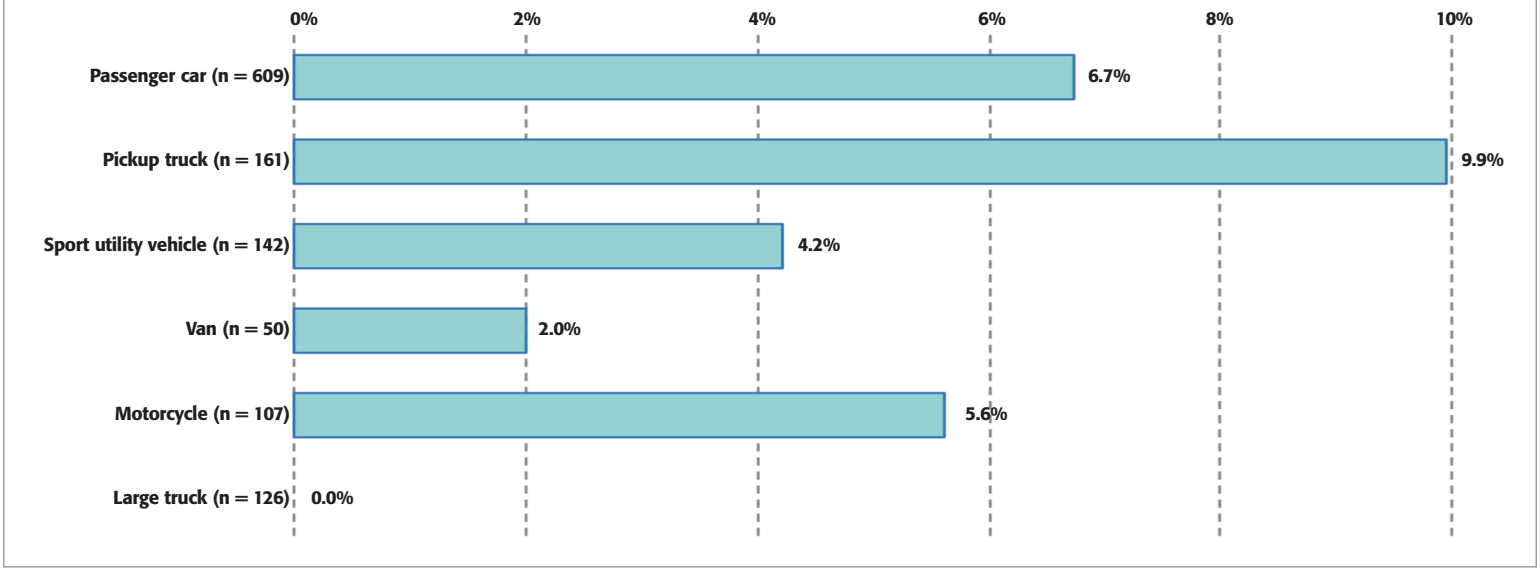


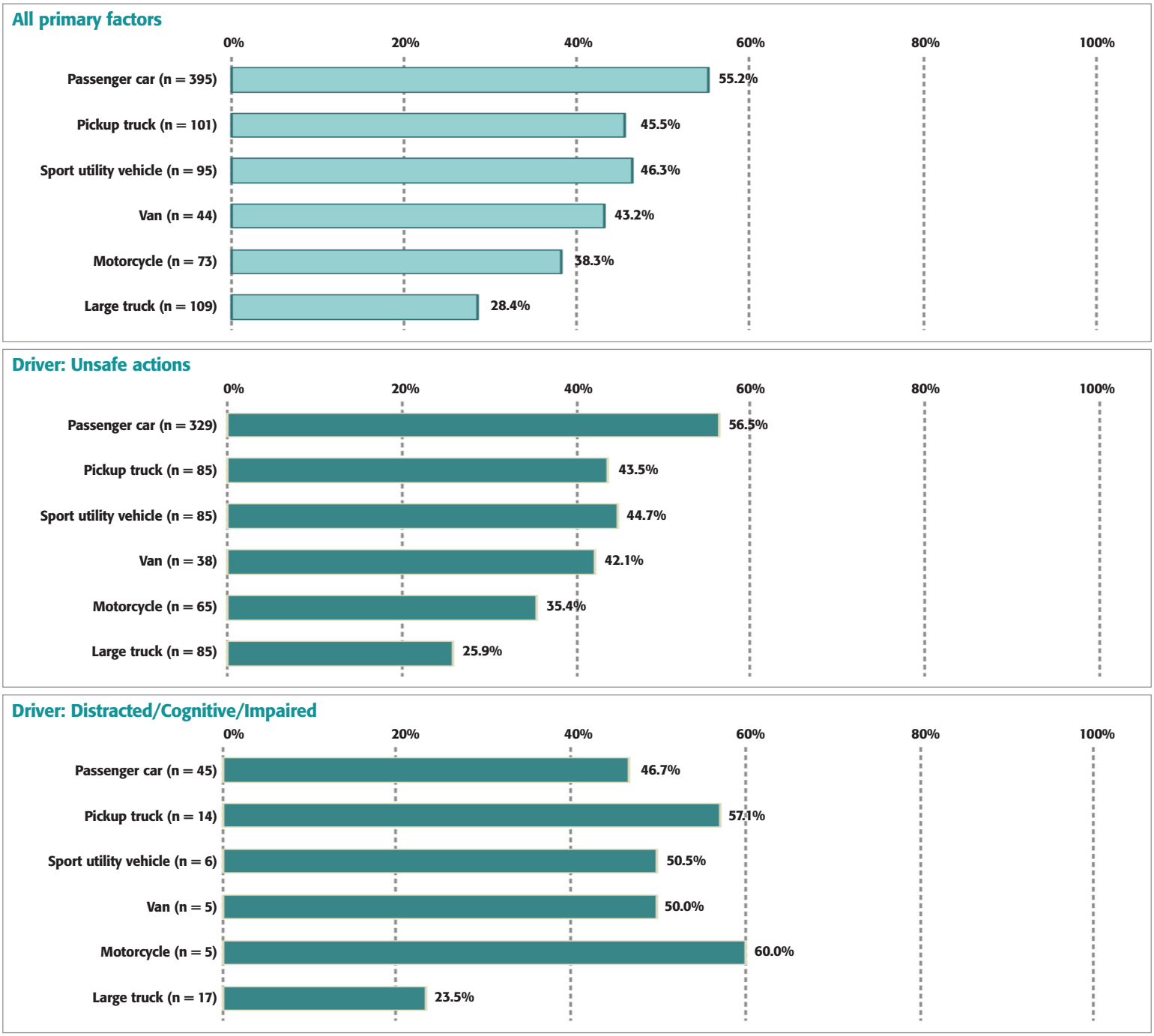
Figure 4.4. Percent of vehicles with an alcohol-impaired driver in Indiana fatal collisions, by vehicle type, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Large trucks are defined as vehicles reported as *single 2 axle, 6 tires; single 3 or more axles; truck/trailer – not semi; tractor – cab only, no trailer; tractor/one semi-trailer; tractor/double trailer;* and, *tractor/triple trailer.*
2) Motorcycles include *motorcycles, class A and class B motor-driven cycles,* and *motorized bicycles.*
3) Vehicle types reported as non-motorists (*animal-drawn vehicle, bicycle, and pedestrian), bus/seats 15+ persons with driver, bus/seats 9-15 persons with driver, combination vehicle, farm vehicle, motor home/recreational vehicle, unknown,* or NULL values are exluded.
4) Passenger vehicles are defined as *passenger cars, sport utility vehicles, pickup trucks,* and *vans*.

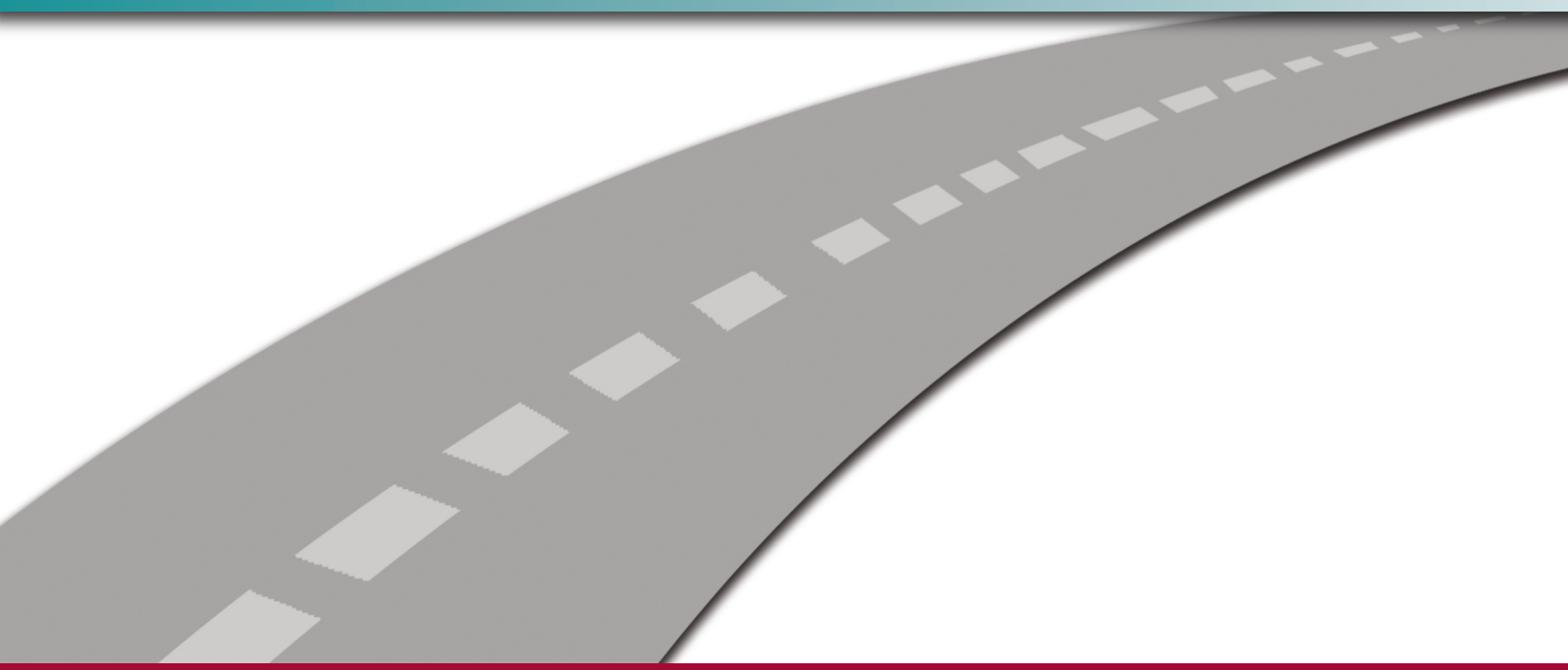
Figure 4.5. Percent of vehicles in Indiana fatal multi-vehicle collisions, by primary factor and vehicle type, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Large trucks are defined as vehicles reported as *single 2 axle, 6 tires; single 3 or more axles; truck/trailer – not semi; tractor – cab only, no trailer; tractor/one semi-trailer; tractor/double trailer;* and, *tractor/triple trailer.*
2) Motorcycles include *motorcycles, class A and class B motor-driven cycles,* and *motorized bicycles.*
3) Vehicle types reported as non-motorists (*animal-drawn vehicle, bicycle, and pedestrian), bus/seats 15+ persons with driver, bus/seats 9-15 persons with driver, combination vehicle, farm vehicle, motor home/recreational vehicle, unknown,* or NULL values are exluded.
4) Passenger vehicles are defined as *passenger cars, sport utility vehicles, pickup trucks,* and *vans.*
5) *Driver: Unsafe actions* includes primary factors reported as *disregard signal/signage, failure to yield right of way, following too closely, improper lane usage, improper passing, improper turning, left of center, speed too fast for weather conditions, unsafe backing, unsafe lane movement, unsafe speed,* and *wrong way on one way.*
6) *Driver: Distracted/cognitive/impaired* includes primary factors reported as *cell phone usage, driver distracted (explained in narrative), other (explained in narrative) – driver, other telematics in use, overcorrecting/oversteering, ran off road right, alcoholic beverages, driver asleep or fatigued, driver illness,* and *illegal drugs.*

MOTORCYCLES



MOTORCYCLES, 2016

NOTE: *Motorcyclists* include *operators* and *passengers* of *motorcycles, class A and B motor driven cycles, motorized bicycles,* and *mopeds*. See Glossary for unit type definitions. ARIES also includes *motorized bicycle* and *moped* as *unit types*.

While traffic collisions not involving motorcycles increased more than 3 percent in 2016, collisions involving motorcycles decreased 2 percent from 2015 to 2016 (Table 5.1). Similarly, while *fatal collisions* not involving motorcycles increased 3 percent in 2016, fatal motorcycle collisions decreased 3 percent, from 104 in 2015 to 101 in 2016. Each year from 2012 to 2016, there were more *multi-vehicle* (MV) than *single-vehicle* (SV) motorcycle collisions. The rates at which SV and MV motorcycle collisions result in a fatality were roughly similar 2012-2016, but SV motorcycle collisions resulted in injuries more than MV collisions (Calculated from table 5.1).

Motorcycle collisions occur at generally predictable times, months, and days. In 2016, the count of injury collisions involving motorcycles generally peaked from 3pm to 5pm, while the proportion of all injury collisions that involved motorcycles peaked around 7pm to 9pm (Figure 5.1). Counts of fatal and incapacitating collisions involving motorcycles were highest during May through September (Figure 5.2), and were typically highest on Saturdays and Sundays (Figure 5.3).

Injury rates in motorcycle collisions are associated with different collision characteristics. Multi-vehicle crashes result in fatalities more often than single-vehicle motorcycle collisions, but single-vehicle crashes are more likely than multi-vehicle to produce a non-fatal injury (Table 5.2). As in previous years, motorcycle collisions in 2016 occurred predominately during *clear* weather conditions, on *straight/level* roads not involving *road junctions*, and on *local/city* roads. The probability of fatal motorcycle collisions was highest on *highways* (6 percent), at *intersections* (4 percent), and on *curves* (4 percent). In addition, selected characteristics of motorcycle collisions differ in various ways from non-motorcycle collisions (Table 5.3). For example, fatal motorcycle collisions are more likely than other vehicle collisions to occur at intersections (44 percent of fatal motorcycle collisions, compared to 22 percent of non-motorcycle collisions). Fatal motorcycle collisions occur more often in multi-vehicle crashes than do non-motorcycle collisions. Half of all fatal motorcycle collisions happen on U.S. and state highways (compared to 40 percent of non-motorcycle fatal collisions).

In 2016, a total of 181 motor vehicles were involved in fatal motorcycle collisions (Figure 5.4), while 3,636 traffic units were involved in non-fatal collisions (not shown in Figure 5.4) involving motorcycles. Motorcycles comprised 63 percent of involved vehicles in fatal crashes, with another one-quarter involving passenger vehicles.

The count of collision-involved motorcycles considered to be speeding in collisions generally declined during the 2012-2016 period, including a near 15 percent decline from 2015 to 2016 in multi-vehicle crashes (Table 5.4). When collisions occur involving motorcycles and other vehicles, motorcycles are considerably more likely to be speeding. Motorcycles in single-vehicle collisions were speeding about 17 percent of the time in 2016, but only about 5 percent of the time in MV collisions. Examining only MV collisions, motorcycles are about four times more likely than other involved vehicles to be categorized as *speeding*. However, the proportions of motorcycles considered to have been speeding in either single- or multi-vehicle collisions have remained roughly the same over the previous five years.

Total motorcycle riders involved in collisions declined about 7 percent annually from 2012 to 2016 (Table 5.5). Since 2014, fatalities also decreased. From 2015 to 2016, the number of motorcyclists killed dropped nearly 7 percent, from 107 to 100, and the count of riders with incapacitating and non-incapacitating injuries declined about 4 percent, from 2,355 to 2,268. In 2016, nearly 70 percent of collision-involved motorcycle riders were injured (67 percent) or killed (3 percent).

Since 2015, Indiana law has officially defined three different vehicle types on which motorcycle operators and passengers can be riding at the time of a collision (see glossary for definitions). There are two additional categories of vehicles included in ARIES that are not officially defined in Indiana law: motorized bicycle and moped. In 2016, about 73 percent of riders injured or killed were on *motorcycles*, with the remainder on other two-/three-wheeled vehicles (calculated from Table 5.6). While fatalities on *motorcycles* dropped 13 percent in 2016, fatalities on other related unit types increased 20 percent, from 20 to 24 (calculated from Table 5.6).

In 2016, the likelihood of alcohol impairment was generally higher for motorcycle operators than other involved drivers (Table 5.7). However, the low rates of motorcycle operator impairment in 2016 should be interpreted with caution, and are linked to non-reporting or late reporting of drug and alcohol tests in the March 16, 2017, version of ARIES. For example, considering all motorcycle operators in fatal and incapacitating injury collisions in 2016, fewer than 8 percent had an alcohol test result reported in ARIES (Table 5.8). Nevertheless, in terms of *blood alcohol content (BAC)* results that were reported, the number of motorcycle operators with a BAC of 0.08 g/dL or more from 2015 to 2016 stayed the same (64). Considering only those cases with reported results for fatal and incapacitating collisions over the five-year period, anywhere from 44 percent (in 2012) to 59 percent (in 2016) of motorcycle operators were in excess of 0.08 BAC (calculated from Table 5.8).

Among motorcyclists involved in Indiana collisions, helmet use is associated with lower fatality and injury rates. However, most collision-involved riders were not wearing helmets (Table 5.9 and Figure 5.5). Of the 100 motorcycle fatalities in 2016, only 23 (23 percent) were reported to be wearing helmets. Among only motorcyclists for whom helmet use and age were known, those without helmets experienced higher fatal (3.3 percent) and incapacitating/non-incapacitating injury rates (68 percent) than those wearing helmets (2.1 percent and 64 percent, respectively). Male motorcycle operators had more than twice the fatality rate of female operators.

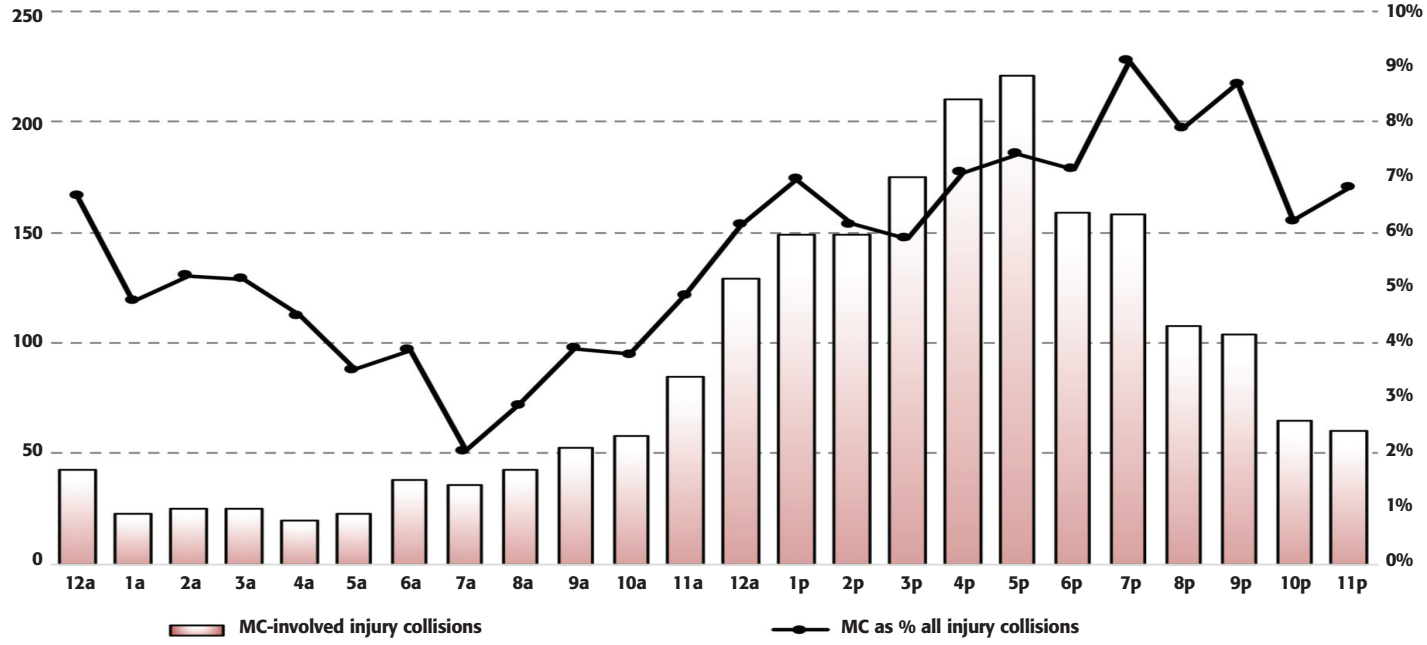
Considering all injuries sustained by motorcyclists, injuries to helmeted and unhelmeted riders do not vary much by *nature* (e.g., severe bleeding, broken bone), but do vary by injury *location* (Table 5.10). In 2016, *unhelmeted* riders experienced injuries to the *neck and above* 38 percent of the time, compared to 29 percent of the time for riders with helmets. Helmeted riders were reported with proportionately more injuries to the entire body (30 percent) and torso (15 percent) than were unhelmeted riders (13 percent and 10 percent, respectively).

