INDIANA CRASH FACTS

2013

INDIANA CRIMINAL JUSTICE INSTITUTE

INDIANA UNIVERSITY PUBLIC POLICY INSTITUTE

SCHOOL OF PUBLIC AND ENVIRONMENTAL AFFAIRS
INDIANA UNIVERSITY
IUPUI

INDIANA TRAFFIC SAFETY QUICK FACTS - 2013

- 193,013 traffic collisions resulting in injury or property damage occurred, a 2 percent increase from 2012.
- There were 703 fatal collisions in 2013 (resulting in 777 fatalities), a 2 percent decrease from 2012.
- 2,874 collisions (1.5 percent of all collisions) occurred in a work zone in 2013.
- 9.6 percent (18,571) of all collisions were speed-related, representing an 11.8 percent increase from the 2012 number of collisions that were speed-related.
- 26 percent (183 of 703) of fatal collisions were speed-related.
- In 2013, there were 114 fatal crashes and 124 fatalities involving a vehicle driver legally impaired by alcohol (i.e., blood alcohol content at or above 0.08 g/dL).
- 16.2 percent (114 of 703) of fatal collisions involved a driver that was legally alcohol-impaired.
- The average economic cost of collisions involving an alcohol-impaired driver was $44,883.
- Collisions involving motorcycles decreased 14.2 percent in 2013, while fatal collisions involving motorcycles decreased 22.6 percent, from 146 in 2012 to 113.
- Overall collision counts were higher in Indiana urban (130,609) and suburban (24,367) locales than in surrounding exurban (11,615) and rural (14,183) areas.
- Rates of fatal and incapacitating injury collisions per 1,000 total collisions were higher in exurban (37 per 1,000) and rural (35) locales than in areas designated as urban (15) and suburban (31).
- December had the highest frequency of collisions among all months (19,466, or 10 percent of all collisions in 2013).
- The 15 to 20 year old age group had the highest rate of drivers involved in all collisions in 2013 (1,140 per 10,000 licensed drivers).
- Drivers ages 21 to 24 years old had the highest rate of involvement in fatal collisions per 10,000 licensed drivers (3.9), followed by drivers ages 18 to 20 (3.1).
- 87 non-motorists were killed in collisions in 2013 (69 pedestrians, 15 pedalcyclists, and 3 animal-drawn vehicle occupants).
- 51 percent of persons killed in motor vehicle collisions were known to be restrained.*
- In 2013, the economic costs of motor vehicle collisions in Indiana approached $3.6 billion.

*excludes non-motorists and vehicles reported as *farm vehicles, motorcycles,* and *mopeds*.

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

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) has collaborated 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 have been summarized in a series of Fact Sheets on various aspects of traffic collisions, including alcohol-impaired crashes, children, motorcycles, trucks, dangerous driving, occupant protection, and young drivers. Portions of the content in 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 and other 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 policy-makers, 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 Appriss for their continued support and guidance throughout the process of creating these reports. PPI would also like to acknowledge the assistance and 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 website (http://policyinstitute.iu.edu/), the ICJI traffic safety website (www.in.gov/cji/), or you may contact the IU Public Policy Institute at 317-261-3000.

NOTES:
In order to minimize misinterpretation of the data presented, please take note of the definitions provided in the glossary.

Data discrepancies may exist between this report and previous traffic safety publications. These differences can be attributed to updates to the ARIES database that have occurred since the original date of publication.

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CHAPTER 1

PROBLEM IDENTIFICATION

PROBLEM IDENTIFICATION, 2013

The Traffic Safety Division 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, safety equipment usage, young drivers, motorcycle safety, dangerous driving, children, 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 problem area, and consistent with NHTSA's priority program areas. To assist with this effort, the Indiana University Public Policy Institute (Institute) prepares 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). These measures are presented in Table 1.1. Additional information is also provided to ICJI in the traffic safety fact sheet series produced annually by the Institute.

NOTE: Subsequent sections include a general discussion of goals identified in the FY 2015 Indiana Highway Safety Plan. This document, produced annually by ICJI, uses data from the 2013 traffic safety fact sheets produced by the Indiana University Public Policy Institute. These publications, including this Crash Book, were produced using the collision dataset current as of March 21, 2014. Discrepancies between figures presented in previous-year Crash Books are due to updates to the collision dataset since the original date of these publications. For more details on specific goals, please refer to the FY 2015 Indiana Highway Safety Plan.

Table 1.1. Performance goals and metrics for Indiana's *Highway Safety Plan*, 2015

Goals and performance measures	HISTORICAL 2009	2010	2011	2012	MOST RECENT (2013)	Annualized rates of change 2012-13	2009-13
Goal: Reduce total fatalities							
Count of fatalities	692	754	749	779	777	-0.3%	2.9%
Rate per 100K population	10.77	11.63	11.49	11.92	11.89	-0.3%	2.5%
Rate per 100M vehicle miles traveled (VMT)	0.98	1.07	1.06	1.10	1.10	-0.3%	2.9%
BY CRASH LOCALITY (where known)							
Count of fatalities in URBAN areas	243	292	279	283	275	-2.8%	3.1%
Rate per 10k involved in collisions	11.65	13.95	13.10	13.03	12.43	-4.6%	1.6%
Count of fatalities in SUBURBAN areas	193	140	189	219	230	5.0%	4.5%
Rate per 10k involved in collisions	59.76	44.67	56.14	64.46	63.61	-1.3%	1.6%
Count of fatalities in EXURBAN areas	101	128	108	109	115	5.5%	3.3%
Rate per 10k involved in collisions	70.15	94.84	74.72	74.05	72.04	-2.7%	0.7%
Count of fatalities in RURAL areas	129	123	135	154	134	-13.0%	1.0%
Rate per 10k involved in collisions	78.59	79.34	79.93	88.07	71.36	-19.0%	-2.4%
Goal: Reduce incapacitating injuries							
Count of incapacitating injuries	3,179	3,443	3,405	3,810	3,443	-9.6%	2.0%
Rate per 100K population	49.5	53.1	52.2	58.3	52.7	-9.6%	1.6%
Rate per 100M VMT	4.51	4.88	4.83	5.40	4.88	-9.6%	2.0%
Goal: Reduce alcohol involvement in crashes							
Count of fatalities that involve an impaired driver (any vehicle)	127	135	140	158	124	-21.5%	-0.6%
Percent of all fatalities	18.4%	17.9%	18.7%	20.3%	16.0%	-21.3%	-3.4%
Rate per 100M VMT	0.18	0.19	0.20	0.22	0.18	-21.5%	-0.6%
Count of fatalities that involve an impaired motorcycle operator	22	25	40	36	14	-61.1%	-10.7%
Goal: Increase safety belt usage							
Count of unrestrained occupants killed in passenger vehicles	258	287	260	269	267	-0.7%	0.9%
Observed usage rate for occupants of all passenger vehicles in crashes	90.3%	90.8%	90.6%	90.6%	90.6%	0.0%	0.1%
Observed usage rate for occupants of pickup trucks in crashes	87.1%	87.7%	87.8%	87.8%	87.5%	-0.3%	0.1%
Goal: Reduce involvement of young drivers in fatal crashes							
Count of drivers ages 15 to 20 in fatal crashes	116	123	100	128	101	-21.1%	-3.4%
Goal: Reduce motorcyclist fatalities							
Count of motorcycle and moped rider fatalities	111	110	118	151	118	-21.9%	1.5%
Count of motorcycle and moped operators involved in fatal crashes	118	112	121	149	115	-22.8%	-0.6%
Rate per 10K registrations	5.82	5.36	5.63	6.65	5.19	-22.0%	-2.8%
Count of unhelmeted motorcycle fatalities	90	92	100	122	99	-18.9%	2.4%
Goal: Reduce the incidence of dangerous driving in crashes							
Count of speed-related fatalities	158	145	150	175	214	22.3%	7.9%
Count of total crashes involving a driver disregarding a signal	3,983	4,011	3,955	4,009	4,171	4.0%	1.2%
Goal: Reduce fatalities and incapacitating injuries for children							
Count of children ages 14 and under killed	29	30	31	28	35	25.0%	4.8%
Count of children with incapacitating injuries	199	196	154	212	197	-7.1%	-0.3%
Goal: Reduce non-motorist fatalities and incapacitating injuries							
Count of pedestrian fatalities	55	62	63	64	69	7.8%	5.8%
Count of pedestrian incapacitating injuries	211	251	238	221	205	-7.2%	-0.7%
Count of pedalcyclist fatalities	7	14	13	14	15	7.1%	21.0%
Count of pedalcyclist incapacitating injuries	64	81	82	97	82	-15.5%	6.4%

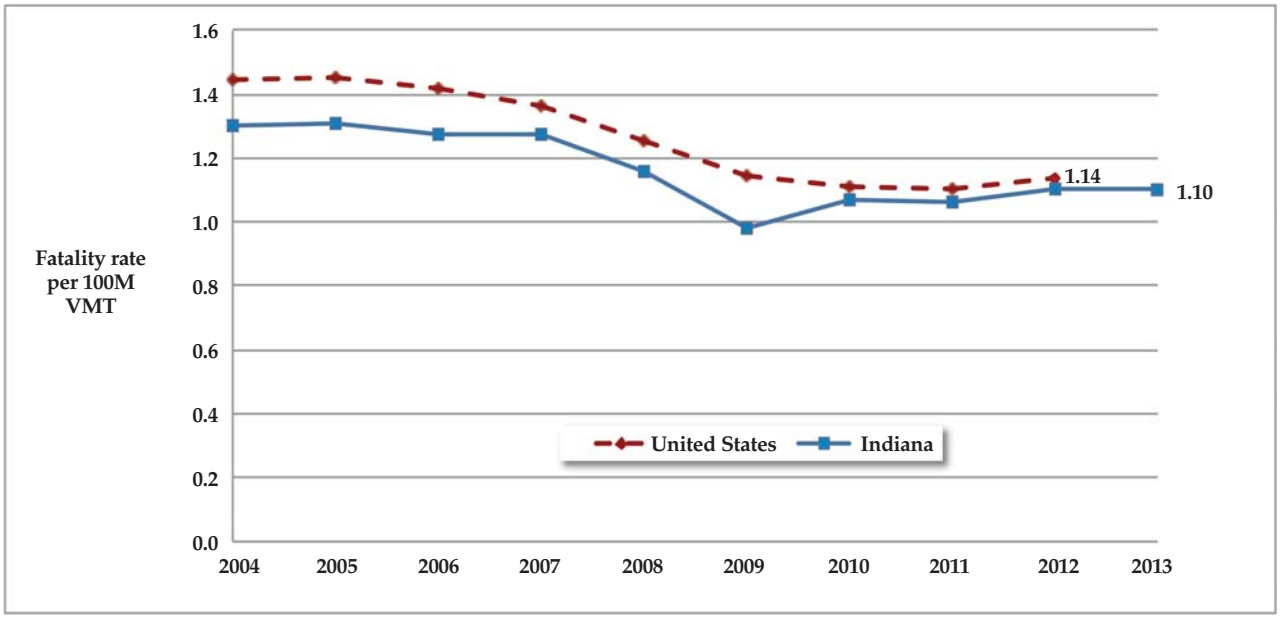
Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; US Census Bureau; Federal Highway Administration; Indiana Bureau of Motor Vehicles

GOAL: Reducing fatalities and serious bodily injuries

The severity of a traffic collision is influenced by many factors, including, but not limited to seatbelt usage, the speed at which vehicles are traveling, objects collided with, alcohol involvement, 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 and across the country, traffic fatality rates have generally decreased over the last 10 years. Indiana's rates of fatalities per 100M vehicle miles traveled (VMT) reached an historic

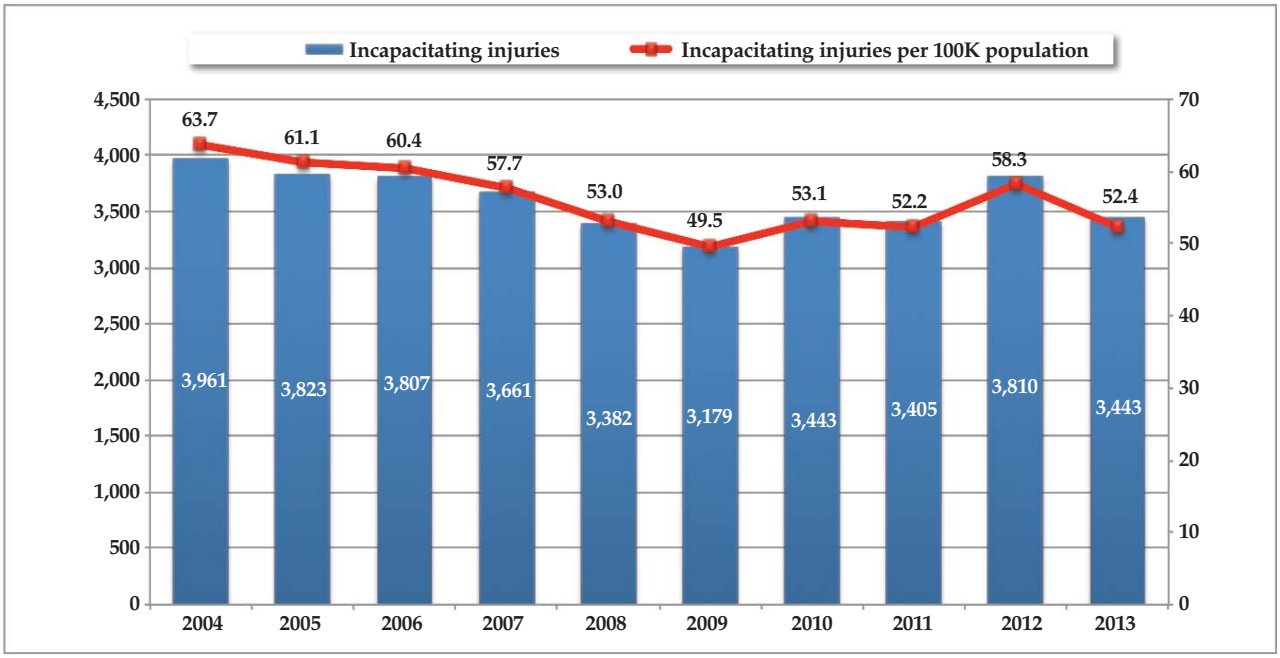
Figure 1.1. Traffic fatalities per 100M vehicle miles traveled (VMT), 2004-2013



Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Fatality Analysis Reporting System (FARS); Bureau of Transportation Statistics

Note: FARS data for 2013 not yet available.

Figure 1.2. Individuals suffering incapacitating injuries in Indiana collisions, 2004-2013



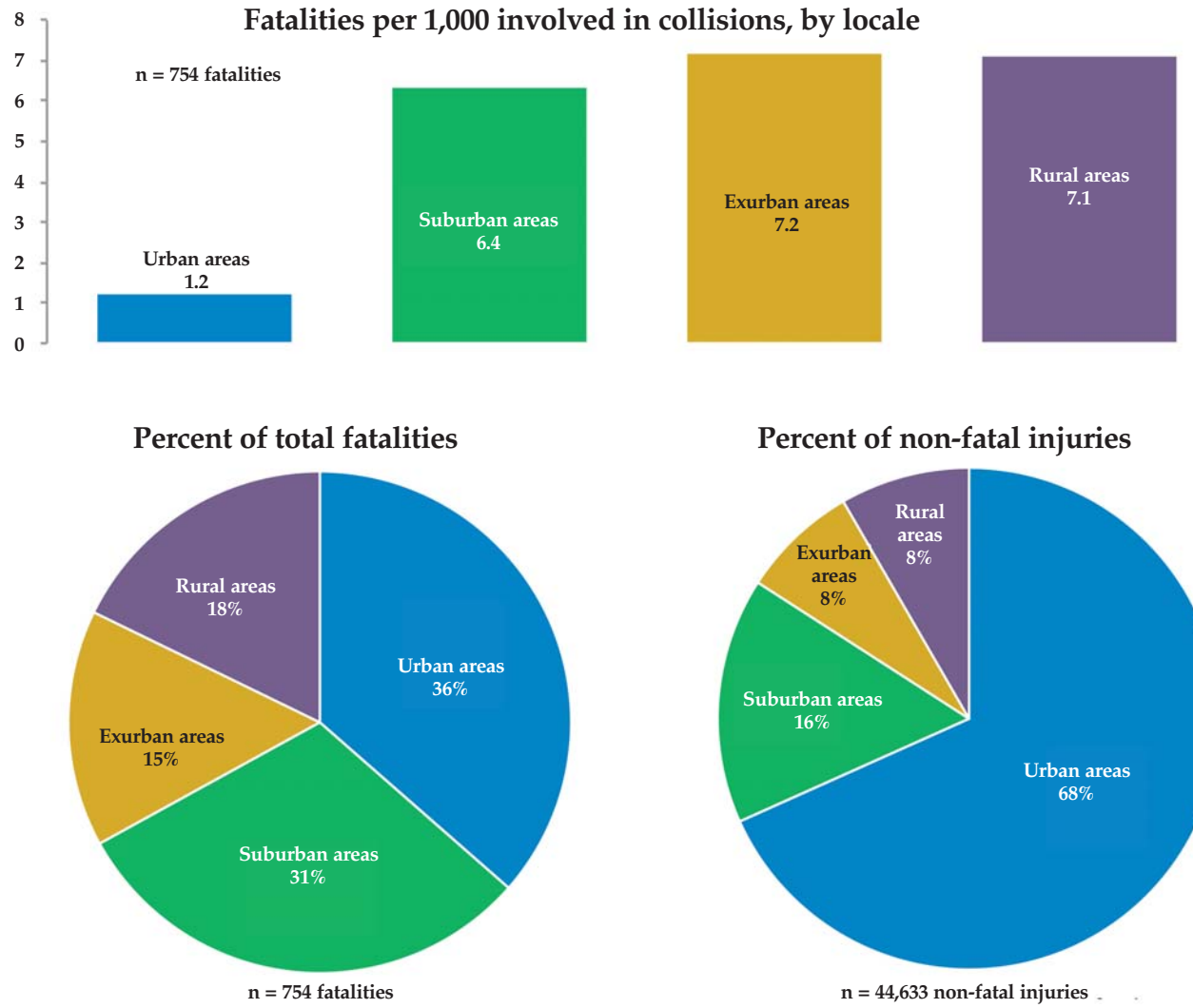
Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; U.S. Census Bureau, extracted from STATS Indiana, Indiana Business Research Center

low in 2009 (0.98) but appear to have leveled off since 2010 (Figure 1.1). Fatality rates in Indiana over this time period (2004 - 2013) have been lower than that of the nation.