Table 5.1. Number of Indiana collisions by motorcycle (MC) involvement, severity, and collision type, 2012-2016

	Count of collisions					Annual rate of change	
	2012	2013	2014	2015	2016	2015-16	2012-16
All collisions	**189,183**	**193,236**	**205,769**	**216,483**	**223,734**	**3.3%**	**4.3%**
MC involved	**4,112**	**3,525**	**3,412**	**3,270**	**3,216**	**-1.7%**	**-6.0%**
Fatal	146	114	122	104	101	-2.9%	-8.8%
Injury	2,899	2,444	2,358	2,132	2,058	-3.5%	-8.2%
Property damage	1,067	967	932	1,034	1,057	2.2%	-0.2%
Multi-vehicle	**2,341**	**2,031**	**1,947**	**1,925**	**1,825**	**-5.2%**	**-6.0%**
Fatal	83	62	74	61	67	9.8%	-5.2%
Injury	1,469	1,265	1,192	1,106	997	-9.9%	-9.2%
Property damage	789	704	681	758	761	0.4%	-0.9%
Single-vehicle	**1,771**	**1,494**	**1,465**	**1,345**	**1,391**	**3.4%**	**-5.9%**
Fatal	63	52	48	43	34	-20.9%	-14.3%
Injury	1,430	1,179	1,166	1,026	1,061	3.4%	-7.2%
Property damage	278	263	251	276	296	7.2%	1.6%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

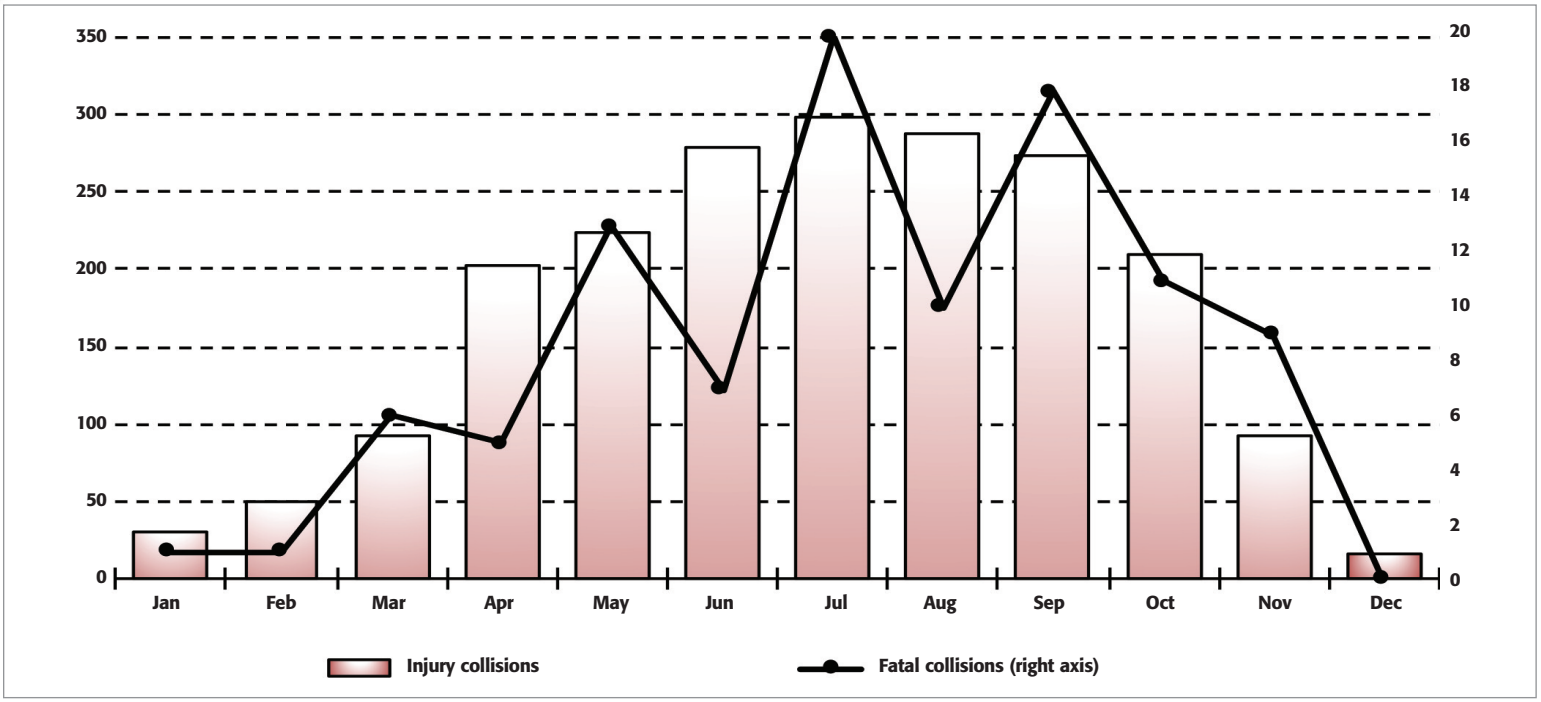
Figure 5.1. Motorcycle (MC) involved injury collisions in Indiana, by hour of the day, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Excludes collisions where *hour* or *injury status* was *unknown* or *not reported*.
2) *Injury* collisions include those with at least one *fatal, incapacitating,* or *non-incapacitating* injury.

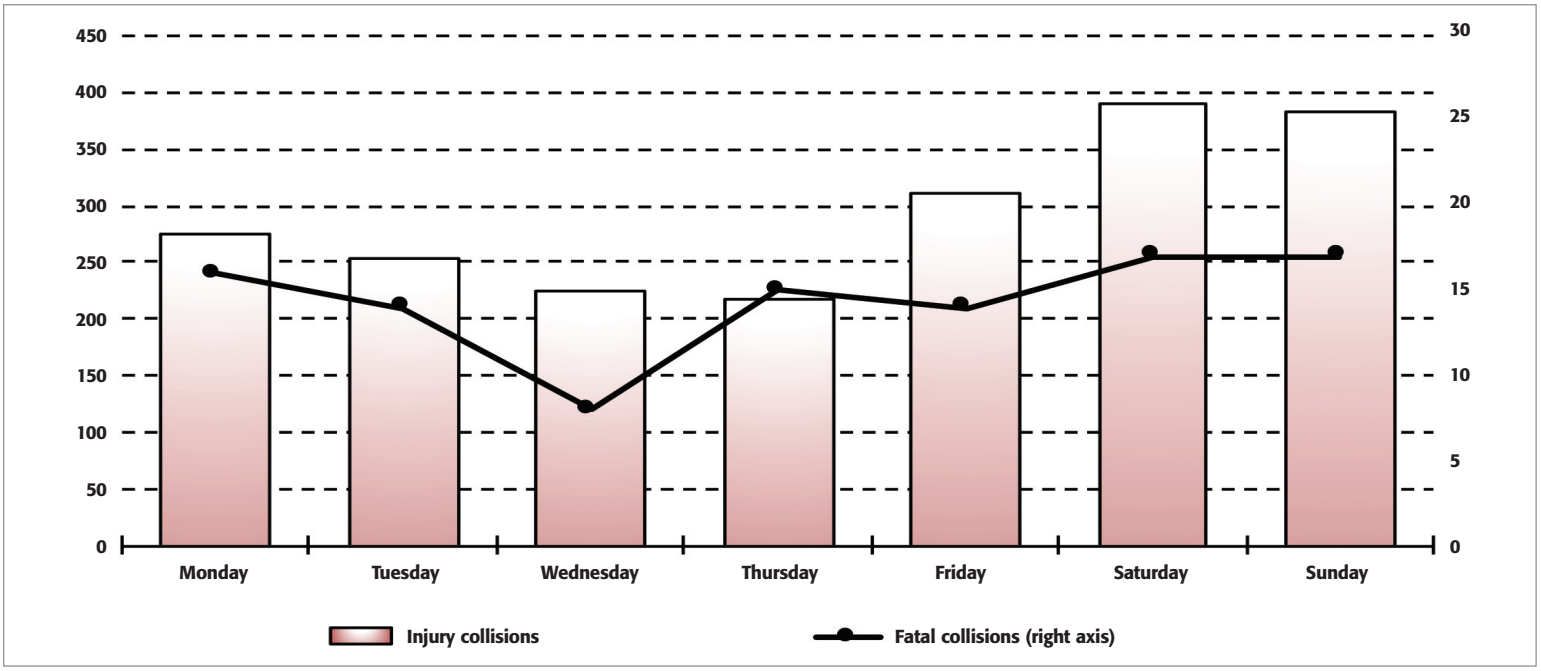
Figure 5.2. Indiana fatal and injury collisions involving motorcycles, by month, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: *Injury collisions* include those with at least one *fatal, incapacitating,* or *non-incapacitating* injury.

Figure 5.3. Indiana fatal and incapacitating collisions involving motorcycles, by day of the week, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: *Injury collisions* include those with at least one *fatal, incapacitating,* or *non-incapacitating* injury.

Table 5.2. Characteristics of Indiana motorcycle collisions, by severity of collision, 2016

Characteristics	Count of collisions				Probability of collision severity	
	Fatal	Injury	Property damage	Total	Fatal	Injury
Vehicles involved						
Single-vehicle	34	1,061	296	1,391	2.4%	76.3%
Multi-vehicle	67	997	761	1,825	3.7%	54.6%
Weather conditions						
Clear	89	1,712	842	2,643	3.4%	64.8%
Cloudy or poor visibility	10	284	157	451	2.2%	63.0%
Extreme weather	2	62	56	120	1.7%	51.7%
Road class						
Local/city	32	1,005	524	1,561	2.0%	64.4%
Highway	51	560	232	843	6.0%	66.4%
County	14	317	131	462	3.0%	68.6%
Interstate	4	106	46	156	2.6%	67.9%
Road character						
Straight (level)	63	1,367	765	2,195	2.9%	62.3%
Curves	25	404	140	569	4.4%	71.0%
Straight (non-level)	13	272	119	404	3.2%	67.3%
Non-roadway	0	15	28	43	0.0%	34.9%
Road junctions						
No junction involved	56	1,300	671	2,027	2.8%	64.1%
Intersections	44	708	368	1,120	3.9%	63.2%
Interchange/ramp	1	50	18	69	1.4%	72.5%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Excludes collisions where characteristic was *unknown* or *not reported*.
2) Selected characteristics are re-grouped from collision characteristics reported in ARIES, as shown below.
   a) *Weather conditions:*
      Cloudy or poor visibility includes *cloudy, fog/smoke/smog,* and
      Extreme weather includes *rain, severe cross wind, sleet/hail/freezing rain,* and *blowing sand/soil/snow*.
   b) *Road junctions:*
      Intersections includes *five point or more, four-way intersection, T-intersection, traffic circle/roundabout, RR crossing, trail crossing,* and *Y-intersection*.
      Interchange/ramp includes interchange and *ramp*.
   c) *Road character:*
      Curves includes *curve/grade, curve/hillcrest,* and *curve/level*.
      Straight/grade/hillcrest includes *straight/grade* and *straight/hillcrest*.
   d) *Road class:*
      Highway includes *state road* and *US route*.
3) Injury collisions include those with at least one fatal, incapacitating, or non-incapacitating injury.

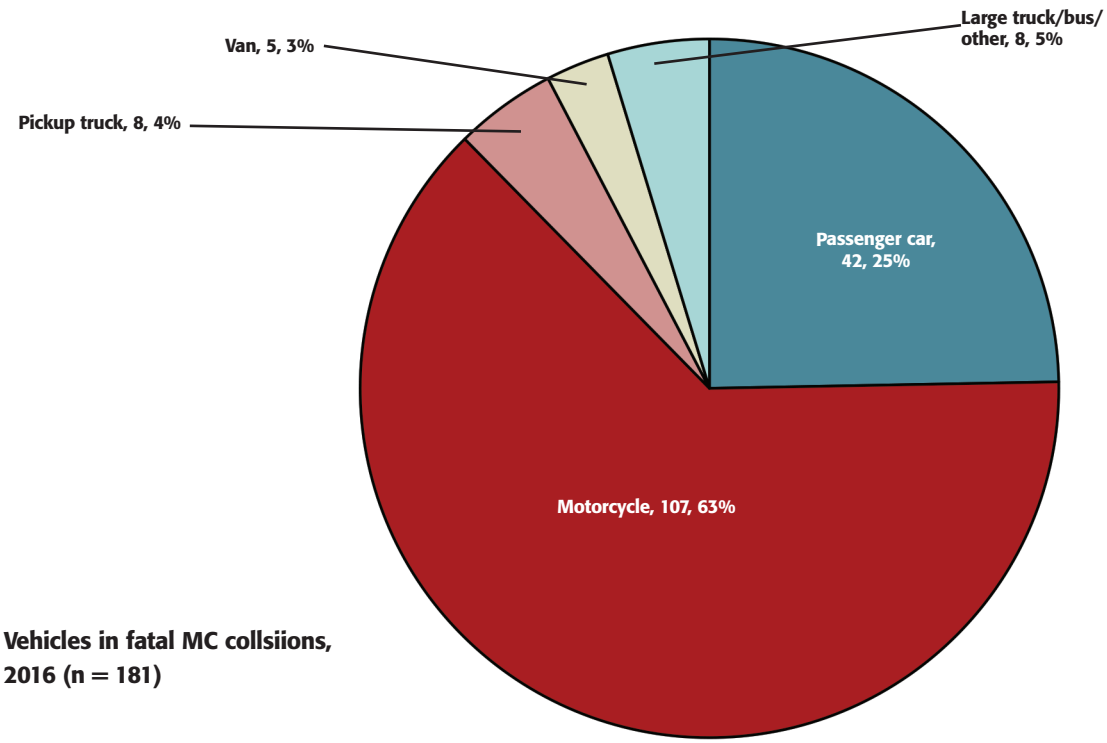
Table 5.3. Proportion of Indiana fatal and injury collisions, by collision characteristic and motorcycle involvement, 2016

Collision characteristic	Fatal collisions		Injury collisions	
	MC collision (n = 101)	Non-MC collision (n = 667)	MC collision (n = 2,058)	Non-MC collision (n = 33,265)
Vehicles involved	**100%**	**100%**	**100%**	**100%**
Single-vehicle	33.7%	53.8%	51.6%	30.6%
Multi-vehicle	66.3%	46.2%	48.4%	69.4%
Weather condition	**100%**	**100%**	**100%**	**100%**
Clear	88.1%	64.0%	83.2%	64.8%
Cloudy or poor visibility	9.9%	23.5%	13.8%	20.7%
Extreme weather	2.0%	12.0%	3.0%	14.5%
Road class	**100%**	**100%**	**100%**	**100%**
Local/city	31.7%	25.3%	48.8%	49.8%
Highway	50.5%	40.3%	27.2%	27.7%
Unknown	0.0%	1.5%	3.4%	3.5%
County	13.9%	20.2%	15.4%	11.2%
Interstate	4.0%	12.6%	5.2%	7.8%
Road character	**100%**	**100%**	**100%**	**100%**
Straight (level)	62.4%	64.6%	66.4%	74.7%
Straight (non-level)	12.9%	14.7%	13.2%	13.6%
Curves	24.8%	20.1%	19.6%	10.9%
Non-roadway	0.0%	0.3%	0.7%	0.8%
Road junction	**100%**	**100%**	**100%**	**100%**
No junctions involved	55.4%	76.2%	63.2%	57.7%
Intersections	43.6%	21.7%	34.4%	40.0%
Interchange/ramp	1.0%	2.1%	2.4%	2.3%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Characteristic* categories may not sum to 100 percent due to inclusion of unknowns in collision totals.
2) Selected *characteristics* are re-grouped from collision characteristics reported in ARIES, as shown below.
   a) *Weather conditions:*
      Cloudy or *poor visibility* includes *cloudy, fog/smoke/smog,* and *blowing sand/soil/snow.*
      Extreme weather includes *rain, severe cross wind, sleet/hail/freezing rain,* and *snow*.
   b) *Road junctions:*
      Intersections includes *five point or more, four-way intersection, T-intersection, traffic circle/roundabout, RR crossing, trail crossing,* and *Y-intersection*.
      Interchange/ramp includes interchange and *ramp*.
   c) *Road character:*
      Curves includes *curve/grade, curve/hillcrest,* and *curve/level*.
      Straight/grade/hillcrest includes straight/grade and *straight/hillcrest.*
   d) *Road class:*
      Highway includes *state road* and *US route*.
3) *Injury collisions* include those with at least one *fatal, incapacitating,* or *non-incapacitating* injury.

Figure 5.4. Vehicles in Indiana fatal collisions involving motorcycles (MC), 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Excludes *non-motorists* and *unknown* vehicles.
2) Includes *single-* and *multi-vehicle* collisions.

Table 5.4. Speeding status of vehicles involved in Indiana motorcycle collisions, 2012-2016

	Vehicles involved					Annual rate of change	
	2012	2013	2014	2015	2016	2015-16	2012-16
Single-vehicle (SV) collisions							
Motorcycles	**1,771**	**1,494**	**1,465**	**1,345**	**1,391**	**3.4%**	**-5.9%**
Not speeding	1,487	1,224	1,210	1,089	1,157	6.2%	-6.1%
Speeding	284	270	255	256	234	-8.6%	-4.7%
Multi-vehicle (MV) collisions							
Motorcycles	**2,442**	**2,102**	**2,018**	**1,998**	**1,918**	**-4.0%**	**-5.9%**
Not speeding	2,304	1,997	1,912	1,876	1,814	-3.3%	-5.8%
Speeding	138	105	106	122	104	-14.8%	-6.8%
Other vehicles	**2,332**	**2,027**	**1,941**	**1,928**	**1,834**	**-4.9%**	**-5.8%**
Not speeding	2,303	1,998	1,911	1,902	1,808	-4.9%	-5.9%
Speeding	29	29	30	26	26	0.0%	-2.7%
Percent speeding							
Motorcycles–SV	16.0%	18.1%	17.4%	19.0%	16.8%		
Motorcycles–MV	5.7%	5.0%	5.3%	6.1%	5.4%		
Other vehicles–MV	1.2%	1.4%	1.5%	1.3%	1.4%		

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
) *Other* vehicles excludes *unknown* unit type, *pedestrians, bicycles,* and *animal-drawn vehicles.*
2) Excludes *unknown* speeding status.

Table 5.5. Indiana motorcycle rider injuries in collisions, 2012-2016

	Count of individuals					Annual rate of change	
Injury status	**2012**	**2013**	**2014**	**2015**	**2016**	**2015-16**	**2012-16**
Total	**4,466**	**3,796**	**3,690**	**3,499**	**3,405**	**-2.7%**	**-6.6%**
Fatal	151	119	124	107	100	-6.5%	-9.8%
Injury	3,286	2,757	2,676	2,417	2,322	-3.9%	-8.3%
Not injured	1,029	920	890	975	983	0.8%	-1.1%
% fatal	**3.4%**	**3.1%**	**3.4%**	**3.1%**	**2.9%**		
% injury	**73.6%**	**72.6%**	**72.5%**	**69.1%**	**68.2%**		

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Injury* includes *incapacitating, non-incapacitating, other, unknown,* '+', *not reported,* and *refused.*
2) *Motorcycle riders* include *operators* and *passengers* of *motorcycles, class A* and *B motor driven cycles, motorized bicycles,* and *mopeds.*

Table 5.6. Motorcyclists involved in Indiana collisions, by type of motorized vehicle, 2015 and 2016

Unit type/Injury group	Count of individuals		Percent change	2016 injury rate, by unit type
	2015	2016	2015-2016	
All motorcyclists	**3,499**	**3,405**	**-2.7%**	
Motorcycle	**2,579**	**2,478**	**-3.9%**	**100%**
Fatal	87	76	-12.6%	3.1%
Injury	1,776	1,696	-4.5%	68.4%
Not injured	716	706	-1.4%	28.5%
Motor driven cycle class B	**416**	**454**	**9.1%**	**100%**
Fatal	6	6	0.0%	1.3%
Injury	305	322	5.6%	70.9%
Not injured	105	126	20.0%	27.8%
Motor driven cycle class A	**222**	**243**	**9.5%**	**100%**
Fatal	9	10	11.1%	4.1%
Injury	145	141	-2.8%	58.0%
Not injured	68	92	35.3%	37.9%
Motorized bicycle	**166**	**124**	**-25.3%**	**100%**
Fatal	3	6	100.0%	4.8%
Injury	104	80	-23.1%	64.5%
Not injured	59	38	-35.6%	30.6%
Moped	**116**	**106**	**-8.6%**	**100%**
Fatal	2	2	0.0%	1.9%
Injury	87	83	-4.6%	78.3%
Not injured	27	21	-22.2%	19.8%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
) *Motorcyclists* include *operators* and *passengers* of *motorcycles*, *class A* and *B motor driven cycles, motorized bicycles,* and *mopeds*.
2) *See Glossary* for unit type definitions. ARIES includes *motorized bicycle* and *moped* as *unit types.*
3) *Injury* includes *incapacitating, non-incapacitating, other, unknown,* '+', *not reported,* and *refused.*

Table 5.7. Individuals involved in Indiana motorcycle collisions by collision type, vehicle type, driver alcohol impairment, and injury status, 2016

Type of vehicle/alcohol status	Count of individuals, by injury status			Total
	Fatal	Injury	No injury	
Single-vehicle collisions				
Motorcycles	**34**	**1,165**	**328**	**1,527**
Alcohol-impaired unit	3	84	14	101
% alcohol-impaired	8.8%	7.2%	4.3%	6.6%
Multi-vehicle collisions				
Motorcycles	**66**	**1,157**	**655**	**1,878**
Alcohol-impaired unit	3	16	6	25
% alcohol-impaired	4.5%	1.4%	0.9%	1.3%
All other vehicles	**1**	**161**	**1,496**	**1,658**
Alcohol-impaired unit	0	3	24	27
% alcohol-impaired	0.0%	1.9%	1.6%	1.6%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) See glossary for definition of alcohol-impaired.
2) *Injury* includes *incapacitating, non-incapacitating, other, unknown,* '+', *not reported,* and *refused.*
3) Excludes *non-motorists.*
4) More than 90 percent of motorcycle operators in fatal and incapacitating collisions have no reported BAC results in ARIES, so % *alcohol-impaired* should be interpreted with caution.

Table 5.8. Blood alcohol content (BAC) of vehicle operators involved in Indiana fatal and incapacitating collisions involving motorcycles, 2016

Collision type	Vehicles involved	BAC range	Total	% by vehicles involved % BY
Single-vehicle	**Motorcycles**	**Total operators**	**737**	**100.0%**
		0 g/dL	15	2.0%
		0.01-0.07	12	1.6%
		0.08-0.14	19	2.6%
		0.15-0.59	33	4.5%
		Not reported	658	89.3%
Multi-vehicle	**Motorcycles**	**Total operators**	**683**	**100.0%**
		0 g/dL	13	1.9%
		0.01-0.07	4	0.6%
		0.08-0.14	5	0.7%
		0.15-0.59	7	1.0%
		Not reported	654	95.8%
	Other vehicles	**Total operators**	**609**	**100.0%**
		0 g/dL	67	11.0%
		0.01-0.07	4	0.7%
		0.08-0.14	8	1.3%
		0.15-0.59	3	0.5%
		Not reported	527	86.5%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: BAC range in grams per deciliter (g/dL). 0.08 or greater is legally impaired.

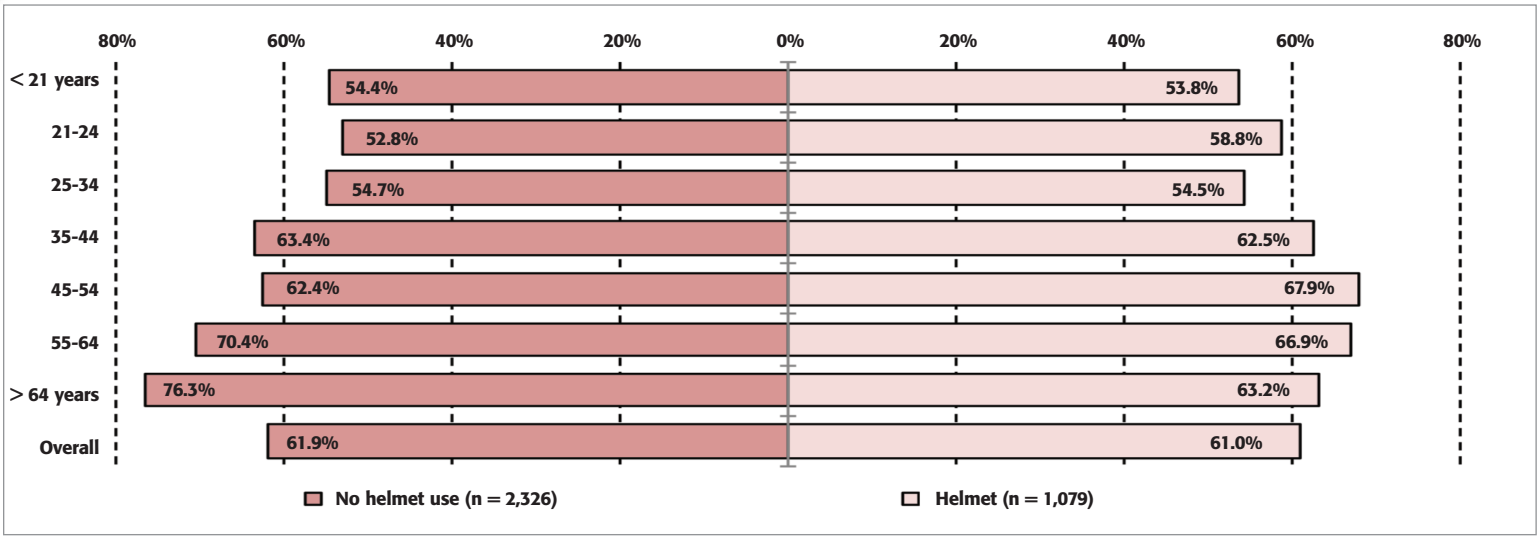
Table 5.9. Motorcyclists involved in Indiana collisions, by rider characteristics and injury status, 2016

Characteristics	Count of individuals				Probability of injury status	
	Fatal	Injury	Not injured	Total	Fatal	Injury
Type of individual	**100**	**2,322**	**983**	**3,405**	**2.9%**	**68.2%**
Operator	89	2,059	965	3,113	2.9%	66.1%
Injured passenger	11	263	18	292	3.8%	90.1%
Helmet use/age group						
Helmet	**23**	**705**	**351**	**1,079**	**2.1%**	**65.3%**
Under 21	3	103	40	146	2.1%	70.5%
21-24	4	93	54	151	2.6%	61.6%
25-34	5	118	63	186	2.7%	63.4%
35-44	1	95	56	152	0.7%	62.5%
45-54	0	106	55	161	0.0%	65.8%
55-64	5	119	56	180	2.8%	66.1%
65 and older	5	71	27	103	4.9%	68.9%
No helmet	**77**	**1,617**	**632**	**2,326**	**3.3%**	**69.5%**
Under 21	1	113	62	176	0.6%	64.2%
21-24	4	123	54	181	2.2%	68.0%
25-34	17	310	111	438	3.9%	70.8%
35-44	10	293	131	434	2.3%	67.5%
45-54	20	446	133	599	3.3%	74.5%
55-64	16	244	105	365	4.4%	66.8%
65 and older	9	88	36	133	6.8%	66.2%
Gender						
Male	**87**	**1,961**	**901**	**2,949**	**3.0%**	**66.5%**
Operator	86	1,905	891	2,882	3.0%	66.1%
Injured passenger	1	56	10	67	1.5%	83.6%
Female	**13**	**361**	**75**	**449**	**2.9%**	**80.4%**
Operator	3	154	67	224	1.3%	68.8%
Injured passenger	10	207	8	225	4.4%	92.0%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Excludes cases in which *gender, helmet use*, or *age group* was unknown.
2) Counts of passengers *not injured* should be excluded in ARIES; counts shown are as reported in ARIES.
3) Totals within *gender, helmet use,* and *type of individual* categories may not match due to missing values in selected categories.
4) *Injury* includes *incapacitating, non-incapacitating, other, unknown,* '+', *not reported,* and *refused.*
5) *No helmet includes unknown/NULL* safety equipment usage.