The number of incapacitating injuries occurring in Indiana traffic collisions also declined steadily between 2004 and 2009. After reaching a five-year high in 2012 (3,810), the number of incapacitating injuries in crashes decreased 10 percent in 2013 (calculated from Figure 1.2). The rate of incapacitating injuries per 100,000 population decreased from 64 to 52 during this time period.

Fatalities are more likely to occur in non-urban areas. In 2013, about 18 percent of all traffic fatalities occurred in rural areas, compared to 8 percent of non-fatal injuries (Figure 1.3). The *rural* rate of fatalities per 1,000 involved in collisions was 7.1 in 2013, 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, 2013



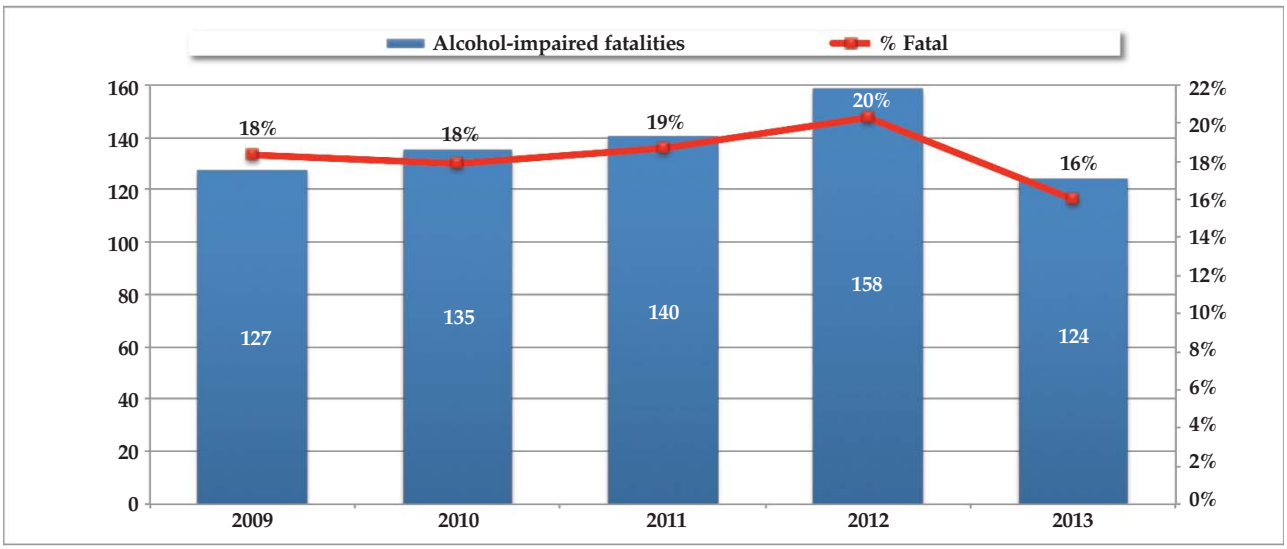
Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Non-fatal* injuries include *incapacitating, non-incapacitating,* and *possible* injuries.
2) Excludes cases where locale could not be determined.
3) See glossary for Census locale definitions.

GOAL: Reducing impaired driving

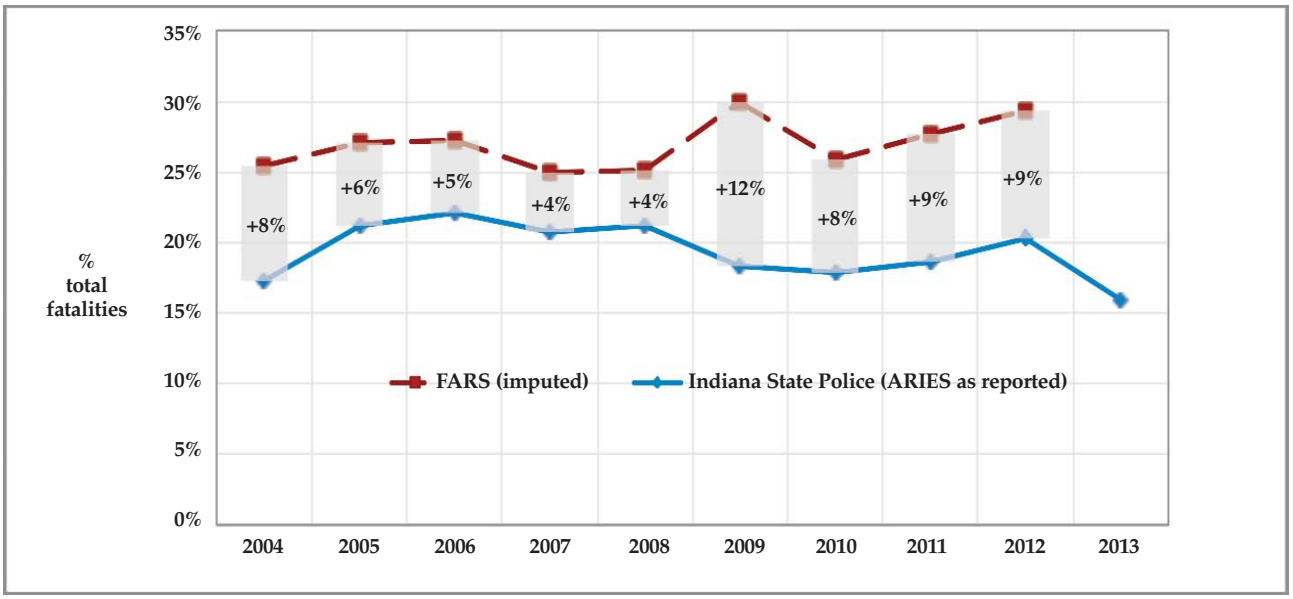
In 2013, Indiana experienced a five-year low in both the number (124) and percent (16 percent) of Indiana traffic fatalities that involved an impaired driver (blood alcohol content [BAC] = .08 grams per deciliter or higher) (Figure 1.4). According to the most recent data available from the NHTSA's Fatality Analysis Reporting System (FARS), 29 percent of all 2012 Indiana traffic fatalities occurred in crashes involving an alcohol-impaired driver, compared to 20 percent in 2012 as reported in ARIES. NHTSA imputations for alcohol-impaired crashes consistently vary from data on alcohol-impaired driving as reported by Indiana law enforcement officers to the Indiana State Police (See Figure 1.5 for comparison).

Figure 1.4. Indiana alcohol-impaired traffic fatalities as a percent of total traffic fatalities, 2009-2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Figure 1.5. Indiana alcohol-impaired traffic fatalities as a percent of total Indiana traffic fatalities, comparison of FARS imputed data to Indiana ARIES data as reported, 2004-2013



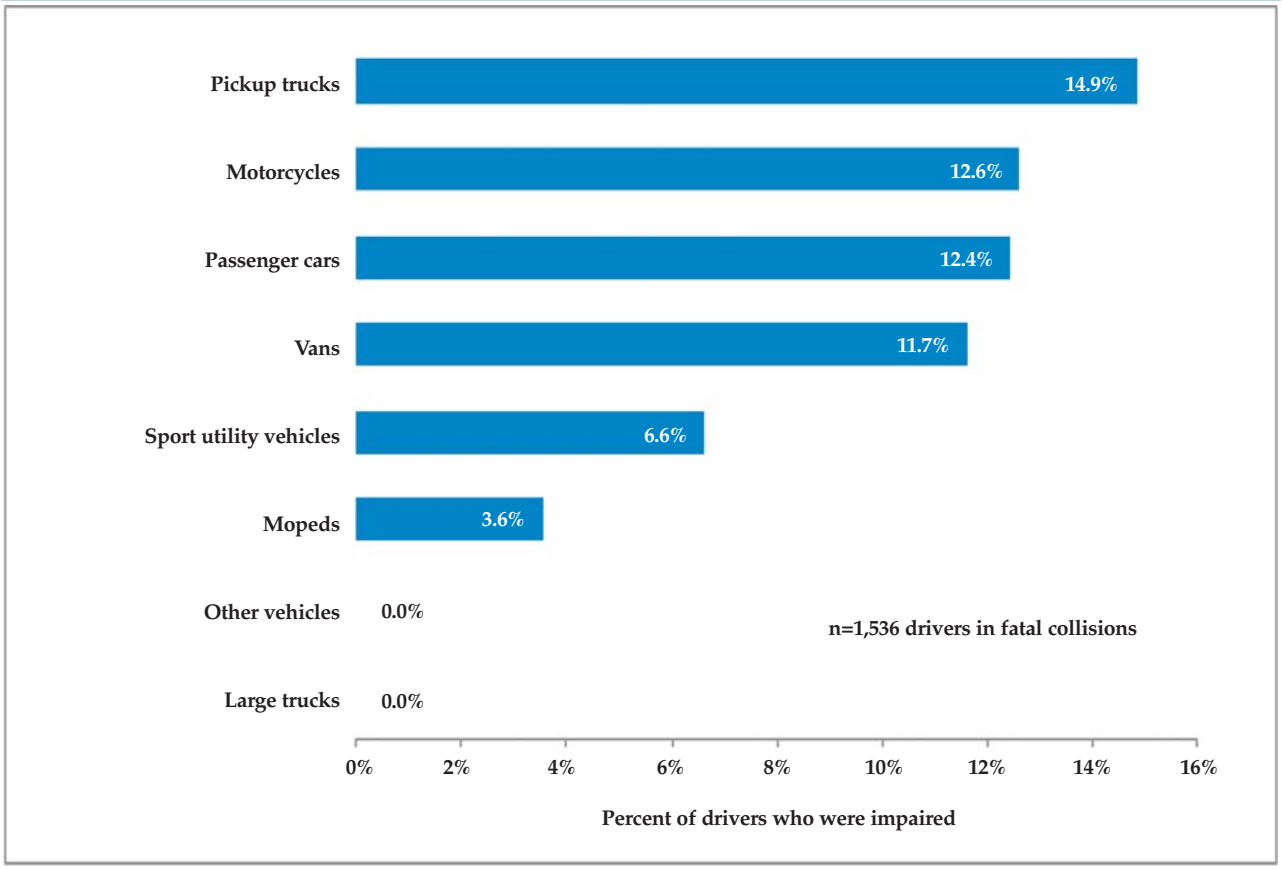
Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Fatality Analysis Reporting System (FARS)

Notes:

1) FARS data are imputed by NHTSA from ARIES data. NHTSA imputations for alcohol-impaired crashes consistently vary from data on alcohol-impaired driving as reported by the Indiana State Police.
2) FARS data for 2013 not yet available.

Rates of driver alcohol impairment vary by vehicle type. Figure 1.6 shows that, in 2013, pickup truck drivers had the highest rate of impaired driving (15 percent) across all vehicle types. Thirteen percent of motorcyclists and 12 percent of passenger car drivers in fatal collisions were driving impaired. In 2013, there were no large truck drivers in fatal collisions who were legally impaired.

Figure 1.6. Percent of drivers involved in fatal collisions that were legally impaired, by vehicle type, 2013



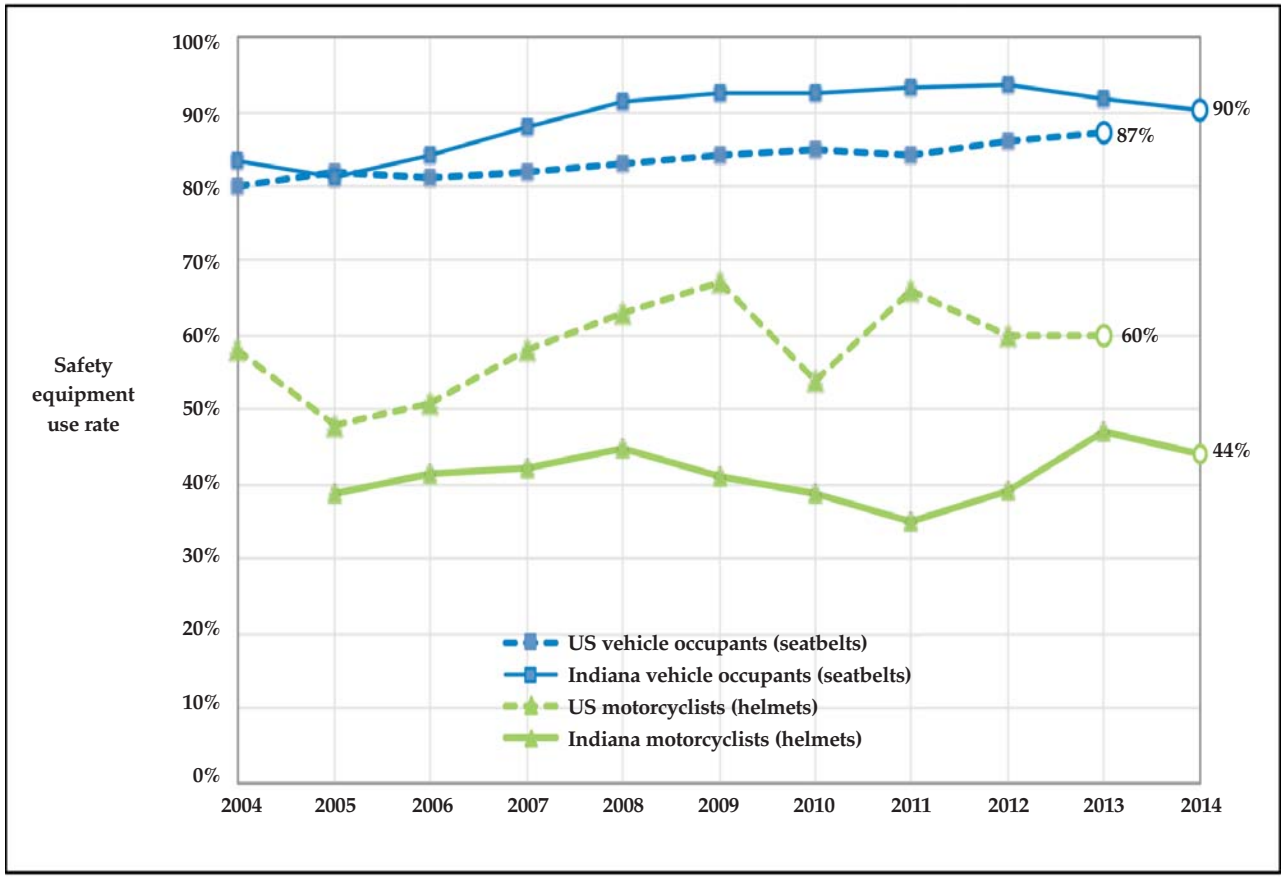
Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Other* vehicles includes *commercial buses, school buses, farm vehicles,* and *recreational vehicles*.
2) *Non-motorists* are excluded.
3) See glossary for *alcohol-impaired* definition.

GOAL: Increasing safety equipment usage

Indiana's observational rate of restraint use among passenger vehicle occupants has increased from 83 percent in 2004 to 90 percent in 2014, 3 percentage points higher than the national rate. Observed helmet use among motorcyclists in Indiana, while not legally mandated, consistently lagged far behind the national rate between 2004 and 2014, but the gap has been closing since 2011. In 2014, 44 percent of motorcyclists in Indiana were wearing helmets, compared to 60 percent nationally in 2013 (most recent data available) (Figure 1.7). According to observational surveys conducted in Indiana, pickup truck restraint use rates, while continually lagging behind rates for passenger cars, have increased dramatically over the past decade, from a rate of 57 percent in 2004 to 79 percent in 2014 (Figure 1.8).

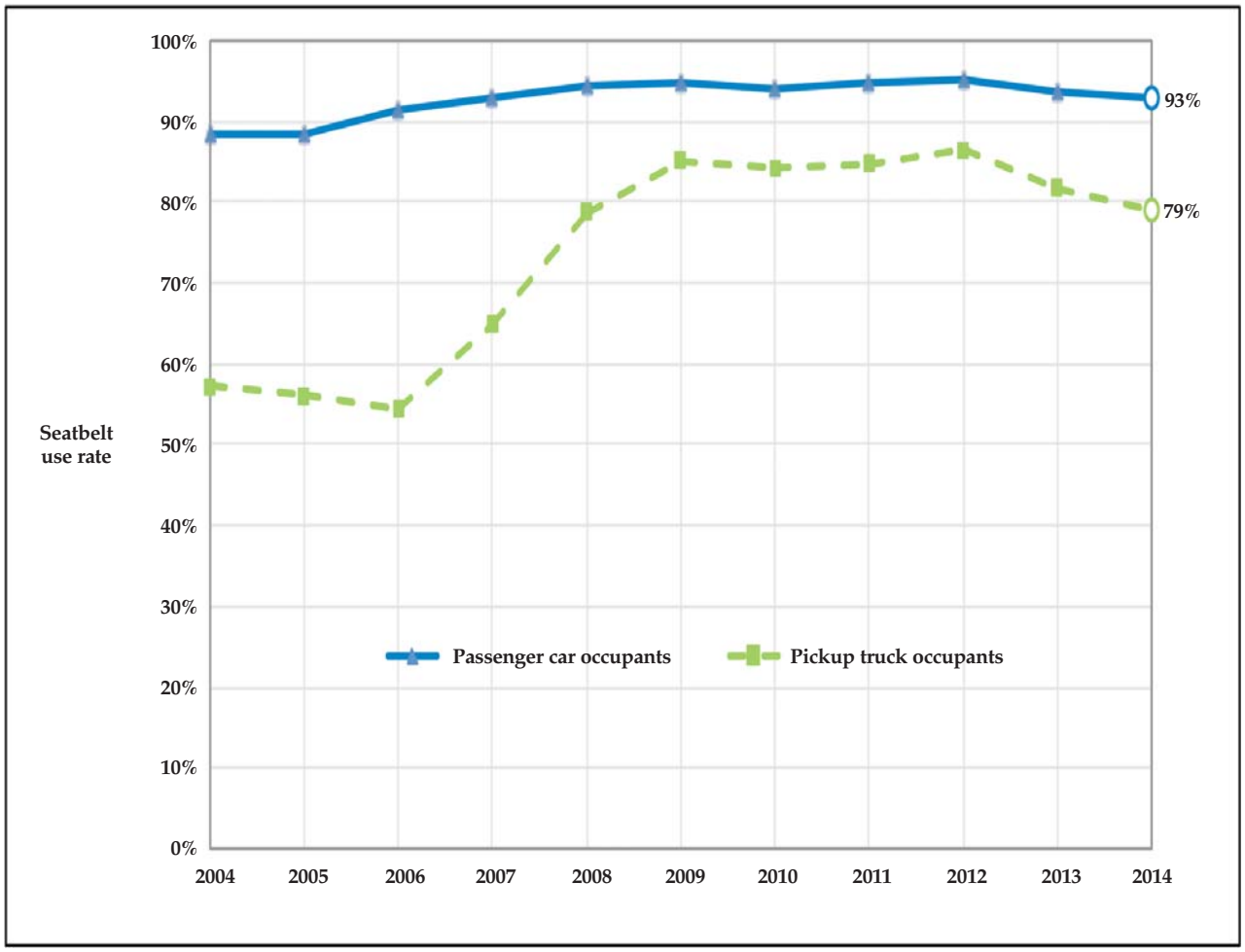
Figure 1.7. Comparison of observed safety equipment usage rates, by vehicle type, 2004-2014