Figure 5.5. Fatal and incapacitating injuries as percent of total motorcyclist injuries, by helmet use and age group, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Excludes cases with unknown *age*.
2) *Total injuries* excludes those classified as 'not injured' in ARIES.
3) *No helmet* includes *unknown/NULL* safety equipment usage.
4) Due to redefinition of incapacitating injury in ARIES in 2015, use caution in comparing 2016 to earlier years.

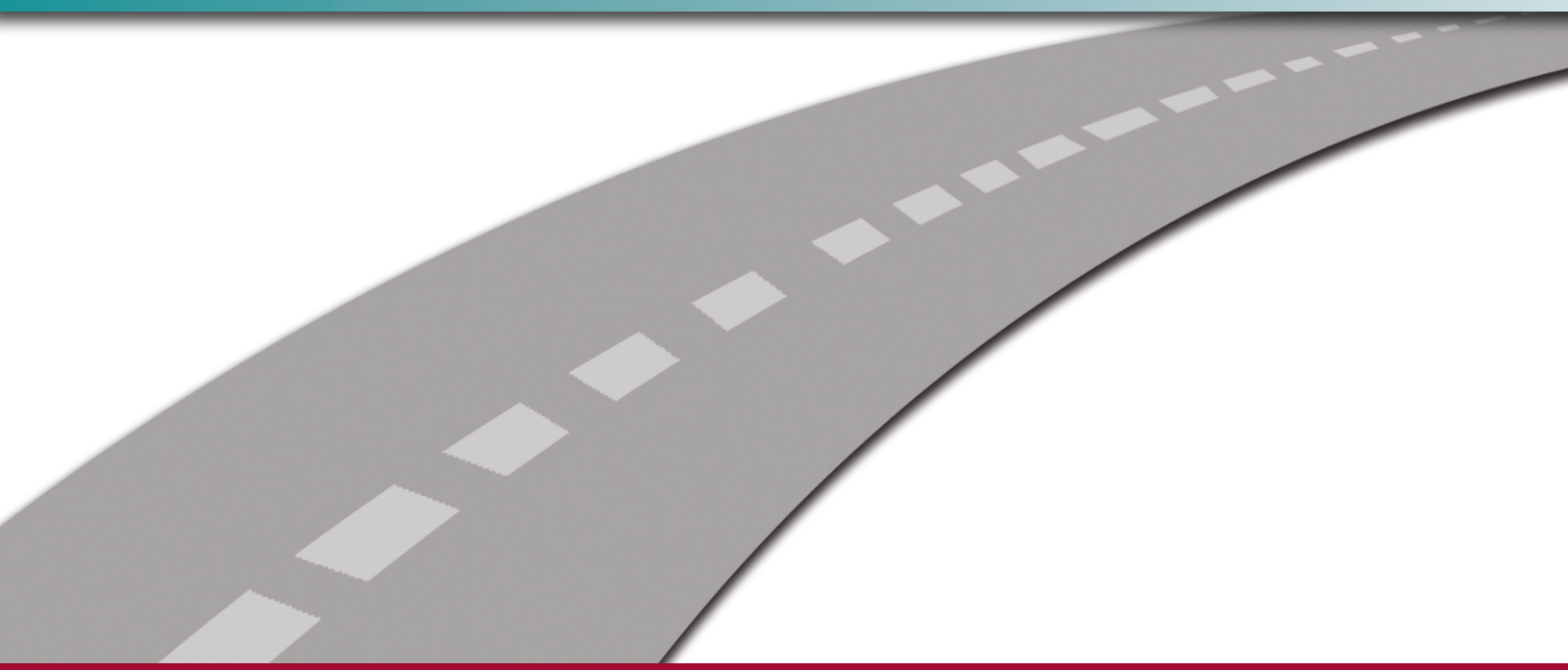
Table 5.10. Nature and location of injuries to motorcycle operators and passengers in Indiana collisions, by reported helmet use, 2016

Nature of injury	Location of injury					Total	Percent injuries by nature
	Neck and above	Arms	Entire body	Legs	Torso		
Total	**734**	**501**	**299**	**592**	**273**	**2,399**	
Helmet	**103**	**208**	**90**	**214**	**109**	**724**	**100%**
Other injury	51	125	52	113	83	424	58.6%
Fracture/dislocaton	7	50	13	66	13	149	20.6%
Minor bleeding	16	26	9	23	0	74	10.2%
Internal	17	2	14	3	10	46	6.4%
Severe bleeding	11	5	0	5	0	21	2.9%
Severed	0	0	0	4	0	4	0.6%
None visible	1	0	2	0	1	4	0.6%
Burns	0	0	0	0	2	2	0.1%
Percent injuries by location	*28.7%*	*12.4%*	*29.6%*	*14.2%*	*15.1%*	*100%*	
No helmet indicated	**631**	**293**	**209**	**378**	**164**	**1,675**	**100%**
Other injury	248	173	109	218	118	866	51.7%
Minor bleeding	157	49	22	31	1	260	15.5%
Fracture/dislocaton	40	67	32	113	20	272	16.2%
Internal	77	0	31	4	20	132	7.9%
Severe bleeding	103	2	11	7	1	124	7.4%
None visible	5	1	1	3	3	13	0.8%
Severed	1	1	3	2	1	8	0.5%
Percent injuries by location	*37.7%*	*17.5%*	*12.5%*	*22.6%*	*9.8%*	*100%*	

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Other injuries include abrasion, complaint of pain, contusion/bruise, and other.
2) Burns includes minor burn and severe burn.
3) Location of injury:
   a) *Torso* includes *abdomen/pelvis, back,* and *chest.*
   b) *Arms* includes *elbow/lower arm* and *shoulder/upper arm.*
   c) *Neck* and *above* includes *eye, face, head,* and *neck.*
   d) *Legs* includes *hip/upper leg* and *knee/lower leg/foot.*
4) Excludes individuals with no reported injury, unknown nature of *injury, location of injury,* or *helmet use.*

PEOPLE



PEOPLE, 2016

This section documents individuals involved in Indiana collisions between 2012 and 2016. The tables and figures in this section detail individual involvement (i.e., *drivers, injured occupants, pedestrians, pedalcyclists,* and *animal-drawn vehicle* operators) in collisions by age, gender, type of injury, license type, non-motorist action, and restraint use.

Person type

From 2012 to 2016, the number of individuals involved in Indiana collisions increased 4 percent annually (Table 1). Recent crash data shows the total number of *driver* fatalities in Indiana traffic collisions rose 5 percent from 536 in 2015 to 562 in 2016, while fatalities among *injured occupants* fell by 9 percent during the same period. The number of *pedestrians* experiencing fatal injuries increased 6 percent annually between 2012 (1,754) and 2016 (1,913). Overall, *pedalcyclist* involvement in collisions decreased 5 percent annually between 2012 and 2016. Between 2015 and 2016, the number of *pedalcyclist* fatalities rose by 67 percent from 9 to 15.

Figure 1 shows the proportion of individuals killed in Indiana collisions by person type. Drivers accounted for at least two-thirds of all fatal injuries between 2012 and 2016. *Injured occupants* represented roughly 20 percent of fatalities, followed by pedestrians (10 percent in 2016), and pedalcyclists (2 percent in 2016).

As Table 6.2 illustrates, between 2012 and 2016, the relative proportion of individuals involved in crashes was higher among males across nearly all person type categories. In 2016, 56 percent of drivers involved in collisions and 82 percent of pedalcyclists in crashes were male. Only among injured occupants, did females represent a larger proportion of individuals involved between 2012 and 2016—between 60 and 62 percent. The proportion of individuals involved in collisions by age group and gender is illustrated in Table 6.3. Between 2012 and 2016, males in the *25- to-34 year-old, 35- to-45-year-old,* and *45- to-54-year-old* age categories were more likely to be involved in crashes than females.

Drivers by License type and License Status

In 2016, among license types, motorcyclists represent 11 percent of fatalities (calculated from Table 6.4). In terms of license status, 83 percent of drivers involved in Indiana collisions had a *valid* driver's license (calculated from Table 6.5). Approximately 10 percent of *drivers* killed had either suspended (44 drivers in 2016) or *habitual traffic violator* (8 in 2016) infractions.

Restraint use

Overall restraint use by individuals involved in Indiana collisions in passenger vehicles has remained constant at 91 percent during the 2012 through 2016 period. Restraint use rates decline with injury severity status. In 2016, only 45 percent of the 581 persons killed in passenger occupant vehicles were properly restrained (Table 6.6). As illustrated in Table 6.7, in 2016, approximately 10 percent of male drivers between the ages of 15 and 44 involved in collisions were *unrestrained*. Young male drivers were also more likely than female drivers to engage in *speeding, alcohol-impaired driving,* and *dangerous driving* behaviors.

Non-motorists

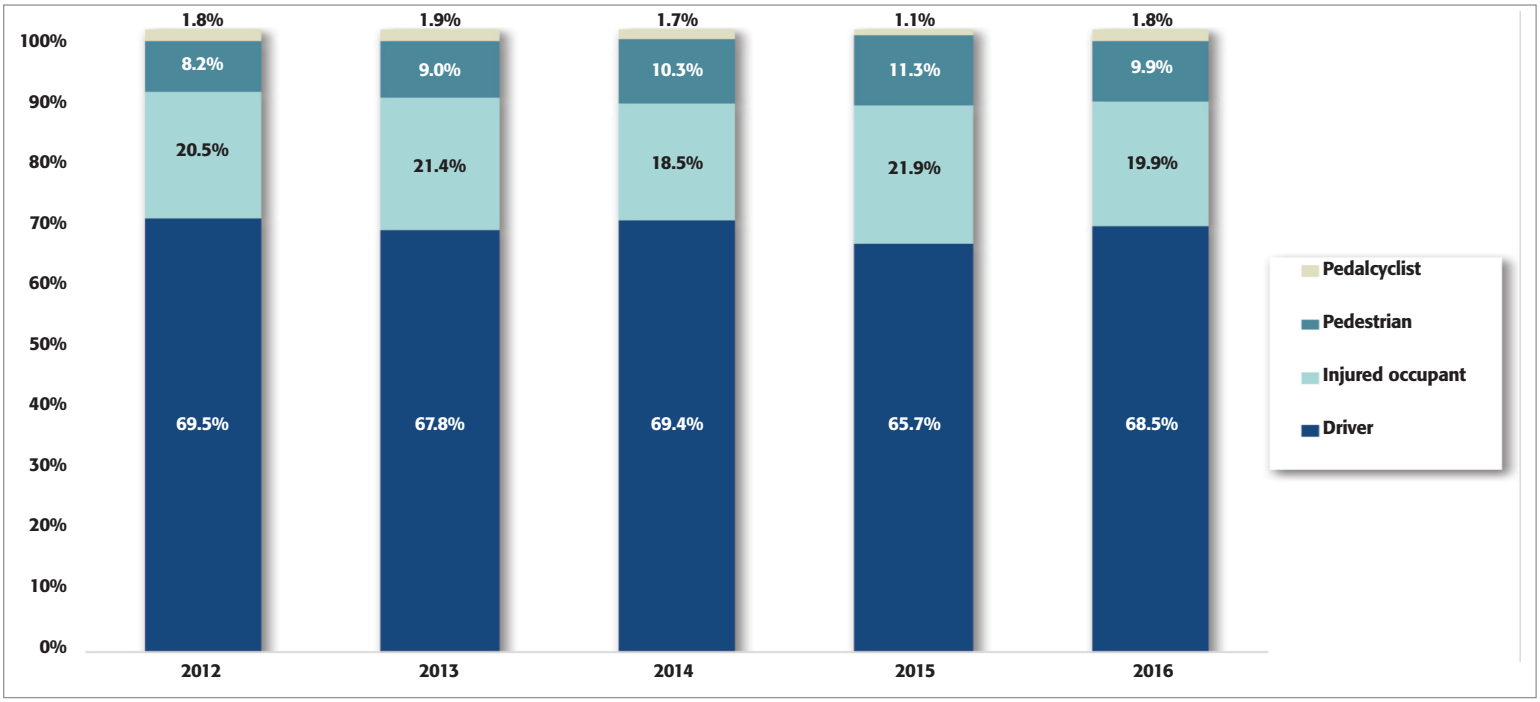
The most common action of pedestrians and pedalcyclists involved in 2016 collisions was *crossing at intersection* (Tables 6.8 and 6.9). Riding *on roadway* was also a common pedalcyclist behavior reported as a contributing factor in collisions. *Crossing not at intersection* (30 percent) and walking on a *roadway* (16 percent) were the most common actions of pedestrians resulting in traffic collisions in 2016. Pedalcyclist actions related to *crossing at intersection* represented for 30 percent (282 of 926) of crashes involving pedalcyclists in 2016 (Table 6.8). Both pedalcyclists (88 percent) and pedestrians (77 percent) were more likely to be attributable in crashes with a non-motorist action of *crossing at intersection.*

Table 6.1. Individuals involved in Indiana collisions, by person type and injury status, 2012-2016

Person type/injury status	Count of individuals					Annual rate of change	
	2012	2013	2014	2015	2016	2015-16	2012-16
All individuals	**306,392**	**310,303**	**330,978**	**351,266**	**364,013**	**3.6%**	**4.4%**
Driver	**290,764**	**295,249**	**315,825**	**334,639**	**347,188**	**3.8%**	**4.5%**
Fatal	542	530	517	536	562	4.9%	0.9%
Non-fatal injuries	34,476	33,428	34,345	36,191	37,124	2.6%	1.9%
Not injured	255,746	261,291	280,963	297,912	309,502	3.9%	4.9%
Injured occupant	**12,652**	**12,225**	**12,335**	**13,761**	**13,898**	**1.0%**	**2.4%**
Fatal	160	167	138	179	163	-8.9%	0.5%
Non-fatal injuries	12,258	11,827	11,987	13,052	13,225	1.3%	1.9%
Not injured	234	231	210	530	510	-3.8%	21.5%
Pedalcyclist	**1,119**	**1,032**	**928**	**964**	**926**	**-3.9%**	**-4.6%**
Fatal	14	15	13	9	15	66.7%	1.7%
Non-fatal injuries	894	822	713	732	680	-7.1%	-6.6%
Not injured	211	195	202	223	231	3.6%	2.3%
Pedestrian	**1,754**	**1,688**	**1,778**	**1,796**	**1,913**	**6.5%**	**2.2%**
Fatal	64	70	77	92	81	-12.0%	6.1%
Non-fatal injuries	1,507	1,429	1,486	1,453	1,538	5.8%	0.5%
Not injured	183	189	215	251	294	17.1%	12.6%
Animal-drawn vehicle operator	**103**	**109**	**112**	**106**	**88**	**-17.0%**	**-3.9%**
Fatal	1	2	0	1	0	-100.0%	-100.0%
Non-fatal injuries	23	28	32	37	24	-35.1%	1.1%
Not injured	79	79	80	68	64	-5.9%	-5.1%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Figure 1. Individuls killed in Indiana collisions, by person type, 2012-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Excludes animal-drawn vehicle operators.

Table 6.2. Individuals involved in Indiana collisions, by person type and gender, 2012-2016

Person type	2012		2013		2014		2015		2016		Annal rate of change, 2012-16	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Driver	44.6%	55.4%	44.5%	55.5%	43.8%	56.2%	44.2%	55.8%	44.4%	55.6%	-0.2%	0.1%
Injured occupant	62.0%	38.0%	61.5%	38.5%	61.7%	38.3%	61.4%	38.6%	60.4%	39.6%	-0.6%	1.0%
Pedalcyclist	19.2%	80.8%	18.8%	81.2%	20.4%	79.6%	21.9%	78.1%	18.4%	81.6%	-1.2%	0.3%
Pedestrian	41.2%	58.8%	42.1%	57.9%	41.8%	58.2%	40.1%	59.9%	41.1%	58.9%	-0.1%	0.0%
Animal-drawn vehicle operator	28.7%	71.3%	23.1%	76.9%	30.4%	69.6%	33.7%	66.3%	21.8%	78.2%	-6.6%	2.3%
All	**41.2%**	**58.8%**	**42.1%**	**57.9%**	**41.8%**	**58.2%**	**40.1%**	**59.9%**	**41.1%**	**58.9%**	**-0.1%**	**0.0%**

Low < > **High**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: Excludes unkown gender.

Table 6.3. Individuals involved in Indiana collisions, by age group and gender, 2012-2016

Age group	2012		2013		2014		2015		2016		Annal rate of change, 2012-16	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
15-20	6.7%	7.7%	6.6%	7.4%	6.2%	7.0%	6.4%	7.1%	6.5%	7.2%	-0.8%	-1.7%
21-24	5.2%	5.8%	5.2%	6.0%	5.2%	5.9%	5.1%	5.9%	5.0%	5.9%	-0.8%	0.4%
25-34	9.1%	10.6%	9.1%	10.8%	9.2%	11.2%	9.3%	11.2%	9.4%	11.4%	1.0%	1.8%
35-44	7.4%	9.1%	7.3%	9.1%	7.3%	9.3%	7.3%	9.2%	7.2%	9.0%	-0.5%	-0.3%
45-54	7.0%	9.1%	6.9%	9.0%	6.6%	9.0%	6.5%	8.7%	6.4%	8.6%	-2.1%	-1.4%
55-64	5.3%	7.0%	5.3%	7.0%	5.3%	7.3%	5.4%	7.2%	5.4%	7.2%	0.3%	0.8%
65-74	2.7%	3.5%	2.8%	3.7%	2.9%	3.8%	3.0%	3.8%	3.1%	3.9%	3.6%	2.8%
75+	1.8%	2.1%	1.8%	2.0%	1.7%	2.1%	1.7%	2.0%	1.7%	2.0%	-1.1%	-0.2%
All ages	**45.2%**	**54.8%**	**45.1%**	**54.9%**	**44.3%**	**55.7%**	**44.8%**	**55.2%**	**44.8%**	**55.2%**	**-0.2%**	**0.2%**

Low < > **High**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: Excludes unkown gender.

Table 6.4. Drivers involved in Indiana collisions, by license type and injury status, 2016

License type	Driver injury status			
	Fatal	Non-fatal injury	Not injured	Total
Operator	437	32,316	272,461	305,214
Motorcycle	63	1,447	5,258	6,768
Commercial Driver	20	1,062	16,730	17,812
No License	20	1,044	5,238	6,302
Learner's permit	12	499	2,751	3,262
Chauffeur	10	525	4,930	5,465
Probationary Operator License	0	12	110	122
Unknown	0	153	1,575	1,728
Total	**562**	**36,905**	**307,478**	**344,945**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Includes drivers reported with ages ranging from 15 to 109. Excludes unknown and invalid ages.
2) *Chauffeur* license type includes *chauffeur* and *public passenger chauffeur license.*
3) *Motorcycle license* type includes *motorcycle, chauffeur with MC endorsement, operators with MC endorsement,* and *public passenger chauffer with MC endorsement.*
4) *Learner permit* license type includes *learner permit, drivers education learners permit*, and *learner motorcycle.*

Table 6.5. Drivers involved in Indiana collisions, by license status and driver injury status, 2016

License status	Driver injury status			
	Fatal	Non-fatal injury	Not injured	Total
Valid	387	27,955	234,327	262,669
Suspended	44	1,754	7,463	9,261
Habitual traffic violator	8	181	265	454
Unlicensed	7	307	1,284	1,598
Cancelled	1	72	461	534
Conditional	0	27	193	220
Fraudulent	0	0	11	11
Invalid - revoked	0	11	88	99
Unknown	70	4,038	36,871	40,979
Total	**517**	**34,345**	**280,963**	**315,825**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Includes drivers reported with ages ranging from 15 to 109. Excludes unknown and invalid ages.
2) *Suspended* license status includes suspended by *infraction, misdemeanor,* and *prior*.

Table 6.6. Restraint use and injury status among individuals involved in Indiana passenger vehicle collisions, 2012-2016

Passenger vehicle occupant injuries	2012	2013	2014	2015	2016	Annual rate of change 2015-16	Annual rate of change 2012-16
All occupants	**283,470**	**287,781**	**304,632**	**325,835**	**337,932**	**3.7%**	**4.5%**
properly restrained	256,889	260,821	278,357	296,880	307,004	3.4%	4.6%
% restrained	*90.6%*	*90.6%*	*91.4%*	*91.1%*	*90.8%*	*-0.3%*	*0.1%*
Fatalities	**518**	**550**	**500**	**568**	**581**	**2.3%**	**2.9%**
properly restrained	250	281	235	276	259	-6.2%	0.9%
% restrained	*48.3%*	*51.1%*	*47.0%*	*48.6%*	*44.6%*	*-8.3%*	*-2.0%*
Non-fatal injuries	**42,149**	**41,082**	**42,021**	**45,158**	**46,304**	**2.5%**	**2.4%**
properly restrained	37,048	36,218	37,418	40,062	41,043	2.4%	2.6%
% restrained	*87.9%*	*88.2%*	*89.0%*	*88.7%*	*88.6%*	*-0.1%*	*0.2%*
Not injured	**240,803**	**246,149**	**262,111**	**280,109**	**291,047**	**3.9%**	**4.9%**
properly restrained	219,591	224,322	240,704	256,542	265,702	3.6%	4.9%
% restrained	*91.2%*	*91.1%*	*91.8%*	*91.6%*	*91.3%*	*-0.3%*	*0.0%*

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Restraint use rates are calculated based on individuals identified as *injured occupant* or *driver* where restraint use was known.
2) *Unrestrained* and *unknown* restraint use codes are included in totals for restraint use rate calculations.
3) Restraint use rates are limited to those occuring in passenger vehicles (defined as *passenger cars, pickup trucks, sport utility vehicles,* and *vans*).