Sources:
Seat Belt Use in 2013 - Use Rates in the States and Territories. National Highway Traffic Safety Administration: DOT HS 811 875
Motorcycle Helmet Use in 2012—Overall Results. National Highway Traffic Safety Administration: DOT HS 812 010
Indiana Safety Belt Observational Survey, June 2014, Survey Results. Center for Road Safety, Purdue University

Notes:
1) Helmet use data for Indiana are not available prior to 2005.
2) In 2013, the Center for Road Safety adopted a new survey methodology approved by NHTSA. This new approach incorporates changes in the weighting of samples that may contribute to the observed decrease in Indiana seatbelt usage in 2013.

Figure 1.8. Observed seatbelt usage rates on Indiana roads, by vehicle type, 2004-2014

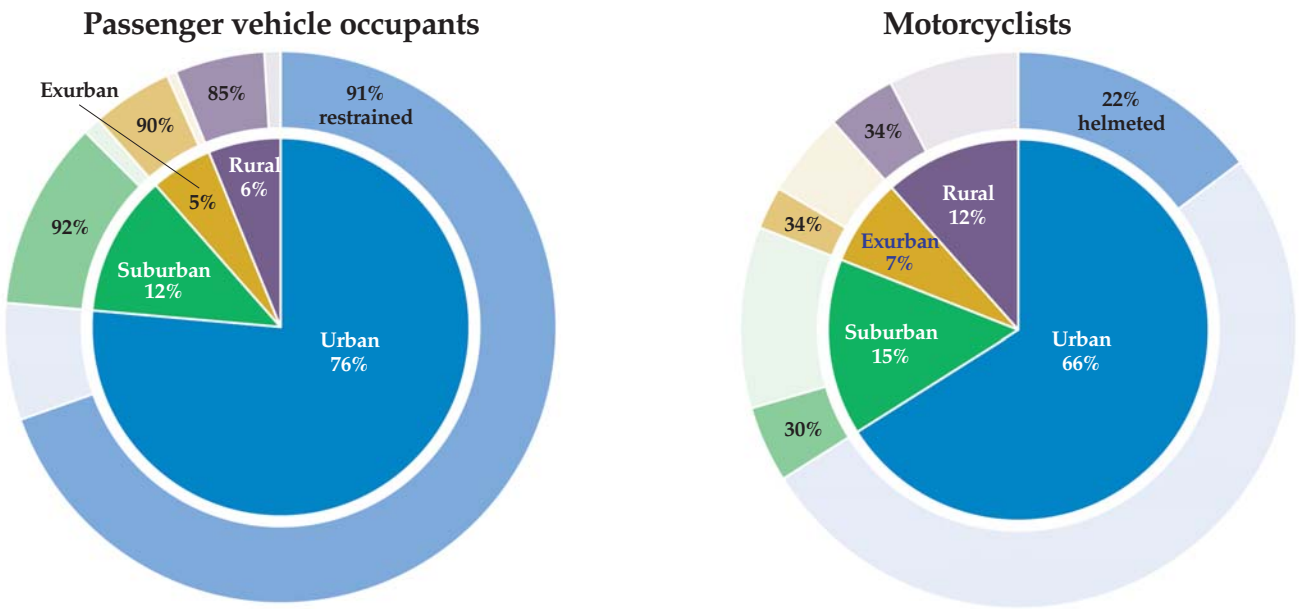


Source: *Indiana Safety Belt Observational Survey, June, 2014, Survey Results.* Center for Road Safety, Purdue University

Note: In 2013, the Center for Road Safety adopted a new survey methodology approved by NHTSA. This new approach incorporates changes in the weighting of samples that may contribute to the observed decreases in Indiana seatbelt usage in 2013.

Restraint use and helmet use among people involved in collisions varies by Census locale. Restraint use among passenger vehicle occupants in collisions tends to increase in more densely populated *urban* (91 percent) and *suburban* (92 percent) areas, compared to 85 percent in *rural* areas (Figure 1.9). While helmet usage is far lower than seatbelt usage across all locales, the reverse is true for motorcyclists. Helmet usage among motorcyclists involved in collisions is greater outside of *urban* areas in Indiana. Among motorcyclists in collisions, 22 percent of motorcyclists in *urban* areas were helmeted, compared to 34 percent in *rural* areas.

Figure 1.9. Safety equipment usage among vehicle occupants and motorcyclists in collisions, by Census locale, 2013



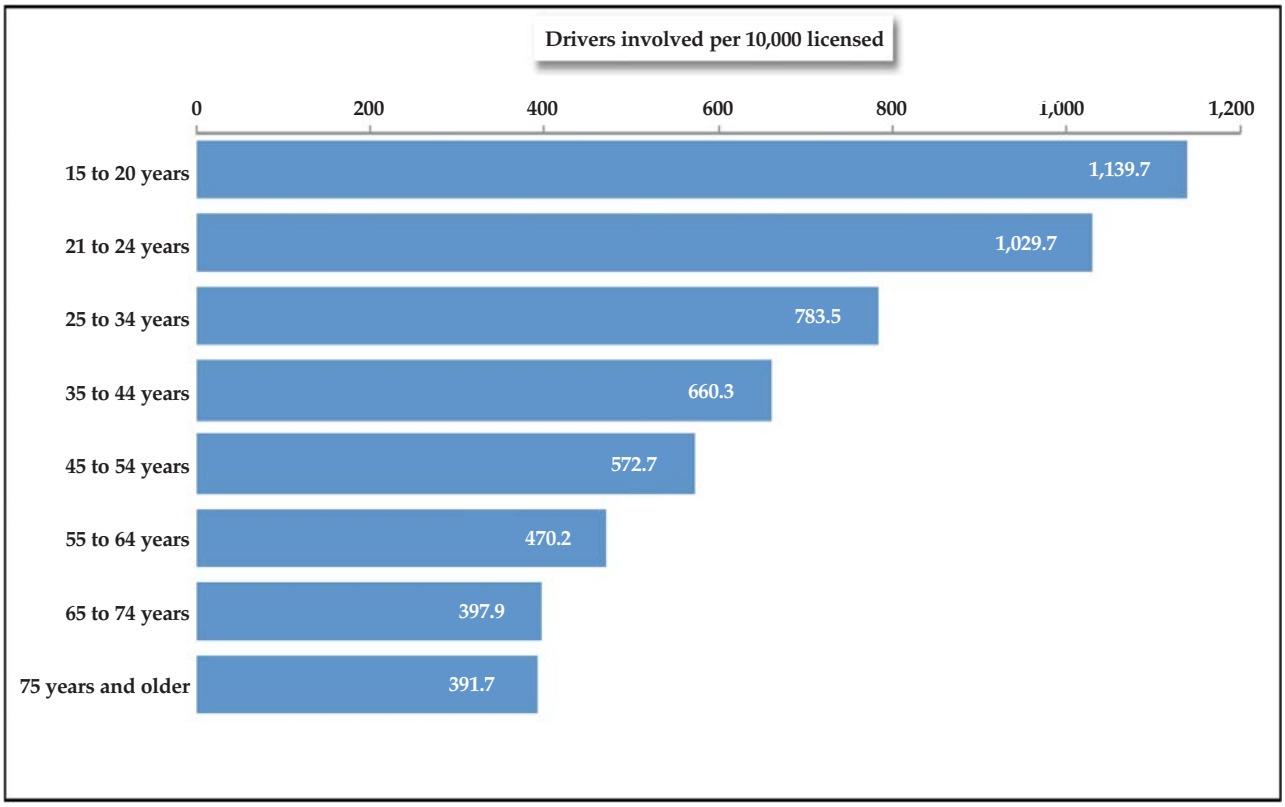
Inner pie: Geographic distribution of occupants involved
Outer ring: Safety equipment use rates, by locality

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Notes:
1) Passenger vehicles include vehicles reported as a *passenger car, pickup truck, van,* or *sport utility vehicle*.
2) Motorcycles includes *motorcycles* and *mopeds*.
3) Excludes cases where locale could not be determined.
4) See glossary for Census locale definitions.

GOAL: Reducing young driver involvement in fatal crashes

In 2013, collision involvement rates were higher among young drivers than any other age group (Figure 1.10). Crash rates are lowest among drivers 75 years and older (392 per 10,000 licensed). Young drivers are more likely than older drivers to be involved in collisions due to aggressive driving behavior and a lack of experience.