Table 6.7. Proportion of drivers In Indiana collisions, by driver behavior, gender, and age group, 2016

Age group	% speeding		% alcohol-impaired		% unrestrained		% engaged in dangerous driving	
	Female	Male	Female	Male	Female	Male	Female	Male
15-20	8.5%	12.3%	0.3%	0.8%	8.3%	9.4%	10.5%	14.4%
21-24	6.9%	10.3%	1.2%	3.1%	7.7%	10.5%	8.9%	12.6%
25-34	5.3%	8.1%	1.2%	2.6%	7.9%	10.6%	7.4%	10.2%
35-44	4.0%	5.9%	1.0%	2.2%	7.9%	9.7%	5.7%	7.7%
45-54	3.1%	4.4%	0.8%	1.9%	7.9%	8.9%	5.1%	6.1%
55-64	2.3%	3.4%	0.5%	1.4%	7.6%	8.7%	4.2%	5.2%
65-74	1.9%	2.6%	0.2%	0.7%	7.2%	8.1%	4.3%	4.7%
75+	1.6%	2.5%	0.1%	0.1%	8.2%	9.0%	4.8%	5.2%
All ages	**4.7%**	**6.7%**	**0.8%**	**1.9%**	**7.9%**	**9.6%**	**6.7%**	**8.7%**

Low < > **High**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Excludes unkown gender and invalid age.
2) See glossary for definitions of *speeding, alcohol-impaired, restraint use,* and *dangerous driving.*

Table 6.8. Pedalcyclists involved in Indiana collisions, by pedalcyclist action and attributability, 2016

Pedalcyclist action	Total involved	Count attributable pedalcyclist	% attributable to pedalcyclist
Crossing at intersection	282	152	53.9%
On roadway	144	72	50.0%
Moving	84	44	52.4%
Crossing not at intersection	76	67	88.2%
With traffic	64	16	25.0%
Against traffic	50	37	74.0%
Not in roadway	37	19	51.4%
On designated non-motorist lane	25	4	16.0%
On shoulder	19	5	26.3%
Other	51	32	62.7%
Unknown	94	49	52.1%
Total	**926**	**497**	**53.7%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: A vehicle or non-motorist is attributable to the occurrence of a collision when the officer marks a contributing circumstance for that vehicle that also matches the collision primary factor.

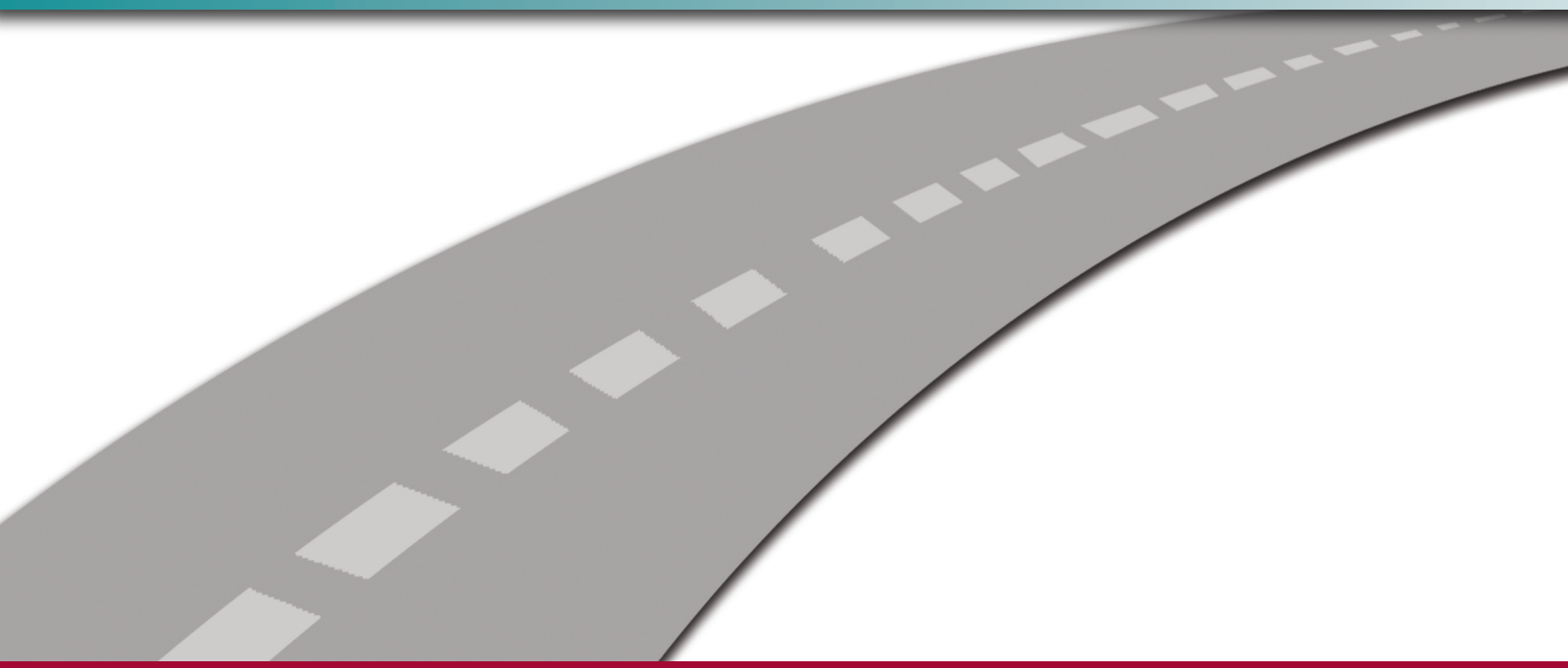
Table 6.9. Pedestrians involved in Indiana collisions, by pedestrian action and attributability, 2016

Pedestrian action	Total involved	Count attributable to pedestrian	% attributable to pedestrian
Crossing at intersection	372	115	30.9%
Crossing not at intersection	288	222	77.1%
On roadway	253	138	54.5%
Moving	127	34	26.8%
Not in Roadway	124	12	9.7%
Standing	102	7	6.9%
On shoulder	48	13	27.1%
With traffic	40	17	42.5%
Against traffic	34	14	41.2%
Getting in or out of vehicle	32	11	34.4%
On designated non-motorist lane	31	6	19.4%
Working	22	5	22.7%
Getting off or on school bus	5	1	20.0%
Other	221	69	31.2%
Unknown	214	65	30.4%
Total	**1913**	**729**	**38.1%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: A vehicle or non-motorist is attributable to the occurrence of a collision when the officer marks a contributing circumstance for that vehicle that also matches the collision primary factor.

ALCOHOL



ALCOHOL, 2016

NOTE: *On average from 2012 to 2016, more than half of all drivers involved in fatal collisions have no blood alcohol content (BAC) results reported in ARIES. In 2016, 83 percent of drivers killed and 96 percent of drivers injured in crashes have no BAC results reported in ARIES. It is very likely impairment rates are underestimated due to non-reporting of BAC results in ARIES, and should be interpreted with caution.*

In 2016, there were 73 fatal crashes and 83 fatalities (decreases from 2015 of 18 percent and 14 percent, respectively) involving a vehicle driver legally impaired by alcohol (i.e., BAC at or above 0.08 g/dL) (Table 7.1). From 2012 to 2016, the numbers of persons killed in crashes involving alcohol-impaired drivers decreased 17 percent annually, and fatal collisions involving an alcohol-impaired driver decreased nearly 19 percent annually.

About 59 percent of all drivers involved in fatal crashes in Indiana were tested for alcohol and/or drugs in 2016, compared to only 10 percent of all drivers tested in incapacitating injury collisions (Table 7.2). Testing rates were generally higher for younger drivers. The group with the highest rate of testing included drivers between 45 and 54 who were in fatal collisions (65 percent), while the lowest rate (38 percent) in fatal collisions was for drivers 75 years and older.

Considering all collisions, the 2012 to 2016 counts of alcohol-impaired drivers declined about 2 percent annually, while the number of impaired drivers in fatal collisions decreased annually by nearly 19 percent (Table 7.3). In 2016, the largest proportion of impaired drivers (29 percent) in all collisions were in the 25-34 year old range. About 27 percent of impaired drivers in fatal collisions were aged 21 to 24 years.

Among surviving drivers with reported results in 2016 fatal collisions, 8 percent of drivers with reported results were legally impaired; among drivers killed with reported BAC results, about 40 percent were legally impaired (Table 7.4). In 2016, among drivers killed and for whom BAC results were reported, the drivers most likely to be impaired by alcohol were those aged 35 to 54 (55 percent).

Male drivers are more likely than female drivers to have been alcohol-impaired in Indiana collisions (Table 7.5). For example in fatal collisions, nearly 17 percent of male drivers aged 21 to 24 in fatal crashes were impaired compared to about 13 percent of female drivers in the same age range. Impairment rates in non-fatal collisions are likewise higher for males than females across all age ranges, and impairment rates tends to decline with age for both genders.

Comparing road classes, fatalities in crashes involving an impaired driver were most common on *local/city roads* and *county roads*. In 2016, 12 percent of all fatalities on *local/city roads* involved an impaired driver (Table 7.6), while about 18 percent of fatalities on *county roads* involved impaired drivers. Injuries linked to alcohol-impaired drivers were proportionally largest on *county roads* (7 percent). In addition, alcohol-impaired fatalities were most common in *urban* areas (31 percent, or 26 of 83 persons killed in alcohol-impaired collisions), followed by *suburban* areas (25 percent of persons killed) (Table 7.7).

Alcohol-impaired fatalities and injuries in Indiana vary by month (Figure 7.1). In 2016, the month of March had the highest count of fatalities from collisions involving alcohol-impaired drivers. The highest rate of fatalities from alcohol-impaired fatal collisions was in January. The highest rate of non-fatal injuries from collisions involving alcohol-impaired drivers (5 percent) occurred in March and May.

Drivers involved in single-vehicle collisions are more likely to be impaired than drivers involved in multiple-vehicle collisions (Tables 7.8). In single-vehicle collisions in 2016, nearly 15 percent of all drivers killed were alcohol-impaired, compared to 5 percent of drivers killed in multiple-vehicle collisions. However, in terms of drivers killed, 75 percent of single vehicle collision drivers and 78 percent of multi-vehicle crash drivers had no BAC results reported in ARIES, so impairment rates are underestimated substantially in 2016. Among drivers injured in single-vehicle collisions, 8 percent were impaired, compared to only 1 percent of drivers injured in multiple-vehicle crashes.

Impairment rates vary by vehicle type (Table 7.9). In 2016, the highest impairment rates where vehicle type was known were among drivers killed in pickup trucks (15 percent) and passenger cars (10 percent). Considering drivers in all Indiana collisions in 2016, motorcycle operators had the highest rates of alcohol-impaired driving of any vehicle class (4 percent).

The Indiana BMV license status of collision-involved vehicle drivers differs for the non-impaired versus impaired. Among drivers found to be impaired in 2016, approximately 54 percent had valid driver's licenses, as opposed to nearly 90 percent of non-impaired drivers (Figure 7.2). More than 3 percent of impaired drivers were classified as habitual traffic violators.

Table 7.1. Indiana collisions and injuries involving alcohol-impaired drivers, 2012-2016

	2012	2013	2014	2015	2016	Annual rate of change 2015-16	Annual rate of change 2012-16
Collisions involving an alcohol-impaired driver							
Total collisions	**5,198**	**4,797**	**4,593**	**4,852**	**4,783**	**-1.4%**	**-2.1%**
Fatal	167	122	101	89	73	-18.0%	-18.7%
Injury	1,528	1,406	1,300	1,333	1,386	4.0%	-2.4%
Property damage	3,503	3,269	3,192	3,430	3,324	-3.1%	-1.3%
Individuals in collisions involving an alcohol-impaired driver							
Total individuals	**7,393**	**6,946**	**6,593**	**7,108**	**7,099**	**-0.1%**	**-1.0%**
Fatal	177	134	108	96	83	-13.5%	-17.2%
Injured	2,152	2,086	1,893	1,995	2,098	5.2%	-0.6%
Not injured	5,064	4,726	4,592	5,017	4,918	-2.0%	-0.7%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: *Individuals* injured includes *incapacitating, non-incapacitating, possible, +, not reported, refused*, and *unknown* injury status categories.

Table 7.2. Drivers in Indiana collisions who were tested for alcohol or other substances, by age and collision severity, 2016

	Count of drivers					
	Fatal collisions			Incapacitating collisions		
Driver age	**Tested**	**Total**	**Tested as % total**	**Tested**	**Total**	**Tested as % total**
15 to 20	72	109	66.1%	294	3,414	8.6%
21 to 24	95	127	74.8%	418	2,830	14.8%
25 to 34	139	226	61.5%	706	5,464	12.9%
35 to 44	116	185	62.7%	492	4,267	11.5%
45 to 54	123	190	64.7%	428	4,062	10.5%
55 to 64	83	180	46.1%	293	3,529	8.3%
65 to 74	45	91	49.5%	106	2,014	5.3%
75 and older	28	73	38.4%	37	1,144	3.2%
All ages	**701**	**1,181**	**59.4%**	**2,774**	**26,724**	**10.4%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Tested* includes drivers for which ARIES reports an *alcohol, drug,* or *alcohol/drug* test was given.
2) Excludes ages under 15 and over 109 years and cases with unknown or non-reported age.

Table 7.3. Alcohol-impaired drivers in Indiana traffic collisions by driver age, 2012-2016

	Count of drivers involved					Annual rate of change		Percent total
Driver age	**2012**	**2013**	**2014**	**2015**	**2016**	**2015-16**	**2012-16**	**2016**
All collisions	**5,123**	**4,736**	**4,548**	**4,791**	**4,739**	**-1.1%**	**-1.9%**	**100%**
15 to 20	398	339	310	267	260	-2.6%	-10.1%	5.5%
21 to 24	962	888	861	911	832	-8.7%	-3.6%	17.6%
25 to 34	1,457	1,392	1,340	1,368	1,391	1.7%	-1.2%	29.4%
35 to 44	1,000	914	864	890	941	5.7%	-1.5%	19.9%
45 to 54	809	748	704	805	735	-8.7%	-2.4%	15.5%
55 to 64	382	351	351	413	451	9.2%	4.2%	9.5%
65 to 74	93	84	100	115	116	0.9%	5.7%	2.4%
75 and older	22	20	18	22	13	-40.9%	-12.3%	0.3%
Fatal collisions	**169**	**123**	**102**	**90**	**73**	**-18.9%**	**-18.9%**	**100%**
15 to 20	12	6	4	4	2	-50.0%	-36.1%	2.7%
21 to 24	27	27	11	13	20	53.8%	-7.2%	27.4%
25 to 34	48	37	32	27	18	-33.3%	-21.7%	24.7%
35 to 44	38	27	21	19	13	-31.6%	-23.5%	17.8%
45 to 54	28	13	22	13	13	0.0%	-17.5%	17.8%
55 to 64	9	9	9	11	6	-45.5%	-9.6%	8.2%
65 to 74	5	3	3	1	1	0.0%	-33.1%	1.4%
75 and older	2	1	0	2	0	-100%	-100%	0.0%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) On average, more than half of all drivers involved in fatal collisions have no reported BAC results, 2012-2016.
2) Two-thirds of drivers involved in fatal collisions have no reported BAC results in 2016.
3) *Impaired drivers* are those with BAC of 0.08 g/dL or greater reported in ARIES.
4) Excludes ages under 15 and over 109 years and cases with unknown or non-reported age.

Table 7.4. Blood alcohol content (BAC) results for drivers involved in Indiana fatal collisions, 2016

	Count by BAC result (g/dL)							0.08 or more as % of	
Driver age	**0**	**0.01 < 0.08**	**0.08 or more**	**Not reported**	**Total**	**Reported**	**Reported as % total**	**2012-16**	**2016**
Surviving	**235**	**8**	**21**	**355**	**619**	**264**	**42.6%**	**8.0%**	**3.4%**
15 to 20	21	1	0	40	62	22	35.5%	0.0%	0.0%
21 to 24	30	2	10	30	72	42	58.3%	23.8%	13.9%
25 to 34	47	1	5	62	115	53	46.1%	9.4%	4.3%
35 to 44	34	0	2	67	103	36	35.0%	5.6%	1.9%
45 to 54	45	3	2	60	110	50	45.5%	4.0%	1.8%
55 to 64	31	1	1	59	92	33	35.9%	3.0%	1.1%
65 to 74	16	0	1	26	43	17	39.5%	5.9%	2.3%
75 and older	11	0	0	11	22	11	50.0%	0.0%	0.0%
Killed	**74**	**5**	**52**	**431**	**562**	**131**	**23.3%**	**39.7%**	**9.3%**
15 to 20	8	0	2	37	47	10	21.3%	20.0%	4.3%
21 to 24	10	1	10	34	55	21	38.2%	47.6%	18.2%
25 to 34	10	1	13	87	111	24	21.6%	54.2%	11.7%
35 to 44	8	1	11	62	82	20	24.4%	55.0%	13.4%
45 to 54	9	0	11	60	80	20	25.0%	55.0%	13.8%
55 to 64	11	1	5	71	88	17	19.3%	29.4%	5.7%
65 to 74	9	1	0	38	48	10	20.8%	0.0%	0.0%
75 and older	9	0	0	42	51	9	17.6%	0.0%	0.0%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: Excludes ages under 15 and over 109 years and cases with unknown or non-reported age.

Table 7.5. Drivers in Indiana collisions, by age, gender, and alcohol impairment, 2016

	Males			Females			All drivers		
Driver age	**Alcohol-impaired**	**Total involved**	**% impaired**	**Alcohol-impaired**	**Total involved**	**% impaired**	**Alcohol-impaired**	**Total involved**	**% impaired**
In fatal collisions	**58**	**903**	**6.4%**	**15**	**277**	**5.4%**	**73**	**1,180**	**6.2%**
15 to 20	2	82	2.4%	0	27	0.0%	2	109	1.8%
21 to 24	16	96	16.7%	4	31	12.9%	20	127	15.7%
25 to 34	14	162	8.6%	4	63	6.3%	18	225	8.0%
35 to 44	10	138	7.2%	3	47	6.4%	13	185	7.0%
45 to 54	9	152	5.9%	4	38	10.5%	13	190	6.8%
55 to 64	6	147	4.1%	0	33	0.0%	6	180	3.3%
65 to 74	1	77	1.3%	0	14	0.0%	1	91	1.1%
75 and older	0	49	0.0%	0	24	0.0%	0	73	0.0%
In non-fatal collisions	**3,532**	**191,642**	**1.8%**	**1,198**	**153,307**	**0.8%**	**4,730**	**344,949**	**1.4%**
15 to 20	192	24,323	0.8%	71	21,716	0.3%	263	46,039	0.6%
21 to 24	625	20,360	3.1%	200	17,174	1.2%	825	37,534	2.2%
25 to 34	1,005	39,657	2.5%	384	32,629	1.2%	1,389	72,286	1.9%
35 to 44	694	31,363	2.2%	248	24,963	1.0%	942	56,326	1.7%
45 to 54	559	30,052	1.9%	173	22,024	0.8%	732	52,076	1.4%
55 to 64	352	25,170	1.4%	97	18,469	0.5%	449	43,639	1.0%
65 to 74	97	13,612	0.7%	20	10,572	0.2%	117	24,184	0.5%
75 and older	8	7,105	0.1%	5	5,760	0.1%	13	12,865	0.1%

Low < < > > **High**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Excludes ages under 15 and over 109 years and cases with unknown or non-reported age.
2) *All drivers* excludes cases where gender information was not reported.
3) Two-thirds of drivers involved in fatal collisions have no reported BAC results in 2016.
4) Conditional formatting color coding has been assigned by *male drivers, female drivers,* and *all drivers* in crashes.

Table 7.6. Indiana collisions and individual injuries in collisions involving an alcohol-impaired driver, by road class, 2016

	Collisions			Individual injuries					
				Fatal			Injury		
Road class	**Total**	**Impaired**	**Impaired as % collisions in road class**	**Total**	**In impaired collisions**	**Impaired as % fatalities in road class**	**Total**	**In impaired collisions**	**Impaired as % injuries in road class**
Local/city	104,058	2,228	2.1%	211	25	11.8%	25,400	916	3.6%
County	22,574	849	3.8%	160	28	17.5%	5,806	380	6.5%
State	29,534	620	2.1%	194	10	5.2%	9,263	359	3.9%
US routes	19,924	359	1.8%	147	9	6.1%	6,586	227	3.4%
Interstates	19,366	371	1.9%	99	11	11.1%	3,933	171	4.3%
Unknown	28,278	356	1.3%	10	0	0.0%	1,603	45	2.8%
All roads	**223,734**	**4,783**	**2.1%**	**821**	**83**	**10.1%**	**52,591**	**2,098**	**4.0%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Individual injury* includes *incapacitating, non-incapacitating, possible, +, not reported, refused,* and *unknown* injury status categories.
2) *Unknown* includes *not reported* (Null).
3) Impairment rates are underestimated due to non-reporting of BAC results in ARIES.

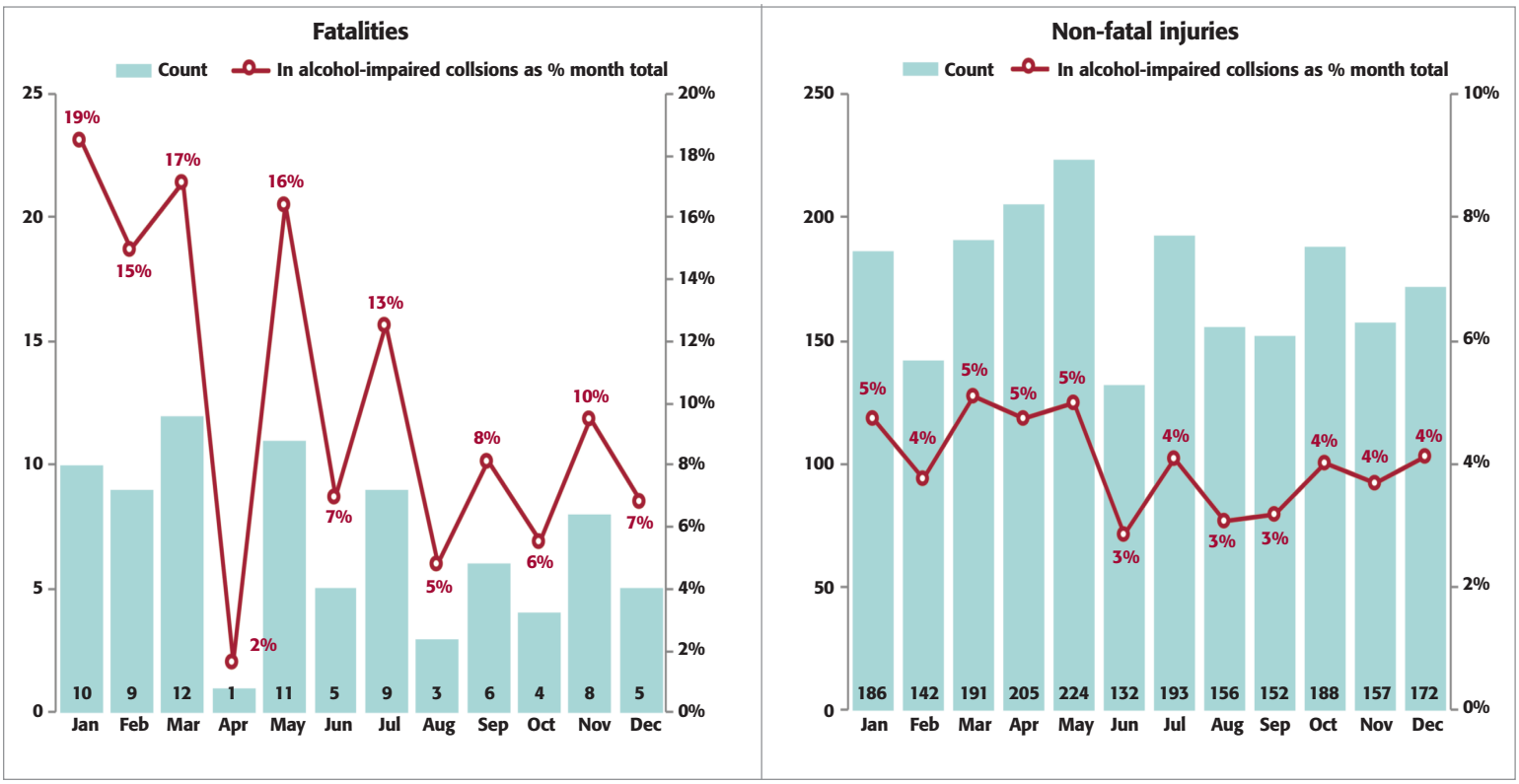
Table 7.7. Fatalities and fatality rates in Indiana collisions involving an alcohol-impaired driver, by locality, 2016

Locality type	All individuals in collsiions				Persons killed in impaired collsions		Fatality impairment rate (by locality)
	Count	% total	Count	% total	Count	% total	
Urban	245,668	67.5%	277	33.7%	26	31.3%	9.4%
Suburban	40,463	11.1%	196	23.9%	21	25.3%	10.7%
Exurban	17,260	4.7%	114	13.9%	18	21.7%	15.8%
Rural	20,351	5.6%	124	15.1%	11	13.3%	8.9%
Unknown	40,271	11.1%	110	13.4%	7	8.4%	6.4%
Total	**364,013**	**100%**	**821**	**100%**	**83**	**100%**	**10.1%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) See glossary for definition of locality.
2) Impairment rates are underestimated due to non-reporting of BAC results in ARIES.