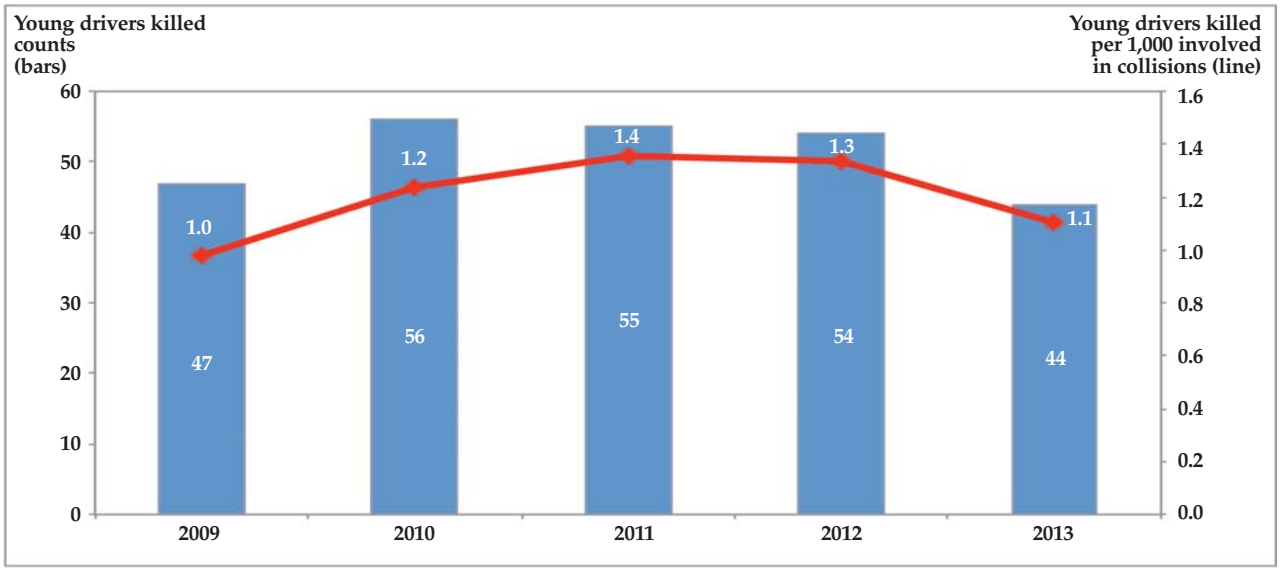
Figure 1.10. Drivers in Indiana collisions per 10,000 licensed, by age group, 2013



Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Indiana Bureau of Motor Vehicles
Notes:
1) Vehicle types reported as *animal-drawn vehicle*, *pedestrian*, and *pedalcyclist* are excluded. Unknown vehicle types are also excluded.
2) Drivers with unknown or invalid age are excluded.

The overall number of young drivers involved in collisions has decreased since the July 2009 implementation of the Indiana Graduated Driver Licensing (GDL) system. The number of young drivers killed in collisions reached a five-year low (44) in 2013 (Figure 1.11).

Figure 1.11. Young drivers killed in Indiana collisions, 2009-2013



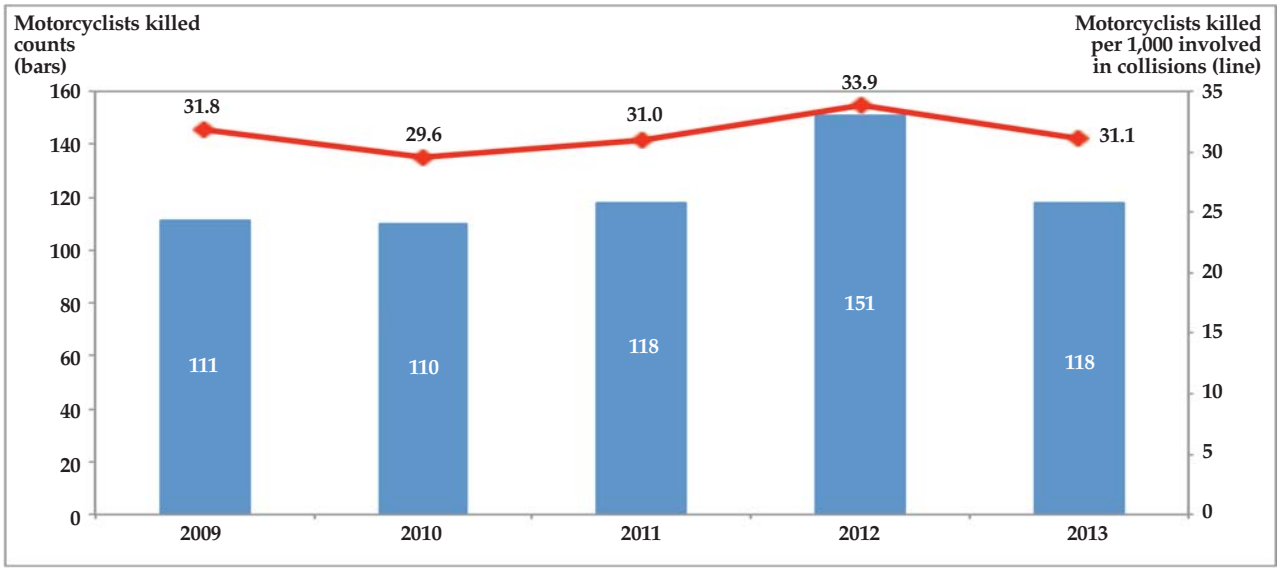
Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

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

GOAL: Reducing motorcyclist fatalities

While 2012 marked a five-year high in the number of Indiana motorcyclist fatalities, this number decreased dramatically in 2013 (118) to pre-2012 levels (Figure 1.12). The rate per 1,000 motorcyclists involved in crashes decreased from 34 per 1,000 in 2012 to 31 per 1,000 in 2013. Earlier exhibits demonstrate two major contributing factors to Indiana's motorcycle fatality rate: the high rate of impaired motorcycle operators illustrated in Figure 1.6, and the low rate of helmet usage illustrated in Figure 1.7.

Figure 1.12. Motorcyclists killed in Indiana collisions, 2009-2013



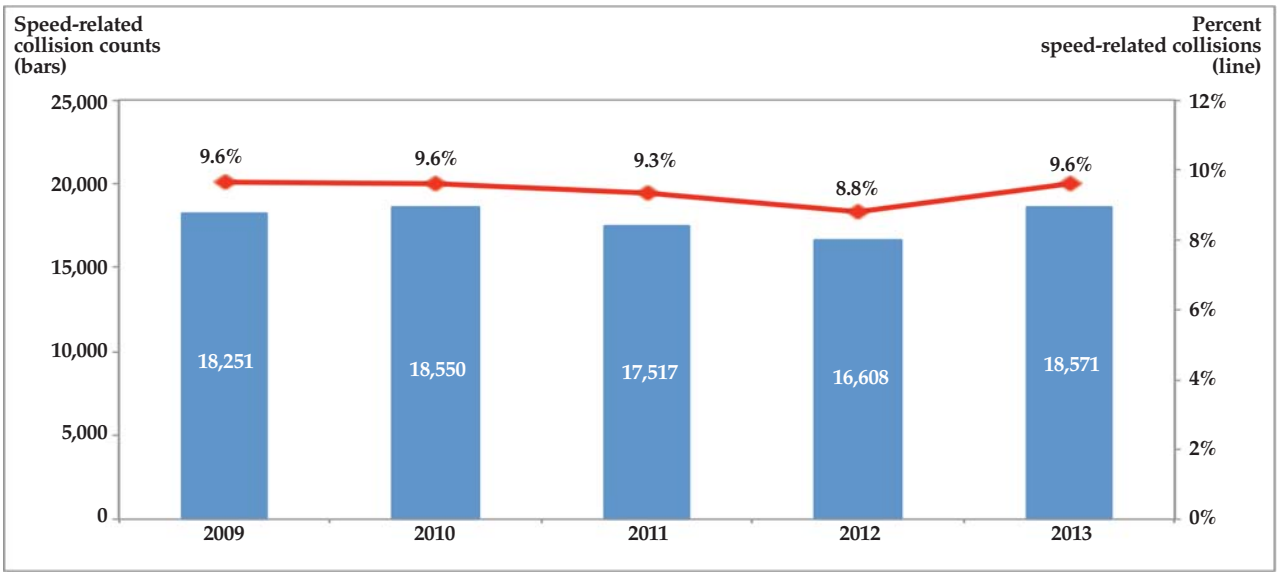
Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: *Motorcyclists* include motorcycle and moped operators and passengers.

GOAL: Reducing dangerous driving

The number of Indiana collisions that involved a speeding driver reached a five-year high in 2013, and increased from 16,608 in 2012 to 18,571 in 2013 (Figure 1.13). The percent of Indiana collisions that involved a speeding driving has remained similar from 2009 to 2013.