Figure 7.1. Fatalities and injuries in Indiana collisions involving an alcohol-impaired driver, by month, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Non-fatal injuries* include *incapacitating, non-incapacitating, possible, +, not reported, refused,* and *unknown* injury status categories.
2) Impairment rates are underestimated due to non-reporting of BAC results in ARIES.

Table 7.8. Blood alcohol content (BAC) of vehicle operators involved in Indiana collisions, by collision type and injury status, 2016

Collsions type	BAC range	Fatilities	% by collision type	Injuries	% by collision tytpe
Single vehicle	**Total operators**	**257**	**100%**	**8,707**	**100%**
	0 g/dL	23	8.9%	261	3.0%
	0.01 < 0.08	3	1.2%	96	1.1%
	0.08 < 0.15	6	2.3%	231	2.7%
	0.15-0.59	32	12.5%	463	5.3%
	Not reported	193	75.1%	7,656	87.9%
Multi-vehicle	**Total operators**	**305**	**100%**	**28,417**	**100%**
	0 g/dL	51	16.7%	555	2.0%
	0.01 < 0.08	2	0.7%	77	0.3%
	0.08 < 0.15	5	1.6%	126	0.4%
	0.15-0.59	9	3.0%	260	0.9%
	Not reported	238	78.0%	27,399	96.4%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) BAC range in grams per deciliter (g/dL). 0.08 or greater is legally impaired.
2) *Injuries* includes *incapacitating, non-incapacitating possible, +, not reported, refused,* and *unknown* injury status categories.

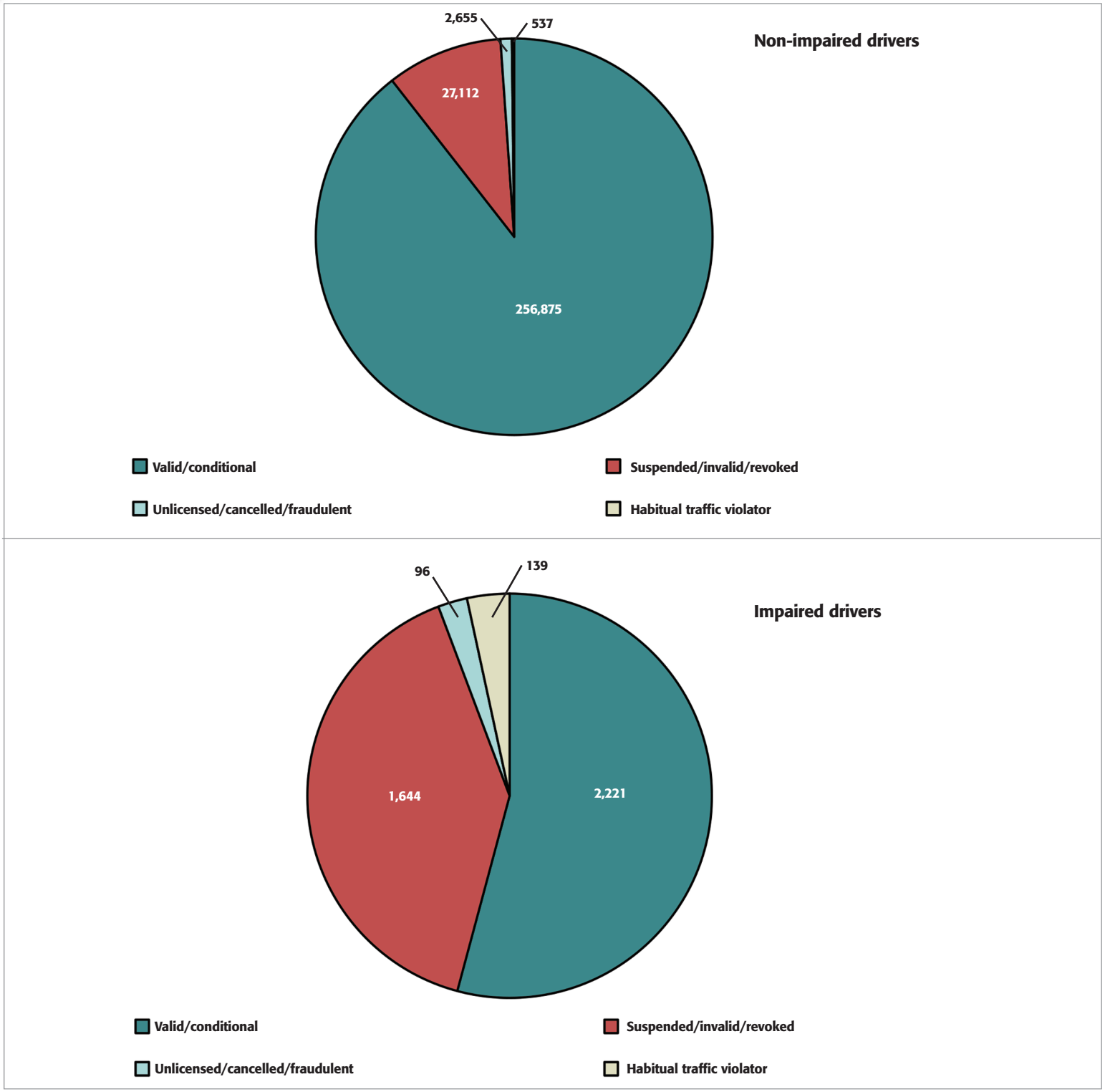
Table 7.9. Drivers involved in Indiana crashes, by vehicle type, injury severity, and alcohol impairment, 2016

	Fatal			Injured			Not injured			All drivers		
Vehicle type	**Alcohol-impaired**	**Total involved**	**% impaired**	**Alcohol-impaired**	**Total involved**	**% impaired**	**Alcohol-impaired**	**Total involved**	**% impaired**	**Alcohol-impaired**	**Total involved**	**% impaired**
Passenger cars	31	301	10.3%	673	24,244	2.8%	2,526	201,949	1.3%	3,230	226,494	1.4%
Sport utility vehicles	3	52	5.8%	118	4,884	2.4%	414	40,441	1.0%	535	45,377	1.2%
Pickup trucks	11	76	14.5%	169	3,330	5.1%	576	34,505	1.7%	756	37,911	2.0%
Vans	0	13	0.0%	25	1,536	1.6%	98	13,710	0.7%	123	15,259	0.8%
Large trucks	0	15	0.0%	5	762	0.7%	21	13,934	0.2%	26	14,711	0.2%
Motorcycles	5	89	5.6%	89	2,059	4.3%	19	965	2.0%	113	3,113	3.6%
Other vehicles	0	4	0.0%	1	149	0.7%	7	2,664	0.3%	8	2,817	0.3%
Unknown	2	12	16.7%	8	160	5.0%	4	1,334	0.3%	14	1,506	0.9%
Total	**52**	**562**	**9.3%**	**1,088**	**37,124**	**2.9%**	**3,665**	**309,502**	**1.2%**	**4,805**	**347,188**	**1.4%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Excludes *non-motorists* and *drivers of animal-drawn vehicles.*
2) Injured includes i*ncapacitating, non-incapacitating possible, +, not reported, refused,* and *unknown* injury status categories.
3) *Alcohol-impaired* includes drivers with BAC of 0.08 g/dL or higher.
4) 83 percent of drivers killed and 96 percent of drivers injured have no BAC results reported in ARIES in 2016; % impaired rates are thus grossly underestimated.

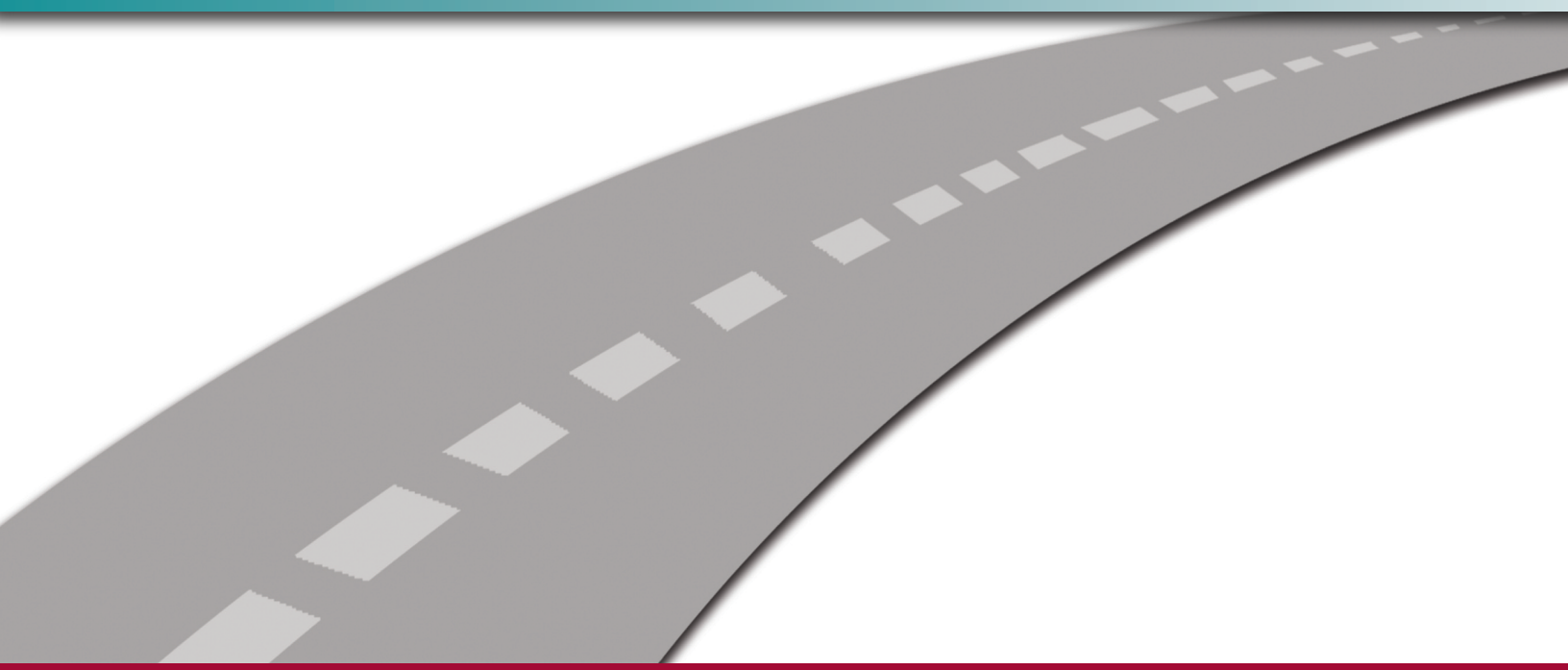
Figure 7.2. Indiana BMV license status of collision-involved drivers, by impairment status, 2016



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Excludes drivers of commercial vehicles.
2) Includes only drivers in ARIES who were matched to Indiana BMV licensing data (e.g., out-of-state drivers or persons without a driver's license would be excluded).

SPEED



SPEED, 2016

A collision is defined as speed-related in Indiana ARIES data if any of the following conditions is met: *Unsafe speed* or *speed too fast for weather conditions* is listed as the primary or a contributing factor of the collision; or a vehicle driver is issued a speeding citation. In 2016, 21,209 speed-related collisions occurred in Indiana, 3.6 percent less than in 2015 (Figure 8.1).

From 2012 to 2016, speed-related collisions increased 4 percent annually (Table 8.1). Speed-related fatal collisions increased 6.3 percent annually during the same period. In 2016, 26 percent of all fatal collisions involved speeding. Ten percent of all 2016 collisions were speed-related. Considering the conditions used to define speed involvement, 6 percent (12,340) of all 2016 collisions involved *speeding too fast for weather conditions* and 4 percent (8,745) involved *unsafe speed.* One percent (1,994) of speed-related collisions in 2016 were linked to a speed-related citation.

There were 33,119,574 persons involved in speed-related collisions in 2016—9 percent of all individuals in collisions (Table 8.2). Of these, 213 were killed (26 percent of all fatalities) and 6,972 suffer non-fatal injuries (13 percent of all non-fatal injuries). The rate of fatal injuries per 1,000 involved in speed-related collisions declined to a five-year low of 5.2 in 2014 and rose to 6.4 in 2016 (Figure 8.2).

In 2016, 11 percent of vehicles in collisions were speeding—a rate lower than 2014 and 2015 rates (Figure 8.3). Among vehicle types, motorcycles remained the most likely to have been speeding at the time of collision (11 percent in 2016). In 2016, 165 of every 1,000 occupants riding in speeding vehicles in collisions suffered an injury, compared to 96 of every 1,000 in vehicles not speeding (Figure 8.4).

As Table 8.3 illustrates, between 2012 and 2016, the relative proportion of speed-related crashes to all crashes decreases with increasing driver age. Among drivers involved in collisions, young males are the most likely to be speeding. In 2016, 12 percent of male drivers and 9 percent of female drivers in the 15- to 20-year old age group were speeding at the time of the collision. Only 3 percent of male drivers and 2 percent of female drivers in the 75 and over age group were reported to be speeding in collisions in 2016.

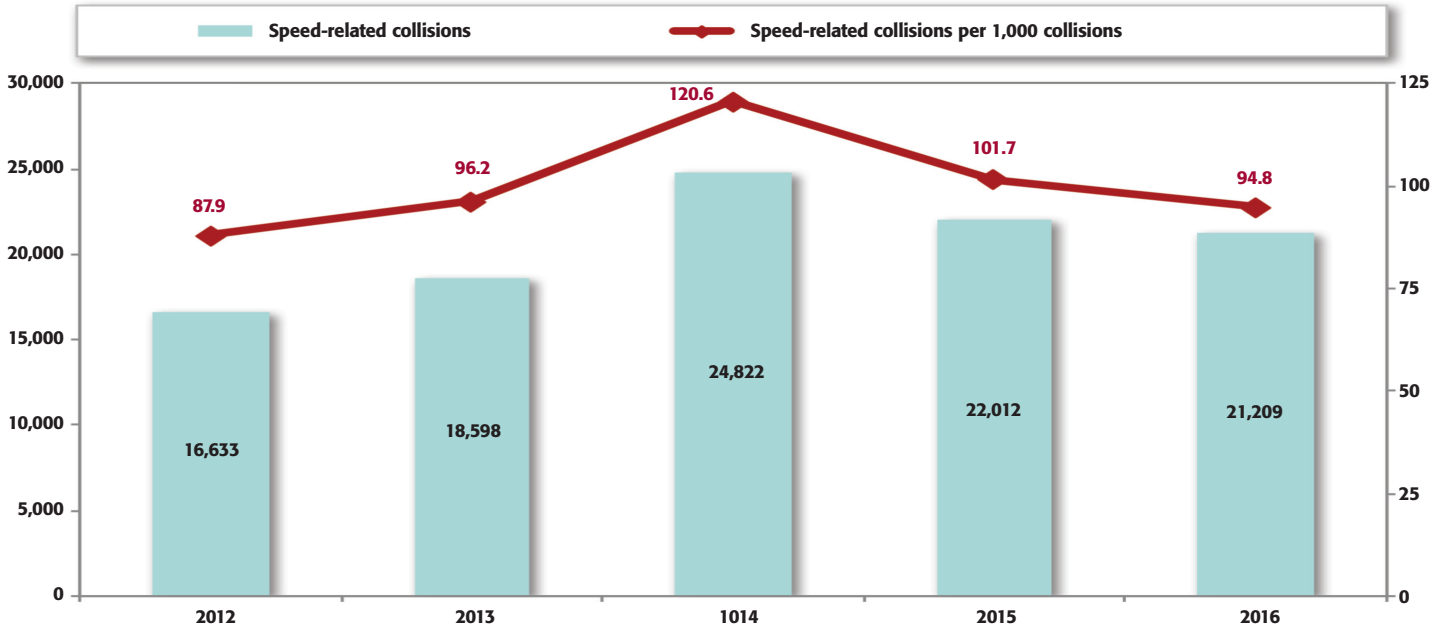
Since 2012, in Indiana, the number of legally impaired drivers (i.e., blood alcohol content of 0.08 g/dL or higher) involved in speed-related collisions fell from 904 in 2012 to 847 in 2014 and 838 in 2016 (Figure 8.5). The proportion of drivers involved in speed-related collisions that were also impaired at the time of collision declined from 5.7 in 2012 to a five-year low of 3.6 in 2014, and increased to 4.2 in 2016. Six percent of speeding drivers in the 35- to 44-year old age group were impaired in 2016. In contrast, only 2 percent of non-speeding drivers in the same age group were impaired (Table 8.4).

Between 2012 and 2016, as shown in Figure 8.6, restraint use rates among vehicle occupants involved in speed-related collisions were consistently lower than among individuals in collisions that were not speed-related. The rate of restraint use among those who sustained non-fatal injuries in speed-related collisions, was roughly 74 percent over the five-year period. During the same time period, the average rate of restraint use among occupants who sustained non-fatal injuries in collisions that were not speed related was 85 percent. The rate of restraint use among individuals involved in speed-related collisions decreases as the severity of injury increases. Between 2012 and 2016, on average 32 percent of individuals killed in speed-related collisions were restrained, compared with an average rate of 46 percent restraint use among vehicle occupants killed in collisions that were not speed-related.

Between 2012 and 2016, the winter months of December, January, and February had the highest incidence of speed-related collisions (Table 8.5). In 2016, with regard to time of day, the likelihood of speed involvement in collisions peaked during morning (8am-10am) hours, declined during late morning and afternoon hours, and then steadily increased from evening (around 6pm) into early morning (Table 8.6). Weekends (Saturday and Sunday) carried a higher probability of speed involvement.

The distribution of speed-related collisions varies by U.S. census locale (Figure 8.7). While the majority (72 percent) of total collisions in 2016 occurred in urban areas, fatal speed-related crashes were more common in *exurban* (32 percent) areas. Considering road classes, *county roads, state roads,* and *US routes* account for a disproportionate share of fatal collisions—relative to their share of total collisions (Figure 8.8). In 2016, 53 percent of total collisions occurred on *local/city roads* and 12 percent occurred on *county roads.* However, 27 percent of fatal collisions happened on *local/city roads* (23 percent were speed-related), compared to 20 percent on county roads (37 percent speed-related).

Figure 8.1. Indiana speed-related collisions, 2012-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Table 8.1. Indiana collisions, by speed involvement, speed-related criteria, and collision severity, 2012-2016

Speed involvedment criteriacollision severity	Count of collisions					Annual rate of change	
	2012	2013	2014	2015	2016	2015-16	2012-16
Total collisions	**189,183**	**193,236**	**205,769**	**216,483**	**223,734**	**3.3%**	**4.3%**
Fatal	720	710	704	752	768	2.1%	1.6%
Non-fatal	34,138	32,852	33,860	34,466	35,323	2.5%	0.9%
Property damage	154,325	159,674	171,205	181,265	187,643	3.5%	5.0%
All speed-related collisions	**16,633**	**18,598**	**24,822**	**22,012**	**21,209**	**-3.6%**	**6.3%**
Fatal	163	185	184	204	198	-2.9%	5.0%
Non-fatal	4,061	4,263	5,126	4,710	4,588	-2.6%	3.1%
Property damage	12,409	14,150	19,512	17,098	16,423	-3.9%	7.3%
Speed-related as % of total	**8.8%**	**9.6%**	**12.1%**	**10.2%**	**9.5%**	**-6.8%**	**1.9%**
Fatal	22.6%	26.1%	26.1%	27.1%	25.8%	-5.0%	3.3%
Non-fatal	11.9%	13.0%	15.1%	13.7%	13.0%	-5.0%	2.2%
Property damage	8.0%	8.9%	11.4%	9.4%	8.8%	-7.2%	2.1%
Speed too fast for weather conditions	**9,434**	**11,419**	**17,370**	**13,714**	**12,340**	**-10.0%**	**6.9%**
Fatal	27	38	40	51	44	-13.7%	13.0%
Non-fatal	1,643	1,917	2,773	2,227	1,952	-12.3%	4.4%
Property damage	7,764	9,464	14,557	11,436	10,344	-9.5%	7.4%
Unsafe speed	**6,757**	**6,848**	**7,443**	**8,168**	**8,745**	**7.1%**	**6.7%**
Fatal	137	153	148	156	153	-1.9%	2.8%
Non-fatal	2,272	2,210	2,305	2,425	2,598	7.1%	3.4%
Property damage	4,348	4,485	4,990	5,587	5,994	7.3%	8.4%
Speed-related citation	**2,301**	**2,448**	**2,557**	**2,370**	**1,994**	**-15.9%**	**-3.5%**
Fatal	9	11	9	13	12	-7.7%	7.5%
Non-fatal	752	778	717	679	625	-8.0%	-4.5%
Property damage	1,540	1,659	1,831	1,678	1,357	-19.1%	-3.1%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Speed-related criteria categories are not mutally exclusive. All speed-related collisions may not equal total of individual categories.

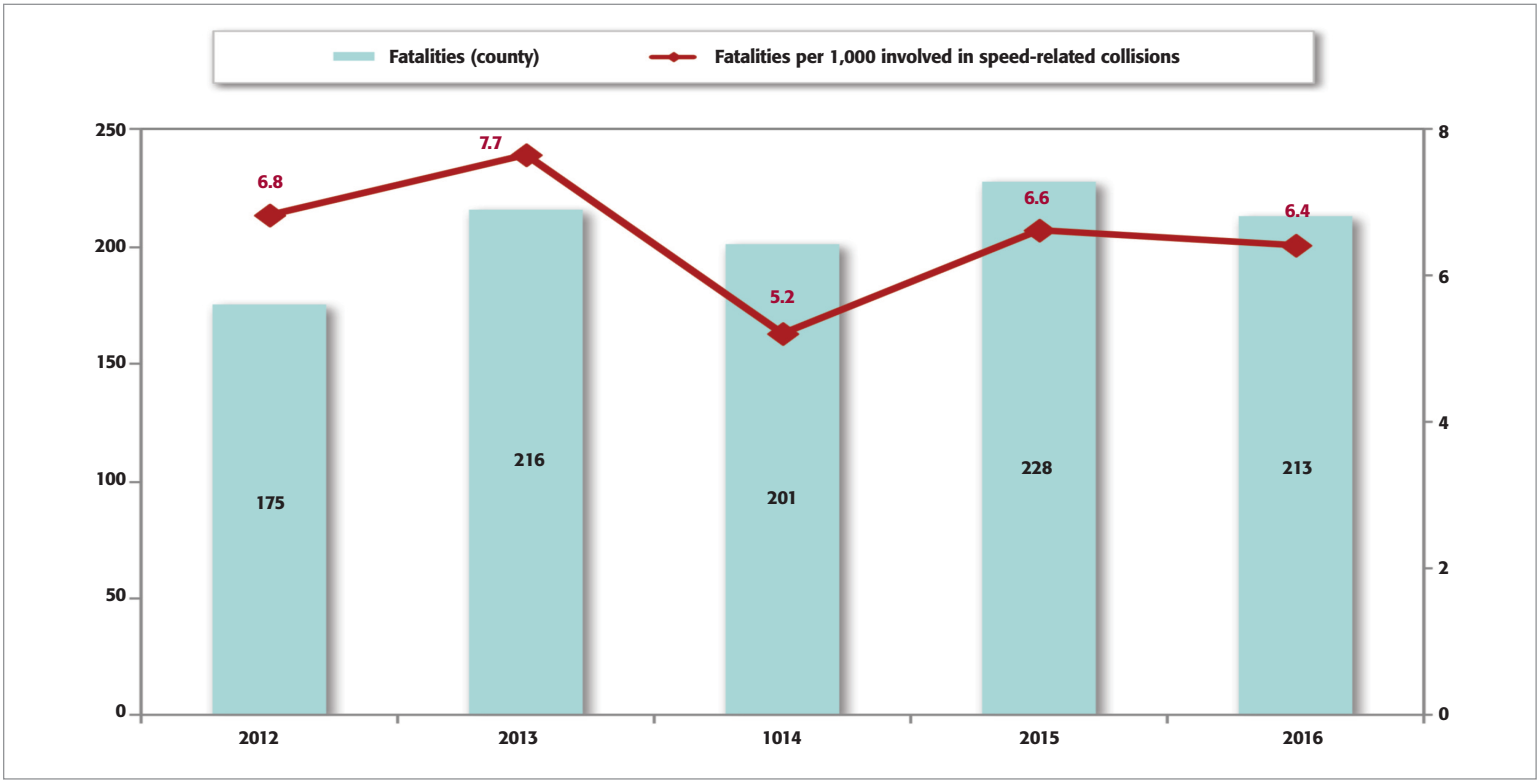
Table 8.2. Individuals involved in Indiana collisions, by speed involvement and injury status, 2012-2016

Speed involvement / injury status	Count of individuals					Annual rate of change	
	2012	2013	2014	2015	2016	2015-16	2012-16
All individuals	**306,392**	**310,303**	**330,978**	**351,266**	**364,013**	**100.0%**	**3.6%**
Speed-related	**25,578**	**28,207**	**38,604**	**34,355**	**33,119**	**100.0%**	**-3.6%**
Fatal	175	216	201	228	213	0.6%	-6.6%
Non-fatal injury	6,024	6,289	7,507	7,262	6,972	21.1%	-4.0%
Not injured	19,379	21,702	30,896	26,865	25,934	78.3%	-3.5%
Not speed-related	**280,814**	**282,096**	**292,374**	**316,911**	**330,894**	**100.0%**	**4.4%**
Fatal	606	568	544	589	608	0.2%	3.2%
Non-fatal injury	43,134	41,245	41,056	44,203	45,619	13.8%	3.2%
Not injured	237,074	240,283	250,774	272,119	284,667	86.0%	4.6%
% Speed-related	**8.3%**	**9.1%**	**11.7%**	**9.8%**	**9.1%**	**-**	**-7.0%**
Fatal	22.4%	27.6%	27.0%	27.9%	25.9%	-	-7.0%
Non-fatal injury	12.3%	13.2%	15.5%	14.1%	13.3%	-	-6.0%
Not injured	7.6%	8.3%	11.0%	9.0%	8.3%	-	-7.1%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

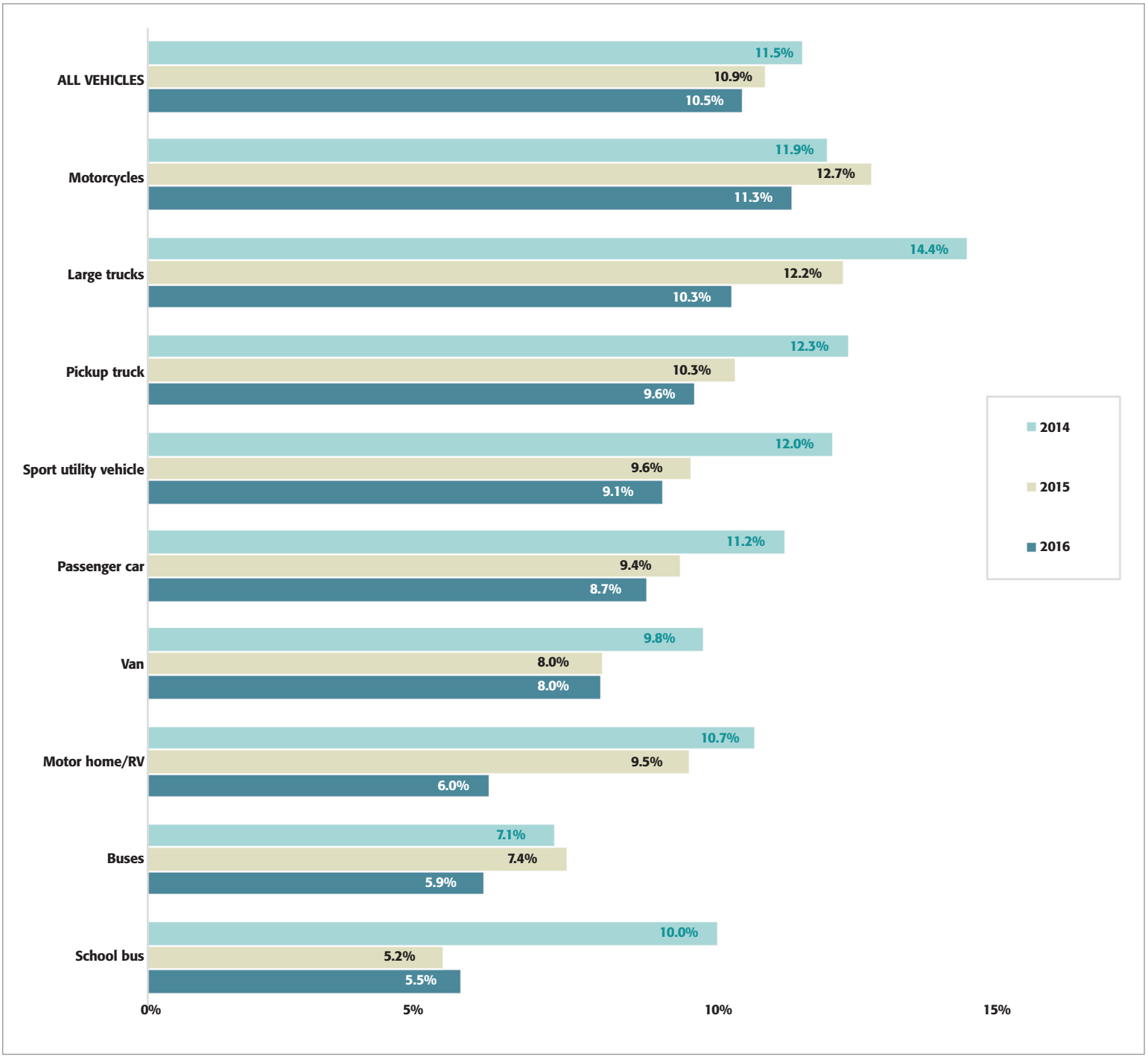
Notes:
1) Includes individuals identified as *drivers, injured occupants, pedestrians*, and *pedalcyclists. Animal-drawn vehicle* occupants are excluded.
2) *Not injured* status includes individuals involved in collisions reported as null values in the injury status code field. While reporting officers are instructed to enter all drivers in ARIES, passengers are only to be entered in the crash report if an injury occurs; therefore, not injured counts should be interpreted with caution.

Figure 8.2. Indiana traffic fatalities in speed-related collisions, 2012-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

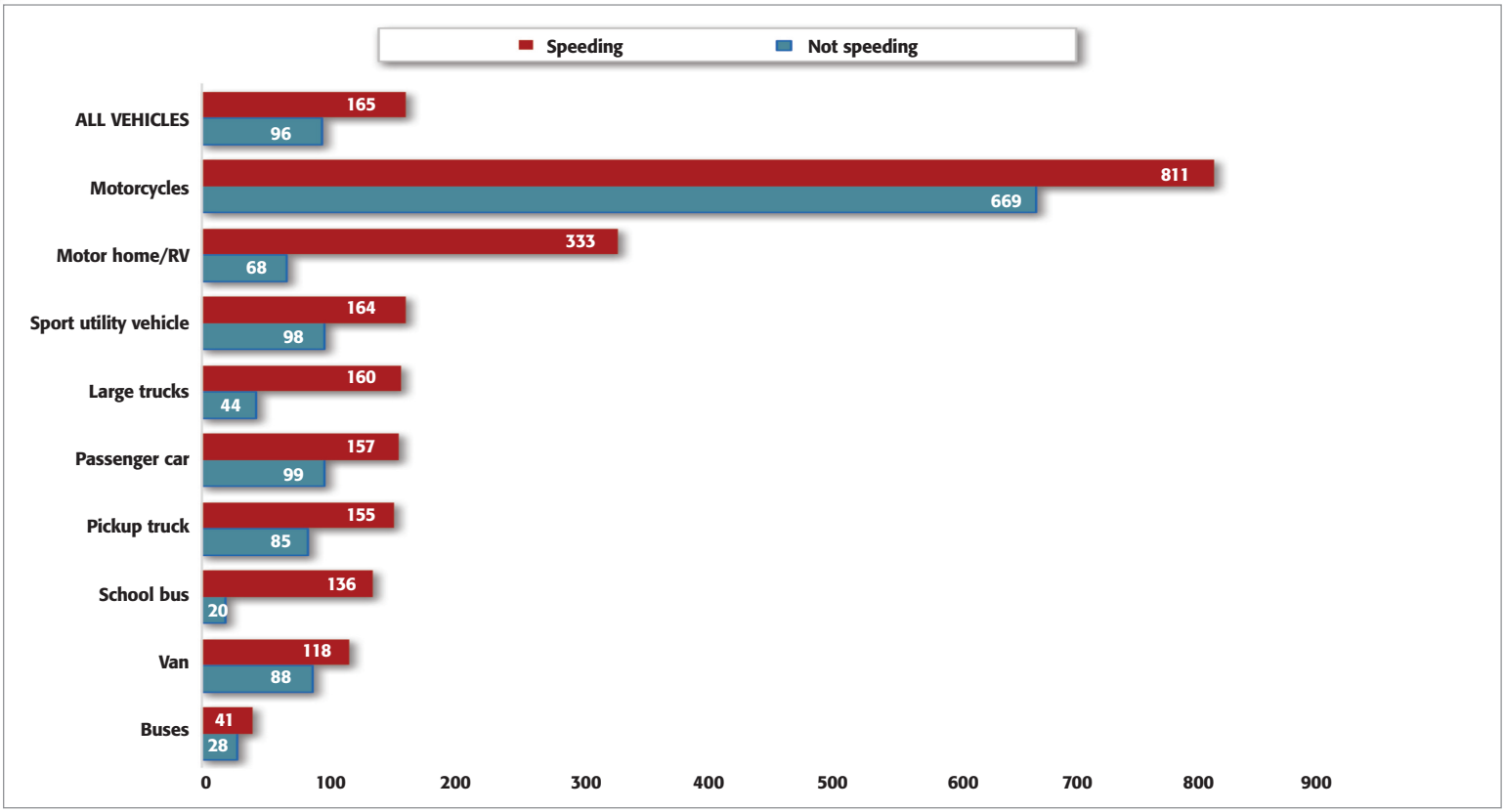
Figure 8.3. Vehicles speeding as a percent of all vehicles involved in Indiana collisions, by vehicle type, 2014-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Excludes vehicle types of animal-drawn vehicle (non-motor vehicle), farm vehicle, combination vehicle, pedestrian, bicycle, and unknown type.

Figure 8.4. Injury rates per 1,000 occupants involved in Indiana collisions, by vehicle type and speed involvement, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Injury* includes *fatal, incapacitating, non-incapacitating, possible,* and *other* injury types.
2) Excludes vehicle types of *animal-drawn vehicle (non-motor vehicle), farm vehicle, combination vehicle, pedestrian, bicycle,* and *unknown*.

Table 8.3. Drivers speeding as a percent of all drivers involved in Indiana collisions, by age group and gender, 2012-2016

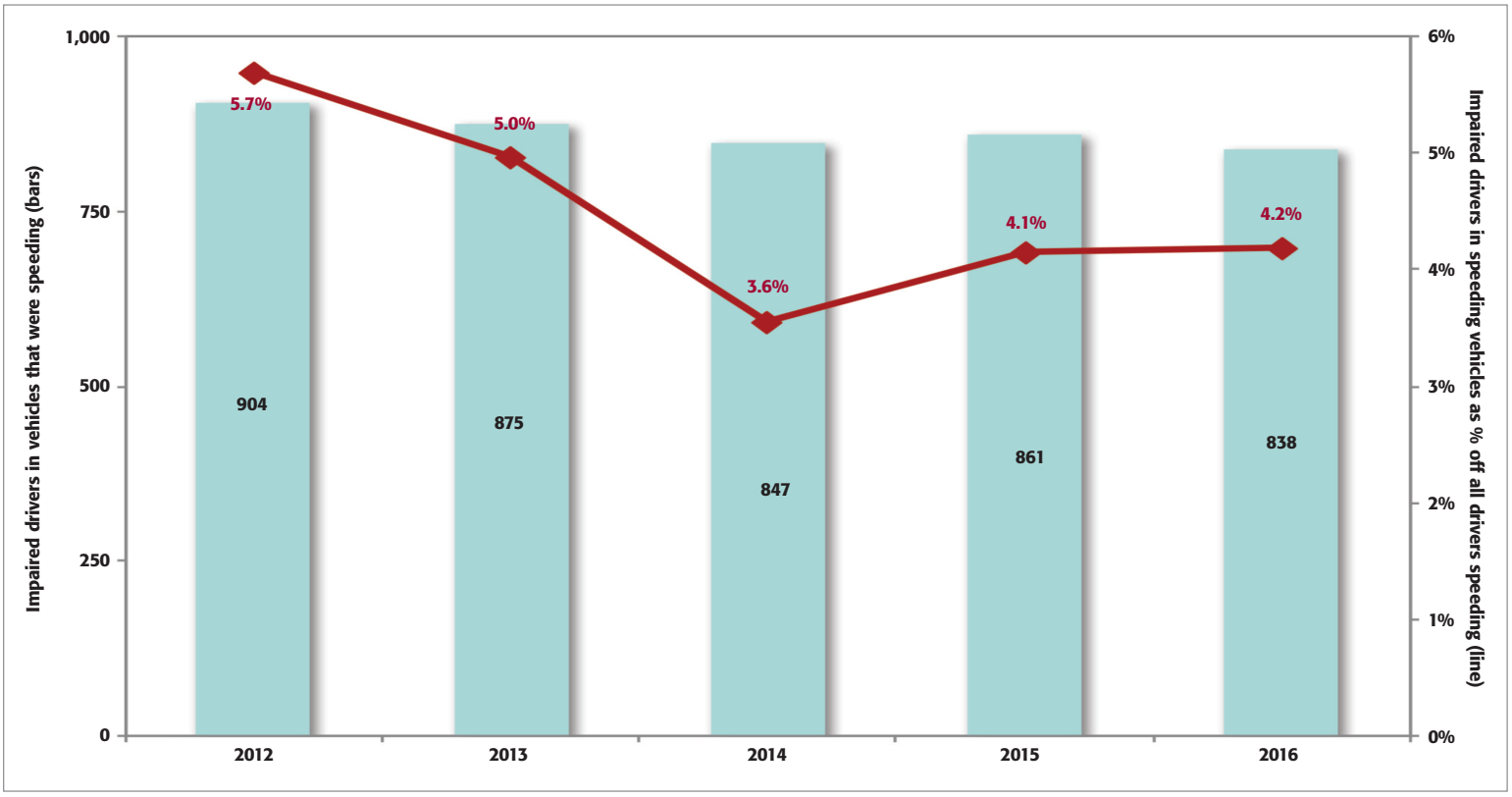
Age group	2012		2013		2014		2015		2016		Annual rate of change, 2012-16	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
15-20	7.3%	12.2%	8.9%	12.4%	9.8%	14.0%	8.6%	13.0%	8.5%	12.3%	3.7%	0.2%
21-24	5.9%	9.4%	7.6%	10.4%	9.5%	12.7%	7.5%	11.2%	6.9%	10.3%	3.8%	2.4%
25-34	4.7%	7.5%	5.5%	8.5%	7.5%	10.7%	5.9%	8.7%	5.3%	8.1%	3.1%	2.0%
35-44	3.9%	5.4%	4.5%	5.7%	5.7%	7.6%	4.3%	6.2%	4.0%	5.9%	0.9%	2.3%
45-54	3.4%	4.3%	3.3%	4.5%	4.9%	6.2%	3.7%	5.1%	3.1%	4.4%	-2.2%	0.7%
55-64	2.5%	3.5%	2.6%	3.7%	3.7%	5.2%	2.8%	4.0%	2.3%	3.4%	-1.8%	-0.4%
65-74	2.0%	2.8%	2.1%	2.8%	2.4%	3.8%	1.9%	3.3%	1.9%	2.6%	-1.8%	-1.9%
75 +	1.7%	2.2%	1.6%	2.2%	2.0%	3.1%	1.7%	2.5%	1.6%	2.5%	-2.1%	3.7%
All ages	4.3%	6.4%	5.0%	6.9%	6.4%	9.5%	5.1%	7.3%	4.7%	6.7%	1.8%	1.1%

Low < > High

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Data limited to drivers with valid gender and age reported.
2) Excludes drivers under 15 years old.

Figure 8.5. Drivers in vehicles that were speeding in Indiana collisions, by alcohol impairment, 2012-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) *Alcohol-impaired* includes drivers with blood alcohol count (BAC) of 0.08 g/dL or higher.
2) When considering the reported decreases in 2014 *alcohol-impaired* drivers, it is important to note that these numbers are likely to increase once BAC results reported after the March 23, 2015, extract are analyzed.

Table 8.4. Drivers involved in Indiana collisions, by age, speed involvement, and alcohol impairment, 2016

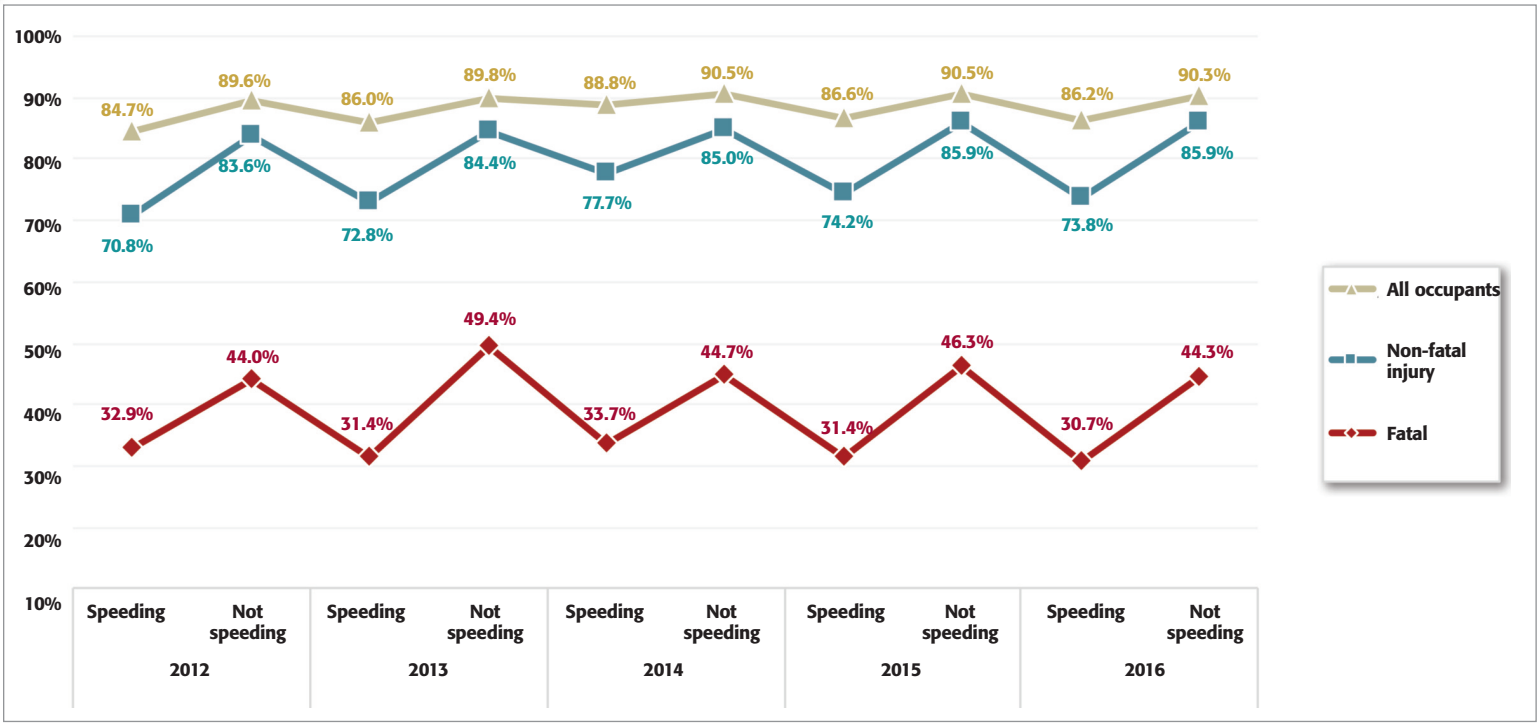
	Not speeding			Speeding		
Age group	Non-impaired	Impaired	% impaired	Non-impaired	Impaired	% impaired
15-20	41,312	194	0.5%	4,807	71	1.5%
21-24	33,723	654	1.9%	3,107	191	5.8%
25-34	66,517	1,153	1.7%	4,729	254	5.1%
35-44	52,888	783	1.5%	2,709	172	6.0%
45-54	49,613	647	1.3%	1,924	98	4.8%
55-64	42,116	416	1.0%	1,256	39	3.0%
65-74	23,646	106	0.4%	548	12	2.1%
75 +	12,702	12	0.1%	273	1	0.4%
Total	322,517	3,965	1.2%	19,353	838	4.2%

Low < > High

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Excludes drivers with unknown age or age under 15 years.
2) *Alcohol-impaired* includes drivers with blood alcohol count (BAC) of 0.08 g/dL or higher.

Figure 8.6. Restraint use rates among occupants involved in Indiana collisions, by injury status and speed involvement, 2012-2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Data limited to drivers and injured vehicle occupants in vehicles where driver was reported to be speeding.

Table 8.5. Total and speed-related traffic collisions, by month, 2012-2016

Month	Total collisions					Speed-related collisions				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Jan	17,448	15,489	23,536	19,692	19,369	3,619	2,233	7,683	4,707	3,608
Feb	14,178	14,259	19,373	19,783	17,780	1,812	2,295	4,324	4,722	2,908
Mar	14,599	15,950	15,516	16,435	16,378	1,063	2,410	2,165	1,925	1,400
Apr	13,892	14,039	14,202	15,364	17,528	777	891	927	865	1,540
May	15,985	16,330	15,908	17,362	18,047	896	936	872	1,074	1,103
Jun	15,143	15,269	15,377	17,146	17,877	756	918	931	1,273	1,031
Jul	14,458	15,019	14,931	17,308	17,680	820	883	825	1,038	1,152
Aug	15,514	15,504	15,657	17,103	19,321	912	822	1,034	1,013	1,302
Sep	14,897	15,767	15,741	17,702	18,619	936	890	889	1,124	1,153
Oct	17,659	17,649	18,845	19,233	19,460	1,243	1,203	1,312	1,171	1,130
Nov	16,616	18,451	19,391	20,477	20,493	727	1,422	2,236	1,552	1,223
Dec	18,794	19,510	17,292	18,878	21,182	3,072	3,695	1,624	1,548	3,659
Total	**189,183**	**193,236**	**205,769**	**216,483**	**223,734**	**16,633**	**18,598**	**24,822**	**22,012**	**21,209**
High	***Dec***	***Dec***	***Jan***	***Nov***	***Dec***	***Jan***	***Dec***	***Jan***	***Feb***	***Dec***
Low	***Apr***	***Apr***	***Apr***	***Apr***	***Mar***	***Nov***	***Aug***	***Jul***	***Apr***	***Jun***

Low — High

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Note: Color-scales are illustrated to show months from low to high for the entire 5-year period, 2012-2016.