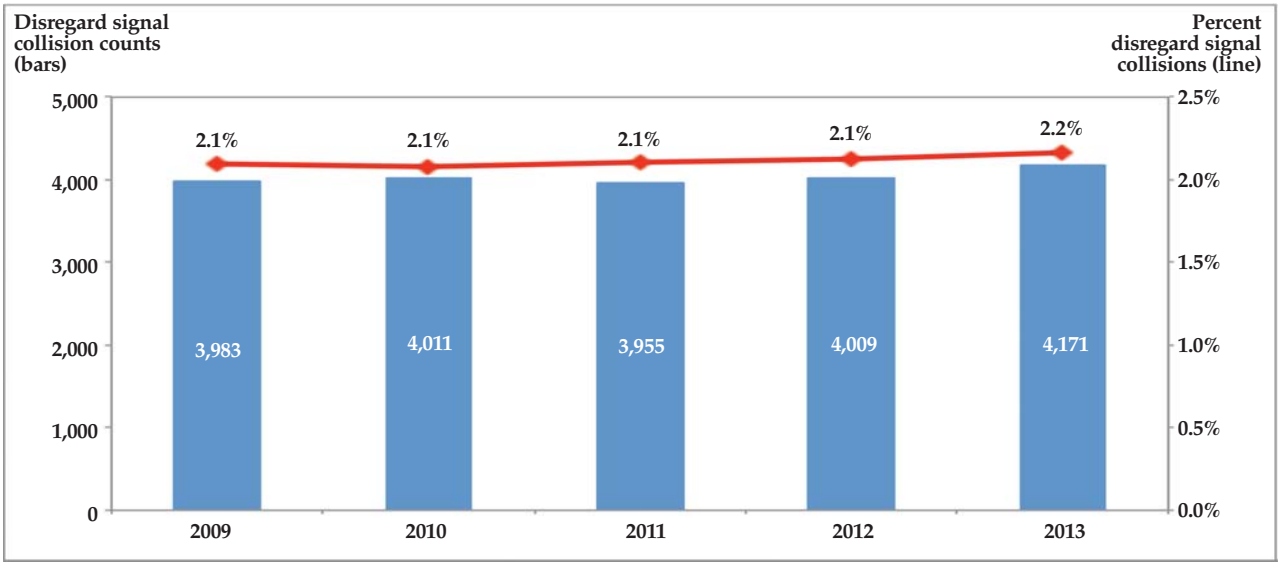
Disregarding signals is also a form of dangerous driving, and is more common among the most inexperienced (ages 15 to 17 years) and most elderly populations (ages 65 and older) (not shown in Figure 1.14). The percent of Indiana collisions that involved a driver who disregarded a signal has remained steady since 2009 (Figure 1.14).

Figure 1.13. Indiana collisions that involved a speeding driver, 2009-2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Figure 1.14. Indiana collisions that involved a driver that disregarded a signal, 2009-2013

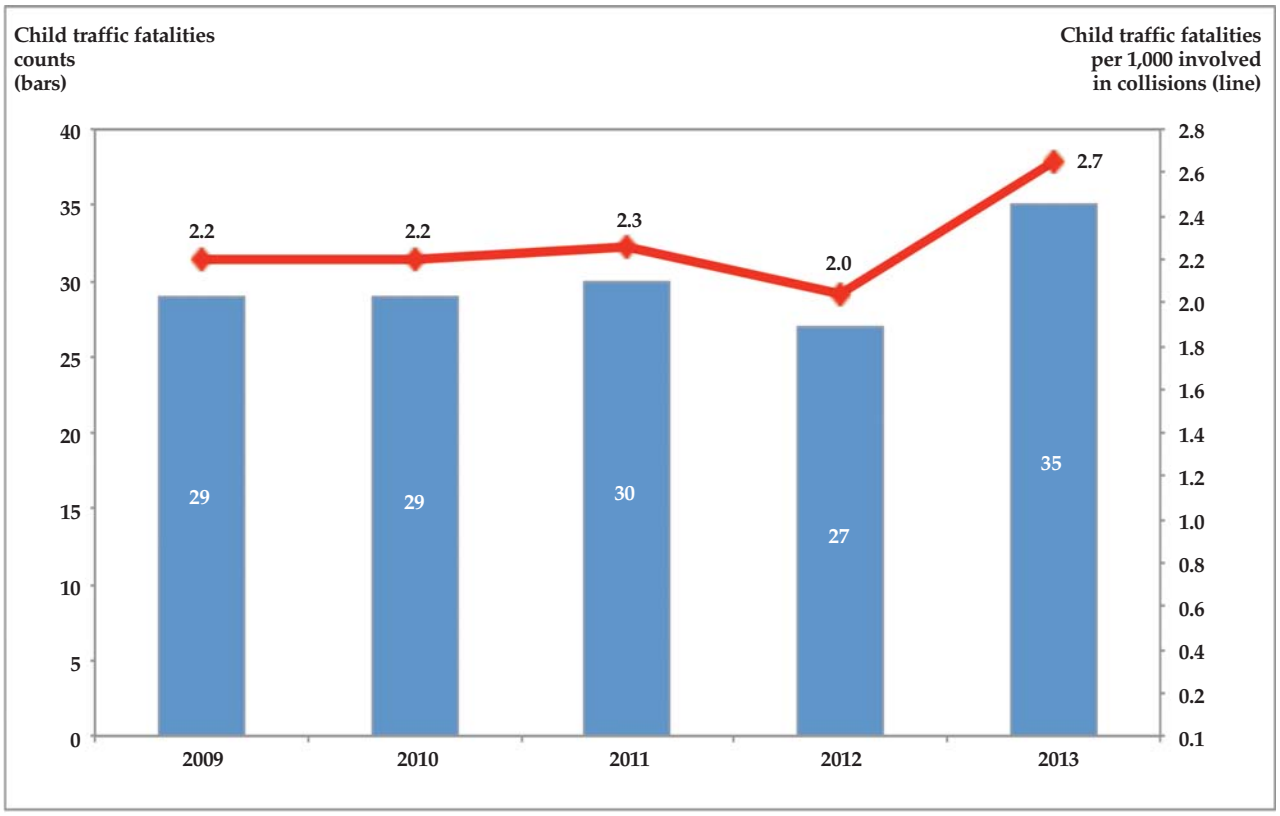


Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

GOAL: Reducing fatalities and serious injuries among children

From 2009 to 2013, the number of children killed in Indiana traffic collisions increased from 29 to 35. The rate per 100,000 population of children (ages 0 to 15) killed in traffic collisions in Indiana increased from 2.0 in 2012 to 2.7 in 2013.

Figure 1.15. Children ages 14 and under killed in Indiana collisions, 2009-2013

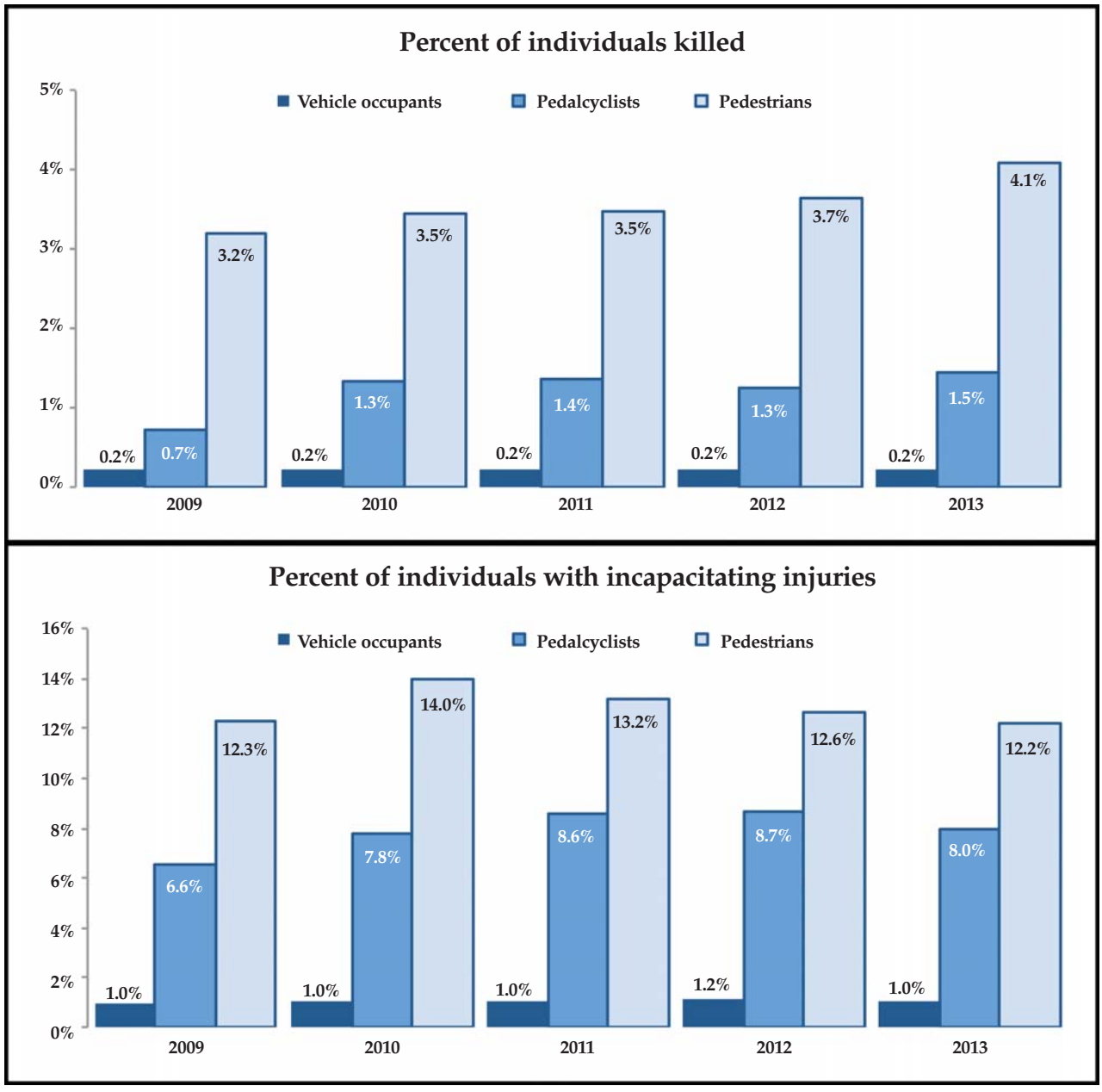


Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: *Children* include individuals ages 14 and under.