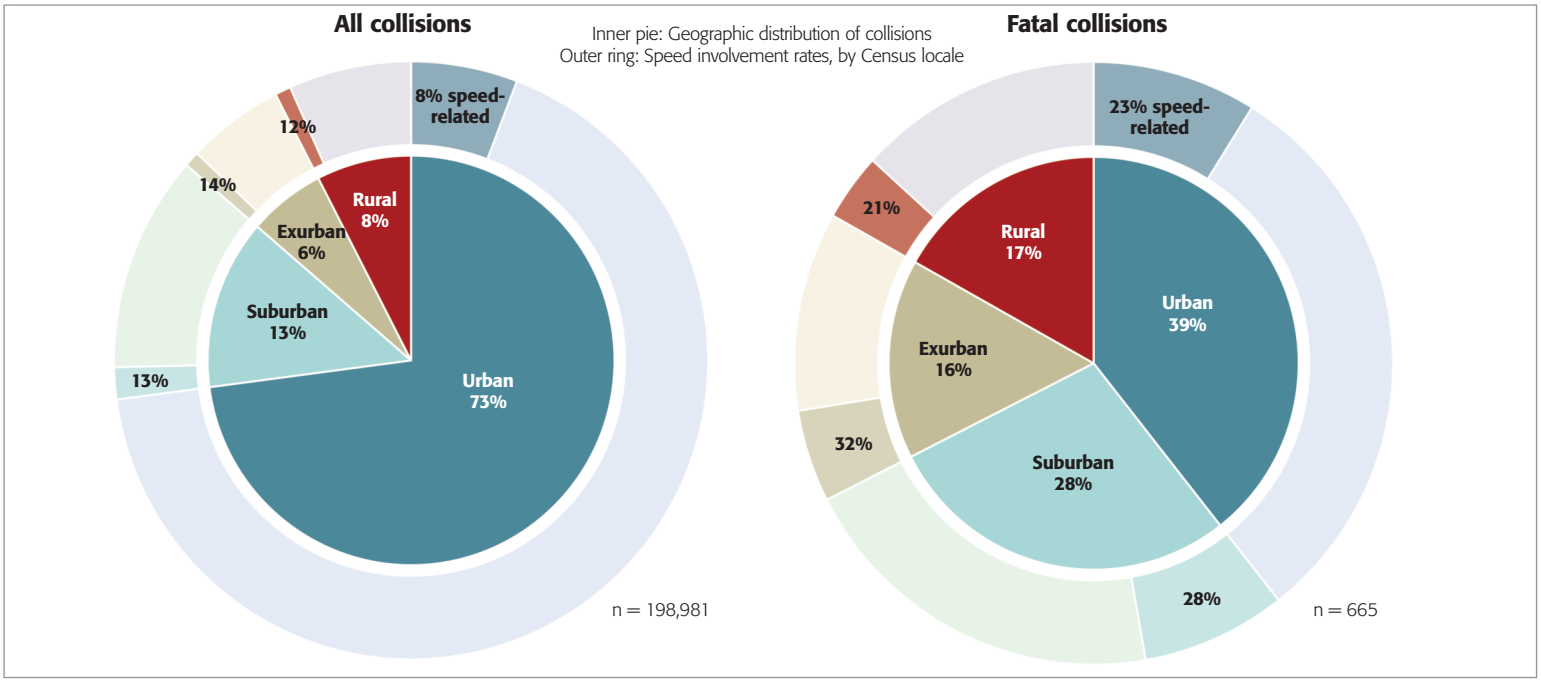
Table 8.6. Speed-related collisions as a percent of all Indiana collisions, by time of day and day of week, 2016

Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	% Speed-related by hour
12am-	17.1%	9.9%	18.6%	16.2%	10.1%	12.3%	21.7%	13.8%
1am-	15.2%	13.3%	13.3%	11.9%	13.5%	15.4%	20.9%	17.1%
2am-	20.2%	12.3%	15.5%	15.8%	16.1%	16.0%	18.9%	17.7%
3am-	17.2%	16.4%	14.3%	22.5%	20.2%	15.2%	26.5%	17.4%
4am-	16.5%	18.8%	20.8%	14.5%	20.9%	15.2%	19.2%	16.6%
5am-	17.2%	15.7%	13.8%	15.1%	15.5%	11.8%	22.3%	17.0%
6am-	15.9%	14.5%	13.4%	13.3%	11.5%	9.9%	23.6%	15.9%
7am-	16.4%	10.9%	14.9%	14.0%	10.1%	8.2%	27.0%	15.8%
8am-	20.2%	11.9%	15.4%	15.5%	10.4%	10.1%	24.1%	17.9%
9am-	18.5%	10.9%	20.7%	21.1%	9.6%	7.9%	17.6%	18.9%
10am-	14.3%	10.6%	17.9%	15.1%	8.3%	7.0%	11.1%	15.4%
11am-	13.1%	9.4%	11.1%	9.9%	7.2%	5.5%	7.9%	12.0%
12pm-	11.6%	8.7%	6.9%	8.9%	5.6%	4.3%	8.6%	9.5%
1pm-	16.6%	6.2%	7.9%	8.6%	5.3%	5.0%	8.1%	9.7%
2pm-	17.0%	6.4%	8.7%	9.7%	5.7%	5.5%	6.9%	9.3%
3pm-	16.5%	6.8%	7.3%	9.1%	5.9%	6.8%	8.1%	9.6%
4pm-	16.2%	6.8%	6.9%	8.0%	6.3%	6.4%	7.0%	9.2%
5pm-	15.8%	6.7%	6.6%	8.0%	5.6%	5.9%	7.8%	9.1%
6pm-	14.5%	8.4%	7.6%	9.0%	7.5%	7.5%	8.6%	9.1%
7pm-	12.8%	9.3%	8.0%	10.2%	9.1%	7.5%	8.3%	10.0%
8pm-	15.3%	11.5%	7.6%	9.2%	9.7%	8.8%	13.0%	10.7%
9pm-	15.5%	9.9%	8.9%	10.1%	9.4%	11.1%	14.0%	11.5%
10pm-	15.9%	13.4%	11.7%	13.6%	10.7%	15.8%	17.8%	13.1%
11pm-	20.5%	16.6%	15.6%	13.0%	15.2%	25.3%	15.2%	13.9%
% Speed-related by day	**13.9%**	**10.3%**	**12.3%**	**11.1%**	**13.6%**	**10.5%**	**13.6%**	**12.1%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) Includes collisions where valid time was reported.
2) Color scale applies to all days/times.

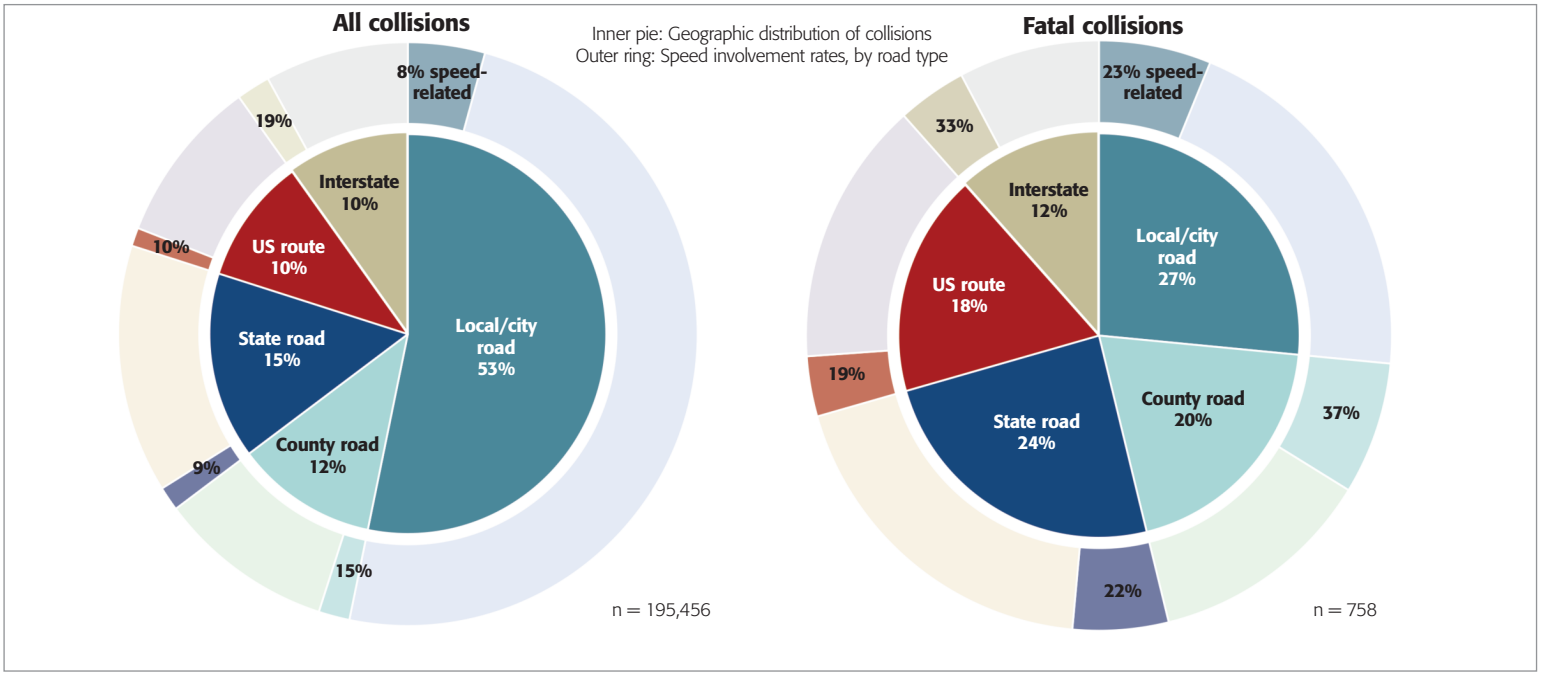
Figure 8.7. Distribution of total and fatal crashes and rates of speed involvement, by Census locale, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Notes:
1) See glossary for Census locale definitions.
2) Excludes cases where locale could not be determined.

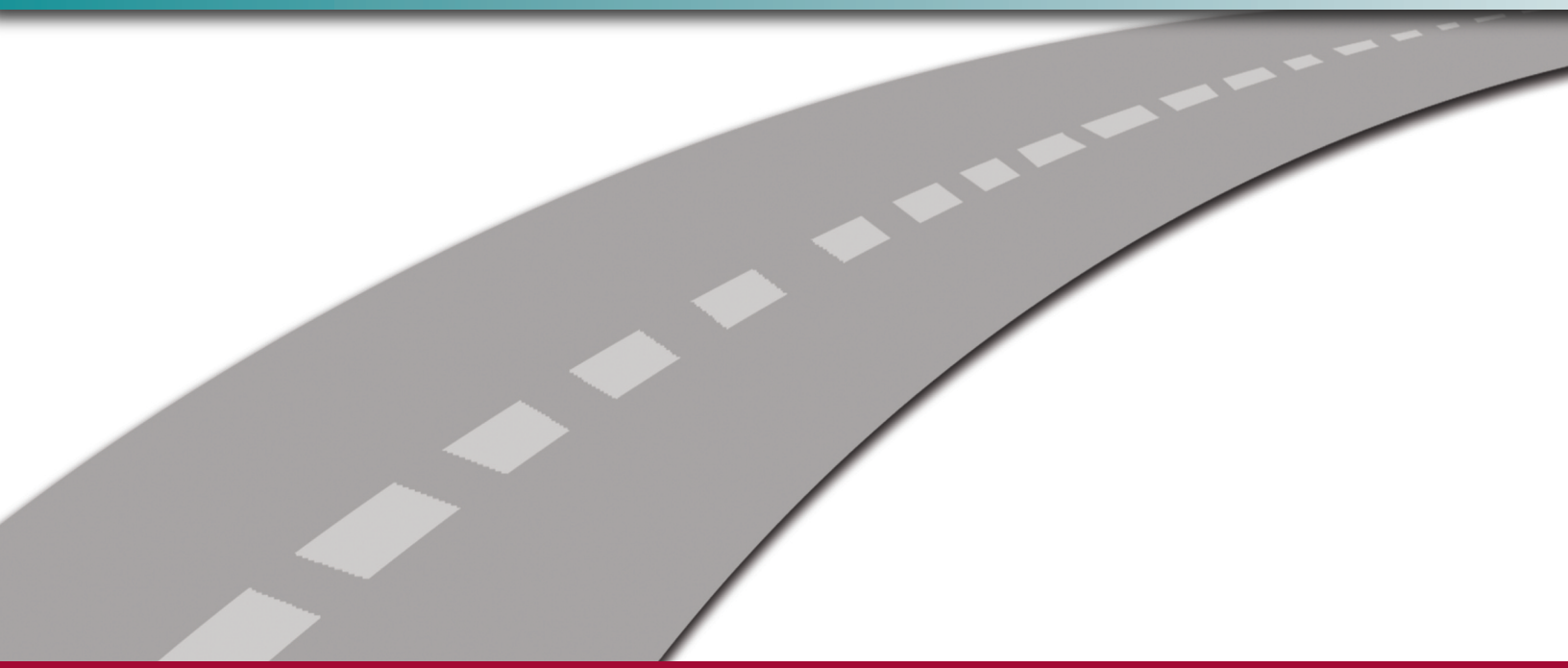
Figure 8.8. Distribution of total and fatal crashes and rates of speed involvement, by road type, 2016



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 16, 2017

Note: Includes collisions where valid road class was reported.

DATA SOURCES

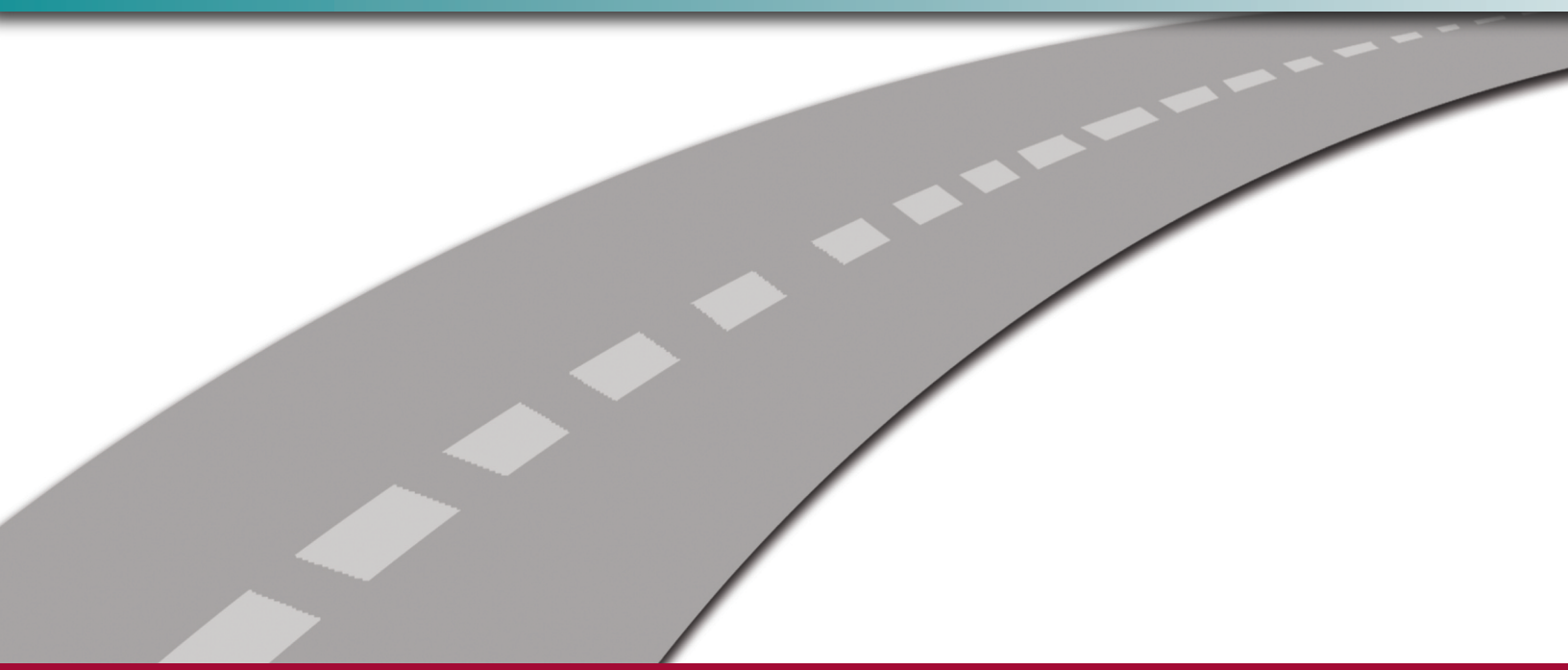


DATA SOURCES

Data in this publication come from the following sources:

- Indiana State Police Automated Reporting Information Exchange System (ARIES), current as of March 16, 2017
- Indiana Bureau of Motor Vehicles, current as of March 7, 2017
- Indiana Department of Transportation, county level VMT (2013), current as of March 7, 2017
- Bureau of Transportation Statistics, State Transportation Statistics, state level VMT, accessed August 15, 2017 at www.bts.gov/publications/state_transportation_statistics/
- Fatality Analysis Reporting System, National Highway Traffic Safety Administration, accessed at www-fars.nhtsa.dot.gov/Main/index.aspx
- U.S. Census Bureau, Annual Estimates of the Resident Population by Single-Year of Age and Sex for the United States and States (2016), provided by the Indiana Business Research Center, Indiana University
- U.S. Census Bureau, Population Estimates for Indiana Counties, 2012-2016, provided by the Indiana Business Research Center, Indiana University, current as of August 2, 2017, accessed at www.stats.indiana.edu/population/popTotals/2016_cntyest.asp

INDIANA STANDARD CRASH REPORT, GLOSSARY, APPENDIX



INDIANA OFFICER'S STANDARD CRASH REPORT

INDIANA OFFICER'S STANDARD CRASH REPORT

Electronic Version

Page | of

Local ID

Date of Crash	Day of Week	Actual Local Time	County	Township	# Motor Vehicles	# Injured	# Dead	# Commercial Vehicles	# Deer

Road Crash Occurred On	Nearest/Intersecting Road/MileMarker/Interchange	If not an intersection, number of feet from	Direction	Road Classification

Inside Corporate Limits?	City/Town or Nearest City/Town	Property?	Crash Latitude	Crash Longitude

Driver #1	Driver #2	Driver #3	Driver #4

Driver Contributing Circumstances

Primary Cause	Vehicle 1	Vehicle 2	Vehicle 3	Vehicle 4	
☐	☐	☐	☐	☐	Alcoholic Beverages
☐	☐	☐	☐	☐	Illegal Drugs
☐	☐	☐	☐	☐	Prescription Drugs
☐	☐	☐	☐	☐	Driver Asleep or Fatigued
☐	☐	☐	☐	☐	Driver Illness
☐	☐	☐	☐	☐	Unsafe Speed
☐	☐	☐	☐	☐	Failure to Yield
☐	☐	☐	☐	☐	Disregard Signal
☐	☐	☐	☐	☐	Left of Center
☐	☐	☐	☐	☐	Improper Passing
☐	☐	☐	☐	☐	Improper Turning
☐	☐	☐	☐	☐	Improper Lane Usage
☐	☐	☐	☐	☐	Following Too Closely
☐	☐	☐	☐	☐	Unsafe Backing
☐	☐	☐	☐	☐	Overcorrecting
☐	☐	☐	☐	☐	Ran off Road
☐	☐	☐	☐	☐	Wrong Way on One Way
☐	☐	☐	☐	☐	Pedestrian's Action
☐	☐	☐	☐	☐	Passenger Distraction
☐	☐	☐	☐	☐	Restriction Violation
☐	☐	☐	☐	☐	Jackknifing
☐	☐	☐	☐	☐	Cell Phone Usage
☐	☐	☐	☐	☐	Other Telematics
☐	☐	☐	☐	☐	Driver Distracted
☐	☐	☐	☐	☐	Speed/Weather Conditions
☐	☐	☐	☐	☐	Other
	☐	☐	☐	☐	None

Vehicle Contributing Circumstances

Primary Cause	Vehicle 1	Vehicle 2	Vehicle 3	Vehicle 4	
☐	☐	☐	☐	☐	Engine Failure or Defective
☐	☐	☐	☐	☐	Accelerator Failure or Defective
☐	☐	☐	☐	☐	Brake Failure or Defective
☐	☐	☐	☐	☐	Tire Failure or Defective
☐	☐	☐	☐	☐	Headlight(s) Defective or Not On
☐	☐	☐	☐	☐	Other Lights Defective
☐	☐	☐	☐	☐	Steering Failure
☐	☐	☐	☐	☐	Window/Windshield Defective
☐	☐	☐	☐	☐	Oversize/Overweight Load
☐	☐	☐	☐	☐	Insecure/Leaky Load
☐	☐	☐	☐	☐	Tow Hitch Failure
☐	☐	☐	☐	☐	Other
	☐	☐	☐	☐	None

Environment Contributing Circumstances

☐	☐	☐	☐	☐	Glare
☐	☐	☐	☐	☐	Roadway Surface
☐	☐	☐	☐	☐	Holes/Ruts in Surface
☐	☐	☐	☐	☐	Shoulder Defective
☐	☐	☐	☐	☐	Road Under Construction
☐	☐	☐	☐	☐	Severe Crosswinds
☐	☐	☐	☐	☐	Obstruction Not Marked
☐	☐	☐	☐	☐	Lane Marking Obscured
☐	☐	☐	☐	☐	View Obstructed
☐	☐	☐	☐	☐	Animal/Object in Roadway
☐	☐	☐	☐	☐	Traffic Ctl Inop/Missing/Obscure
☐	☐	☐	☐	☐	Utility Work
☐	☐	☐	☐	☐	Other
	☐	☐	☐	☐	None

Area Information

- Hit and Run
- School Zone
- Rumble Strips
- Locality
- Light Condition
- Weather Conditions
- Surface Condition
- Type of Median
- Type of Roadway Junction
- Road Character
- Roadway Surface
- Construction | If Yes, Construction Type
- Traffic Control Devices
- Traffic Control Device Operational?
- Was this crash the result of aggressive driving?

Total Estimate of all damage in the Crash:

Other Property Damage (1)	State Property	Owner's Name and Address
Other Property Damage (2)	**State Property**	**Owner's Name and Address**

Witness/Other Participant

☐ Witness ☐ Other Participant	#	Name

Address etc.

Phone # | Location at Time of Crash

☐ Witness ☐ Other Participant	#	Name

Address etc.

Phone # | Location at Time of Crash

Non-Motorist

(Last Name, First Name, MI)

Non-Motorist Type	Non-Motorist Action

Apparent Physical Condition

Cited?	Direction

Street/Highway

Traffic Control? | If yes, was traffic control operational?

Page of

Local ID

Type of Crash					
Time Notified	Time Arrived	Other Location of Investigation			
Assisting Officer		ID No.	Agency	Investigation Complete?	Photos Taken?
Assisting Officer		ID No.	Agency	Date of Report	
Investigating Officer		ID No.	Agency	Reviewing Officer	

Narrative

UNIT INFORMATION

Page of

Local ID

Driver's Name (Last, First, MI)

Address (Street, City, State, Zip)

Date of Birth | Age | Gender

Driver's License # | Lic Type | CDL Class | Lic State

Apparent Physical Status
- Normal
- Had Been Drinking
- Handicapped
- Ill
- Asleep/Fatigued
- Drugs/Medication
- Unknown

Restrictions
- Glasses/Contact Lenses
- Outside Rearview Mirror
- Daylight Driving
- Automatic Transmission
- Special Controls
- Employment Only
- Motorcycle Only
- To/From Employment
- Employer's Vehicle Only
- State-Owned Vehicles
- PP Chauffeurs Taxi Only
- Power Steering
- Special Restrictions
- Probation DWI
- Probation HTO
- None

Test Given: NONE

Type Given: Blood | Urine | Breath | SFST | PBT

Alcohol Results PBT | Certified Test | Pending

Drug Results

Veh# | Color | Vehicle Year | Make | Model | Style

Occupants | Lic Year | License # | License State

Axles | Speed Limit | Insured By | Phone Number

Vehicle Identification#

Registered Owner's Name (Last, First, MI) | Same as Driver

Address (Street, City, State, Zip)

Towed? | To / By | Reason

Lic State | Lic Year | Registered Owner's Name (Last, First, MI) | Same as Driver

License# | Address (Street, City, State, Zip)

Veh Year | Make

Lic State | Lic Year | Registered Owner's Name (Last, First, MI) | Same as Driver

License# | Address (Street, City, State, Zip)

Veh Year | Make

Commercial Vehicle: Carrier's Name and Address

HAZMAT Proper Shipping Name: | State DOT#

US DOT# | ICC# | CMV Inspection | If Yes

Gross Vehicle Weight Rating | Cargo Body Type

HAZMAT Placard | HAZMAT Release of Cargo | HAZMAT 4-Digit ID# | Hazzard Class #

Safety Equipment Used

Safety Equipment Effective?

Ejection/Trapped

EMS No. | Immed Attn | Driver Injury Status

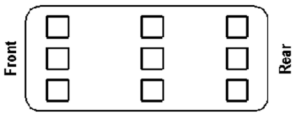
Nature of Most Severe Injury

Location of Most Severe Injury

If Cited?
- Infraction
- Misdemeanor
- Felony

IC Codes

Initial Impact Area
- Undercarriage
- Trailer
- None
- Unknown



Areas Damaged (Multiples)
- Undercarriage
- Trailer
- None
- Unknown

Vehicle Use

Emergency Run? | Fire? NO

Vehicle Type

Pre-Crash Vehicle Action

Direction of Travel

Type of Primary/Secondary Roadway

One Way Traffic
- One Lane
- Two Lanes
- Multi-Lanes (3 or more)

Two Way Traffic
- Two Lanes
- Multi-Lane Divided (3 or more)
- Multi-Lane Undivided 2 way left turn
- Multi-Lane Undivided (3 or more)

Private Drive

Alley

Event Collision With

GLOSSARY

Aggressive Driving
A collision is defined as involving aggressive driving when the driver of a motor vehicle was engaged in at least two of the following actions: (1) driving at an unsafe speed; (2) failing to yield right of way; (3) disregarding a regulatory signal/sign; (4) improper passing; (5) improper turning; (6) improper lane usage; or (7) following too closely.

Alcohol Involvement/Alcohol-related
The terms "alcohol-related" or "alcohol-involved" do not indicate that a crash or fatality was caused by the presence of alcohol.

National Highway Traffic Safety Administration (NHTSA) defines a fatal crash as alcohol-related or alcohol-involved if at least one driver or nonoccupant (such as a pedestrian or pedalcyclist) involved in the crash is determined to have had a Blood Alcohol Concentration (BAC) of 0.01 gram per deciliter (g/dL) or higher. NHTSA defines a nonfatal crash as alcohol-related or alcohol-involved if police indicate on the police accident report that there is evidence of alcohol present. The code does not necessarily mean that a driver or nonoccupant was tested for alcohol.

Indiana defines a crash as alcohol-related or alcohol-involved if any of the following are true: (1) *alcoholic beverages* is listed as the primary factor of the collision; (2) *alcoholic beverages* is listed as a contributing circumstance in the collision; (3) any vehicle driver or non-motorist (pedestrian, pedalcyclist) involved in the collision had a BAC test result greater than zero; (4) the collision report lists the apparent physical condition of any vehicle driver or non-motorist involved as had been drinking; or (5) a vehicle driver is issued an Operating While Intoxicated (OWI) citation.

Alcohol-impaired
A collision in which any vehicle driver involved has a BAC test result at or above 0.08 g/dL.

Attributable/Attributablity
A vehicle and/or driver is considered attributable in a collision when linked by the reporting officer to the primary factor or cause of the collisions.

Blood Alcohol Concentration
The BAC is measured as a percentage by weight of alcohol in the blood (grams/deciliter). A positive BAC level (0.01 g/dL and higher) indicates that alcohol was consumed by the person tested; a BAC level of 0.08 g/dL or more indicates that the person was legally impaired.

Bus
Large motor vehicles used to carry nine or more passengers, including school buses, inter-city buses, and transit buses.

Census-based Locale
Urban is defined as Census 2010 Urban Areas, *suburban* as areas within 2.5 miles of urban boundaries, *exurban* as areas within 2.5 miles of suburban boundaries, and *rural* as areas beyond exurban boundaries (i.e., everything else).

Cited/Citation
When a person involved in a collision is charged with a violation (traffic or criminal) relating to the motor vehicle crash. The document produced is a citation.

Combination Vehicle
A truck consisting primarily of a transport device which is a single-unit truck or truck tractor together with one or more attached trailers.

Commercial Vehicle

1. *A Truck.* A vehicle equipped for carrying property and having a Gross Vehicle Weight Rating (GVWR) or Gross Combination Weight Rating (GCWR) over 10,000 pounds.
2. *A Bus.* A motor vehicle designed to transport nine or more occupants.
3. *Any Vehicle.* Displaying a hazardous materials placard.

Contributing Circumstance
Actions of the driver, apparent environmental conditions, or apparent vehicle conditions that contributed to the collision.

Collision/Crash
An event that produces injury and/or property damage, involves a motor vehicle in transport, and occurs on a trafficway or while the vehicle is still in motion after running off the trafficway.

Collision/Crash Severity
1. *Fatal Crash.* A police-reported crash involving a motor vehicle in transport on a trafficway in which at least one person dies within 30 days of the crash.
2. *Injury Crash.* A police-reported crash involving a motor vehicle in transport on a trafficway in which no one died but a least one person was reported to have: (1) an incapacitating injury; (2) a non-incapacitating injury; or (3) a possible, not visible injury.
3. *Property Damage Only Crash.* A police-reported crash involving a motor vehicle in transport on a trafficway in which no one involved in the crash suffered any injuries. Indiana statute states the estimated property damage must be $1000 or more.

Dark (Lighted)
The time between dusk and dawn, and where there are lights designed and installed to illuminate the roadway. This does not include lighting from storefronts, houses, etc.

Dark (Not lighted)
The time between dusk and dawn, and where there are no lights designed or installed to illuminate the roadway.

Day
From 6:00a to 5:59p.

Disregarding Traffic Signal
A collision where one or more drivers disregarded a traffic signal or flashing signal at a road intersection (excludes interstates).

Driver
An occupant of a vehicle who is in physical control of a motor vehicle in transport, or for an out-of-control vehicle, an occupant who was in control until control was lost.

Ejection
Refers to occupants being totally or partially thrown from the vehicle as a result of an impact or rollover.

Fatal Injury
Any injury that results in death within a 30-day period after the crash occurred.

Fixed Object
Stationary structures or substantial vegetation attached to the terrain. Examples include guardrail, bridge railing or abutments, trees, utility poles, ditches, culverts, and buildings.

Gross Combination Weight Rating (GCWR)
The value specified by the manufacturer as the loaded weight of a combination (articulated) motor vehicle. In absence of a value specified by the manufacturer, GCWR will be determined by adding the GVWR of the power unit and the total weight of the towed unit and any load thereon.

Gross Vehicle Weight Rating (GVWR)
The maximum rated capacity of a vehicle, including the weight of the base vehicle, all added equipment, driver and passengers, and all cargo loaded into or on the vehicle. Actual weight may be less than or greater than GVWR.

Hazardous Materials
Any substance or material which has been determined by the U.S. Department of Transportation, or other authorizing entity, to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. Any motor vehicle transporting quantities of hazardous materials in quantities above the thresholds established by the USDOT, or other authorized entity, is required to display a hazardous materials placard.

Hazardous Materials Placard
A sign that must be affixed to any motor vehicle transporting hazardous materials in quantities above the thresholds established by the USDOT, or other authorized entity. This placard identifies the hazard class division number, four-digit hazardous material identification number or name of the hazardous material being transported.

ICJI
Indiana Criminal Justice Institute.

Incapacitating Injury
A non-fatal injury that prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before the injury occurred. Hospitalization is usually required. Examples are severe lacerations, broken limbs, skull fracture, crushed chest, internal injuries, etc. The most recent ARIES upgrade added a clarification to reporting officers on the definition of incapacitating injuries criteria to include *transported from scene for treatment.*

Inspection Level 1 - North American Standard Inspection
An inspection that includes examination of driver's license, medical examiner's certificate and waiver, if applicable, alcohol and drugs, driver's record of duty status as required, hours of service, seat belt, vehicle inspection report, brake system, coupling devices, exhaust system, frame, fuel system, turn signals, brake lamps, tail lamps, head lamps, lamps on projecting loads, safe loading, steering mechanism, suspension, tires, van and open-top trailer bodies, wheels and rims, windshield wipers, emergency exits on buses and hazardous materials (HM) requirements, as applicable.
www.fmcsa.dot.gov/safety-security/safety-initiatives/mcsap/insplevels.htm

Inspection Level 3 - Driver-only inspection
A roadside examination of the driver's license, medical certification and waiver, if applicable, driver's record of duty status as required, hours of service, seat belt, vehicle inspection report, and HM requirements, as applicable.
http://www.fmcsa.dot.gov/safety-security/safety-initiatives/mcsap/insplevels.htm

Intersection
An area of roadway which is: (1) at a crossing or connection of two or more roadways not classified as a driveway; and (2) the area of the roadway measured less than 33 feet from the apex of two roadways at the curb or boundary line. Types of intersections noted on the Indiana Crash Report are: 1) T-intersections; 2) Y-intersections; 3) Four-way intersection; 4) Interchange; 5) Five points or more; 6) Ramp; and 7) Traffic circle/roundabout.

ISP
Indiana State Police.

Jackknife
Jackknife can occur at any time during the crash sequence. Jackknifing is generally restricted to truck tractors pulling a trailing unit in which the trailing unit and the pulling vehicle rotate with respect to each other.

Junction
Area formed by the connection of two roadways, including intersections, interchange areas, and entrance/exit ramps.

Lane Control
Visible lane markings such as hash marks or lines that separate lanes of travel.

Large Trucks
Trucks over 10,000 pounds gross vehicle weight rating, including single unit trucks and truck tractors.

Licensed Drivers
The annual count of licensed drivers in a given location (e.g., county, state, nation).

Light Trucks
Trucks of 10,000 pounds gross vehicle weight rating or less, including pickups, vans, truck-based station wagons, and sport utility vehicles.

Motorcycle
The category *motorcycle* includes the following:

1. *Motorcycle:* A motor vehicle that: (1) has a seat or saddle for the use of the rider; (2) is designed to travel on no more than three wheels on the ground; and (3) satisfies the operational and equipment specifications described in 49 CFR 571 and IC 9-19. The term does not include a farm tractor or a motor driven cycle.
2. *Motor Driven Cycle—Class A:* A motor vehicle that: (1) has a seat or saddle for the use of the rider; (2) is designed to travel on no more than three wheels on the ground; and (3) complies with applicable motor vehicle equipment requirements under IC 9-19 and 49 CFR 571; (4) has an engine that produces no more than five-brake horsepower; and (5) is registered as a Motor Driven Cycle - Class A. The term does not include an electric personal assistive mobility device.
3. *Motor Driven Cycle—Class B:* A motor vehicle that: (1) has a seat or saddle for the use of the rider; (2) is designed to travel on no more than three wheels on the ground; (3) complies with applicable motor vehicle equipment requirements under IC 9-19 and 49 CFR 571; (4) has a cylinder capacity not exceeding 50 cubic centimeters; and (5) is registered as a Motor Driven Cycle - Class B. The term does not include an electric personal assistive mobility device.
4. ARIES includes two other *unit type* categories not defined by Indiana law (*motorized bicycle* and *moped*) that are also included in *motorcycles*.

Motor Vehicle in Transport
A motor vehicle in motion on the trafficway or any other motor vehicle on the roadway, including stalled, disabled, or abandoned vehicles.

Night
From 6:00p to 5:59a.

Non-incapacitating Injury
An injury, other than a fatal or incapacitating injury, which is evident to the officer at the scene of the crash and may require medical treatment, although hospitalization is usually not required. Examples are abrasions, minor bleeding, and lacerations.

Non-motorist
Any person who is not an occupant of a motor vehicle in transport and includes the following: (1) pedestrians; (2) pedalcyclists; and (3) persons riding in animal-drawn vehicles.

Not Injured
Not injured status includes individuals involved in collisions reported as null values in the injury status code field. While reporting officers are instructed to enter all drivers in ARIES, passengers are only to be entered in the crash report if an injury occurs; therefore, not injured counts should be interpreted with caution.

Occupant
Any person who is in or upon a motor vehicle in transport. Includes the driver, passengers, and persons riding on the exterior of a motor vehicle.

Odds
Odds are calculated as the ratio of the count of an incident occurring to the count of the incident not occurring. For example, in 100 crashes, if there are 24 involving serious bodily injury, the odds of a serious bodily injury (SBI) collision = 24/76 = .32).

Odds ratio
The ratio of the odds of an event occurring in one group to the odds of it occurring in another group. For example, if the odds of SBI for motorcycle riders and passenger car occupants is .21 and .01, respectively, the OR of motorcyclists compared to car occupants = .21/.01 = 19.2 (i.e., motorcyclists are 19.2 times more likely to experience an SBI than are car occupants).

Passenger
Any occupant of a motor vehicle who is not a driver.

Passenger Car
Motor vehicles used primarily for carrying passengers, including convertibles, sedans, and station wagons.

Passenger Vehicles
Passenger vehicles are defined as passenger cars, pickup trucks, SUVs, and vans.

Pedalcyclist
A person on a bicycle or vehicle that is powered solely by pedals.

Pedestrian
Any person walking or not in or upon a motor vehicle or other vehicle.

Pickup Truck
A motor vehicle designed to carry ten persons or less, with an exposed bed.

Possible Injury
Any injury reported or claimed which is not visible. Example: the complaint of back or neck pain (normally included in non-incapacitating injury category).

Primary Factor
The single factor which the investigating officer believes to be the main or primary factor which contributed to the collision's occurrence. Each collision may have only one primary factor.

> *Driver: Unsafe actions include primary factors of following too closely, failure to yield right of way, unsafe backing, disregard signal/reg sign,*

improper turning, speed too fast for weather conditions, unsafe lane movement, improper lane usage, unsafe speed, left of center, improper passing and wrong way on one way.

Driver: Loss of control include primary factors of ran off road right, ran off road left and overcorrecting/oversteering.

Driver: Distraction include primary factors of driver distracted (explained in narrative), cell phone usage, other telematics in use and passenger distraction.

Driver: Cognitive impairment include primary factors of driver asleep or fatigued, driver illness, alchoholic beverages, prescription drugs and illegal drugs.

Environmental include primary factors of animal on roadway, roadway surface condition, view obstructed, other (explained in narrative)-environment, obstruction not marked, severe crosswinds, traffic control problem, holes/ruts in surface, glare, lane marking obscured, road under construction and shoulder defective.

Vehicle-related include primary factors of brake failure or defective, other (explained in narrative)-vehicle, tire failure or defective, insecure/leaky load, steering failure, accelerator failure or defective, engine failure or defective, oversize/overweight load, headlight defective or not on, tow hitch failure and other lights defective.

All other include primary factors of other (explained in narrative)-driver, pedestrian action, not a factor-driver, not a factor-vehicle, violation of license restriction and not a factor-environment.

Unknown include primary factors of *unknown* and invalid.

Property Damage Collision
A police-reported crash involving a motor vehicle in transport on a trafficway in which no one involved in the crash suffered any injuries but at least one vehicle or property was damaged.

Registered Vehicles
The annual count of registered vehicles in a given location (e.g., county, state, nation).

Relative Risk
A measure of the risk of injury determined by comparing the likelihood of an injury in collisions involving certain circumstances with the likelihood of an injury in collisions not involving those circumstances (e.g., the likelihood of a fatal injury when a collision involves speeding versus when it does not). If two percent of collisions involving speeding result in a fatality and one percent of collisions not involving speeding result in a fatality, the relative risk of a fatality when speed is involved equals two (2% / 1%); that is, collisions that involve speeding are two times more likely to result in a fatality than those that do not. Relative risk is often used to measure the risk of a fatal injury but can be used to measure the risk of any type of injury.

Restraint Use
The occupant's use of available vehicle restraints including lap belt, shoulder belt, or automatic belt.

Roadway
That part of a trafficway designed, improved, and ordinarily used for motor vehicle travel.

Rollover
Rollover is defined as any vehicle rotation of 90 degrees or more about any true longitudinal or lateral axis. Includes rollovers occurring as a first harmful event or subsequent event.

Seating Position
The location of the occupants in the vehicle. More than one can be assigned the same seat position; however, this is allowed only when a person is sitting on someone's lap.

Semi-trailer
A trailer, other than a pole trailer, designed for carrying property and so constructed that part of its weight rest upon or is carried by the power unit.

Single-unit Truck
A medium or heavy truck in which the engine, cab, drive train, and cargo area are all on one chassis. (Can have two axles and six tires on the ground, or three or more axles).

Speed-related
A collision is identified as speed-related if any one of the following conditions is met: (1) unsafe speed or speed too fast for weather conditions is listed as the primary or contributing factor of the collision; (2) a vehicle driver is issued a speeding citation.

Sport Utility Vehicle (SUV)
A multi-purpose motor vehicle designed for carrying less than ten persons, which is constructed on a truck chassis or with special features for occasional off-road operation, other than a pickup truck. These vehicles are generally four-wheel-drive (4x4) and have increased ground clearance, and a gross vehicle weight rating (GVWR) of 10,000 pounds or less.

Tractor (Semi)
A motor vehicle consisting of a single power unit device designed primarily for pulling semi-trailers.

Traffic Circle/Roundabout
An intersection of roads where vehicles must travel around a circle to continue on the same road or to connect to an intersecting road.

Traffic Control Signal
Includes the red/green/yellow signal and/or a flashing signal.

Trapped
Persons who are restrained in the vehicle by damaged vehicle components as a result of a crash, and who have to be freed from the vehicle.

Unit
Denotes a motor vehicle, pedestrian, pedalcyclist, or other entity involved in the collision.

Unknown Injury
Injuries reported on the *Indiana Crash Report* as: 1) *refused* (treatment); 2) *unknown*; 3) *not reported;* and 4) invalid codes.

Unsafe Backing
Backing increases the risk for crash because it is much more difficult to see obstacles behind you and requires more space to maneuver. Common unsafe backing actions include: Improper body position, speed too fast, failure to yield and determine the path of travel is clear, failure to look back during the whole maneuver until the vehicle is completely stopped, and incorrect steering.

Van
A motor vehicle consisting primarily of a transport device that has a gross vehicle weight rating of 10,000 pounds or less and is basically a "box on wheels" that is identifiable by its enclosed passenger and/or cargo area, step-up floor, and relatively short (or nonexistent) hood. Examples are passenger vans, cargo or delivery vans, and van-based mini-motor homes.

Vehicle Miles Traveled
The annual vehicle distance traveled in miles (VMT).

Weekday
From 6:00a Monday to 5:59p Friday.

Weekend
From 6:00p Friday to 5:59a Monday.

Work Zone
An area of a trafficway where construction, maintenance, or utility work activities are identified by warning signs/signals/indicators, including those on transport devices (e.g., signs, flashing lights, channelizing devices, barriers, pavement markings, flagmen, warning signs, and arrow boards mounted on the vehicles in a mobile maintenance activity) that mark the beginning and end of a construction, maintenance, or utility work activity.

It extends from the first warning sign, signal, or flashing lights to the END ROAD WORK sign or the last traffic control device pertinent for that work activity.

Work zones also include roadway sections where there is ongoing, moving (mobile) work activity such as lane line painting or roadside mowing only if the beginning of the ongoing, moving (mobile) work activity is designated by warning signs or signals.

Young Driver
A driver of a motor vehicle whose age is between the ages of 15 and 20 years old.

APPENDIX A: Methods for producing economic costs of traffic collisions in Indiana

For the purposes of *Indiana Crash Facts, economic costs* represent the monetary and non-monetary impacts produced by injuries and property damage in traffic collisions. These costs are calculated by taking existing estimates of costs, broken down into various impact categories, by the incidence of traffic injuries and property damage to vehicles in collisions. The general methodology used here follows that in economic cost reports produced by the National Highway Traffic Safety Administration (NHTSA).[1] Several intermediate procedures were performed on the data to arrive at final cost estimates.

1. Injury classifications

Cost estimates are based on the *Maximum Abbreviated Injury Scale* (MAIS), a medical assessment of the most severe injury incurred.[2] The MAIS scale ranges from MAIS 0 (no injury), to MAIS 6 (fatality), with incremental levels representing increasing levels of bodily damage (i.e., decreasing probabilities of survival). Indiana crash reports, however, use the KABCO (K=fatal; A=incapacitating; B=non-incapacitating; C=possible; O=not injured) system of injury classification, in which an officer with no medical training can make a general assessment of the injury severity to individuals involved in the collision. As such, Indiana injury data classifications must be converted to the MAIS system to obtain the cost estimates.

Data taken from the National Automotive Sampling System (NASS) from 1982 to 1986 were used to create this injury "translator".[3], [4] These data encompass a representative survey of crashes in the United States and provide individual-level information on individuals involved; from it, KABCO injuries can be proportionally distributed into MAIS categories. Data were taken from this time period because it represents the most recent data that contain both KABCO and MAIS designations of injury at the individual level. Note that the injury translator can apportion fatalities (K) to MAIS designations, but the data in *Indiana Crash Facts* does not do this for ease of interpretation.

2. Cost estimates and price deflation

Economic cost estimates were obtained from NHTSA economic cost reports.[5] The data are in year 2000 US dollars and accordingly must be adjusted for the effects of the time value of money and for regional price differences. These adjustments were made using annual average price indexes for the United States and Midwest published by the Bureau of Labor Statistics and are current through 2014.[6]

Once costs were adjusted to current economic conditions, the values were multiplied by the incidence of injuries and vehicles that sustained property damage only (i.e., no injured occupants) to arrive at total cost estimates.

[1]Blincoe, L., Seay. A., Zaloshnja, E., Miller, T., Romano, E., Luchter, S., & R. Spicer. (May 2002). The economic impact of motor vehicle crashes, 2000. (DOT HS809 446) National Highway Traffic Safety Administration, Washington D.C.

[2]Association for the Advancement of Automotive Medicine. www.carcrash.org

[3]www.nhtsa-tsis.net/projects/NHTSA/NHTSA_NASS.htm

[4]National Automotive Sampling System, 1982-1986; "*Ejection Mitigation Using Advanced Glazing: A Status Report, November 1995*", NHTSA

[5]Blincoe et al., 2002.

[6]Bureau of Labor Statistics. Average Price Data (Consumer Price Index – CPI). www.bls.gov/cpi/#tables.

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An electronic copy of this document can be accessed via the PPI website (https://trafficsafety.iupui.edu), the ICJI traffic safety website www.in.gov/cji/), or you may contact the Indiana University Public Policy Insitute at 317-261-3000.

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