GOAL: Reducing fatalities and serious injuries among non-motorists

In 2013, non-motorists (pedestrians and pedalcyclists) represented less than 1 percent of all individuals in traffic collisions, but 11 percent of total Indiana traffic fatalities (not shown). The percent of all pedestrians in Indiana crashes that were killed increased from 3.2 percent in 2009 to 4.1 percent in 2013 (Figure 1.16). The percent of all pedestrians in collisions who suffered incapacitating injuries decreased from 12.6 in 2012 to 12.2 percent in 2013.

Figure 1.16. Fatal and incapacitating injuries in Indiana collisions as a percent of all involved, by person type, 2009-2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: *Animal-drawn vehicle occupants* are excluded.

CHAPTER 2

GENERAL TRENDS

GENERAL TRENDS, 2013

The rate of traffic fatalities per 100 million vehicle miles traveled (VMT) in Indiana (1.10) was unchanged between 2012 and 2013 (Figure 2.1). The Indiana rate per 100 million VMT was consistently below the national rate between 2004 and 2012 (latest year of U.S. data available).

Between 2009 and 2013, the winter months of January and December had the highest incidence of total collisions while warm weather months had the highest incidence of fatal collisions (Table 2.1). During this five-year period, the lowest incidence of total collisions occurred during the months of March and April, while the lowest incidence of fatal collisions occurred during the months of February and March.

When looking at all collisions by days of the week, Fridays consistently had the highest incidence of collisions and Sundays had the lowest between 2009 and 2013 (Table 2.2). With the exception of 2011, weekend days had the highest incidence of fatal collisions during this same time period.

The total number of fatal collisions decreased 2.1 percent from 2012 to 2013. Both *aggressive driving* (5,039) and *speeding* collisions (18,571) increased 12 percent in 2013, while crashes that involved an *alcohol-impaired* driver and crashes that involved a driver that was *distracted by a cell phone* decreased 7.7 percent and 5.7 percent, respectively (Figure 2.2).

Drivers killed in Indiana traffic collisions have generally made up about 70 percent of all fatalities since 2009 (calculated from Table 2.3). The total number of vehicle occupants (drivers and passengers) and non-motorists killed or injured in Indiana traffic collisions in 2013 (46,077) decreased 4 percent from 2012 (Table 2.3).

Driver traffic fatalities in Indiana collisions that involved an *alcohol-impaired* driver decreased 25 percent from 132 in 2012 to 99 in 2013 (Table 2.4). Eighty percent of *alcohol-impaired* traffic fatalities (99 of 124) were drivers (calculated from Table 2.4).

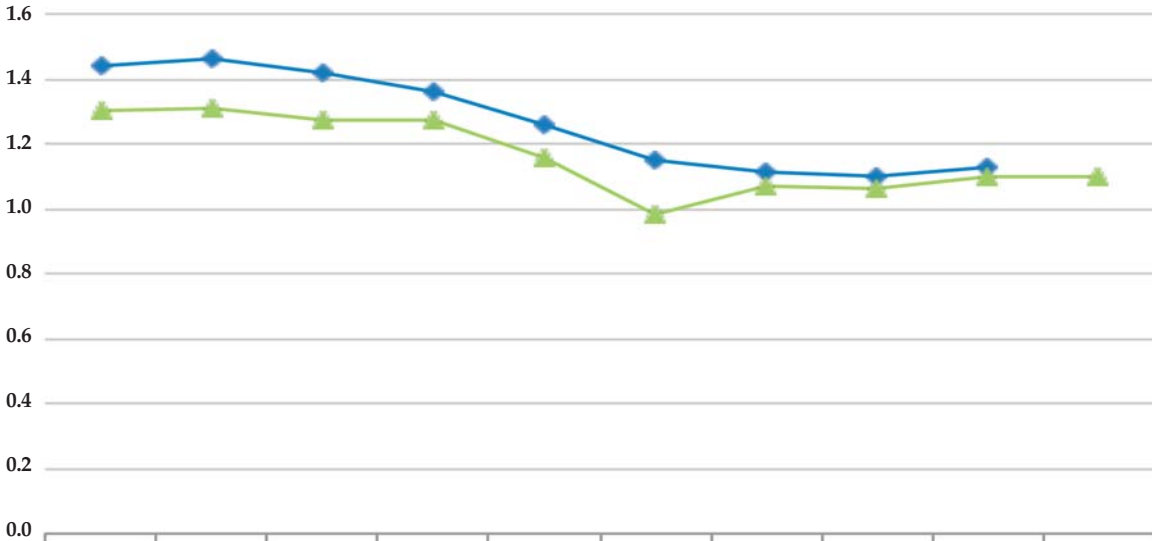
Aggressive driving collisions (5,039) increased 12.1 percent in 2013, and have increased at an annualized rate of 6.3 percent since 2009 (Table 2.5). The total number of individuals killed in aggressive driving crashes increased from 36 in 2012 to 63 in 2013 (75 percent).

The number of Indiana collisions that involved a driver who was *speeding* (18,571) increased nearly 12 percent in 2013, up from 16,608 in 2012 (Table 2.6). The number of traffic fatalities that occurred in speeding collisions (214) increased 22.3 percent in 2013.

The number of individuals killed in Indiana traffic collisions that involved a driver who *disregarded a signal* decreased 17.4 percent (down from 23 fatalities in 2012 to 19 fatalities in 2013). Total *disregarding a signal* collisions (4,171) increased 4 percent in 2013, and increased at an annualized rate of 1.2 percent since 2009 (Table 2.7). While little change occurred in the number of collisions that involved a *hit-and-run* driver (from 23,050 in 2012 to 23,333 in 2013) (Table 2.8), the number of fatal *hit-and-run* collisions decreased 18.2 percent from 33 in 2012 to 27 in 2013. In 2013, 1,068 Indiana collisions involved a driver that was *distracted by a cell phone,* five of which were fatal collisions (Table 2.9).

Alcohol-impaired collisions represented just 2.5 percent of all Indiana collisions in 2013 (Table 2.10), while 16.2 percent of fatal crashes involved an impaired driver (down nearly 5 percentage points from 2012). Approximately 10 percent of total crashes and 26 percent of fatal crashes involved a driver who was speeding. When considering the geography of Indiana collisions, all locales (*urban, suburban, exurban,* and *rural*) saw an increase in 2013 (Figure 2.3). Fatal collisions in *rural* areas decreased 11.7 percent, from 137 in 2012 to 121 in 2013).

Figure 2.1. Traffic fatalities per 100M vehicle miles traveled (VMT), 2004-2013



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
U.S.	1.44	1.46	1.42	1.36	1.26	1.15	1.11	1.10	1.13	na
Indiana	1.30	1.31	1.27	1.27	1.16	0.98	1.07	1.06	1.10	1.10

Sources:
U.S.: National Highway Traffic Safety Administration, National Center for Statistics and Analysis, State Traffic Data (June 2014). DOT HS 812 033.
Indiana: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Indiana Department of Transportation
Notes:
1) Indiana VMT for 2013 is a provisional estimate provided by the Indiana Department of Transportation (subject to change).
2) U.S. fatality numbers for 2013 not yet available.

Table 2.1. Total and fatal traffic collisions, by month, 2009-2013

Month	Total collisions					Fatal collisions				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Jan	20,219	17,060	18,825	17,434	15,481	50	45	56	45	45
Feb	15,255	17,381	16,247	14,169	14,242	48	41	42	43	43
Mar	12,753	13,377	12,742	14,581	15,935	39	50	34	58	54
Apr	14,055	14,166	13,698	13,881	14,030	46	62	43	49	65
May	15,402	15,396	15,126	15,976	16,317	50	58	59	63	49
Jun	14,887	15,432	14,829	15,120	15,256	66	63	58	84	49
Jul	14,118	15,040	14,206	14,422	15,010	68	72	76	79	57
Aug	14,468	14,918	14,992	15,490	15,493	63	71	71	70	74
Sep	14,615	14,905	15,139	14,860	15,743	64	56	64	62	78
Oct	17,576	16,992	17,281	17,608	17,622	47	71	65	54	71
Nov	16,924	17,223	18,401	16,565	18,418	43	57	49	50	62
Dec	19,389	20,995	16,640	18,735	19,466	47	55	57	61	56
Total	**189,661**	**192,885**	**188,126**	**188,841**	**193,013**	**631**	**701**	**674**	**718**	**703**
High	*Jan*	*Dec*	*Jan*	*Dec*	*Dec*	*Jul*	*Jul*	*Jul*	*Jun*	*Sep*
Low	*Mar*	*Mar*	*Mar*	*Apr*	*Apr*	*Mar*	*Feb*	*Mar*	*Feb*	*Feb*

Low High

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: Conditional formatting color-scales are illustrated to show months from low to high for the entire 5-year period, 2009-2013.

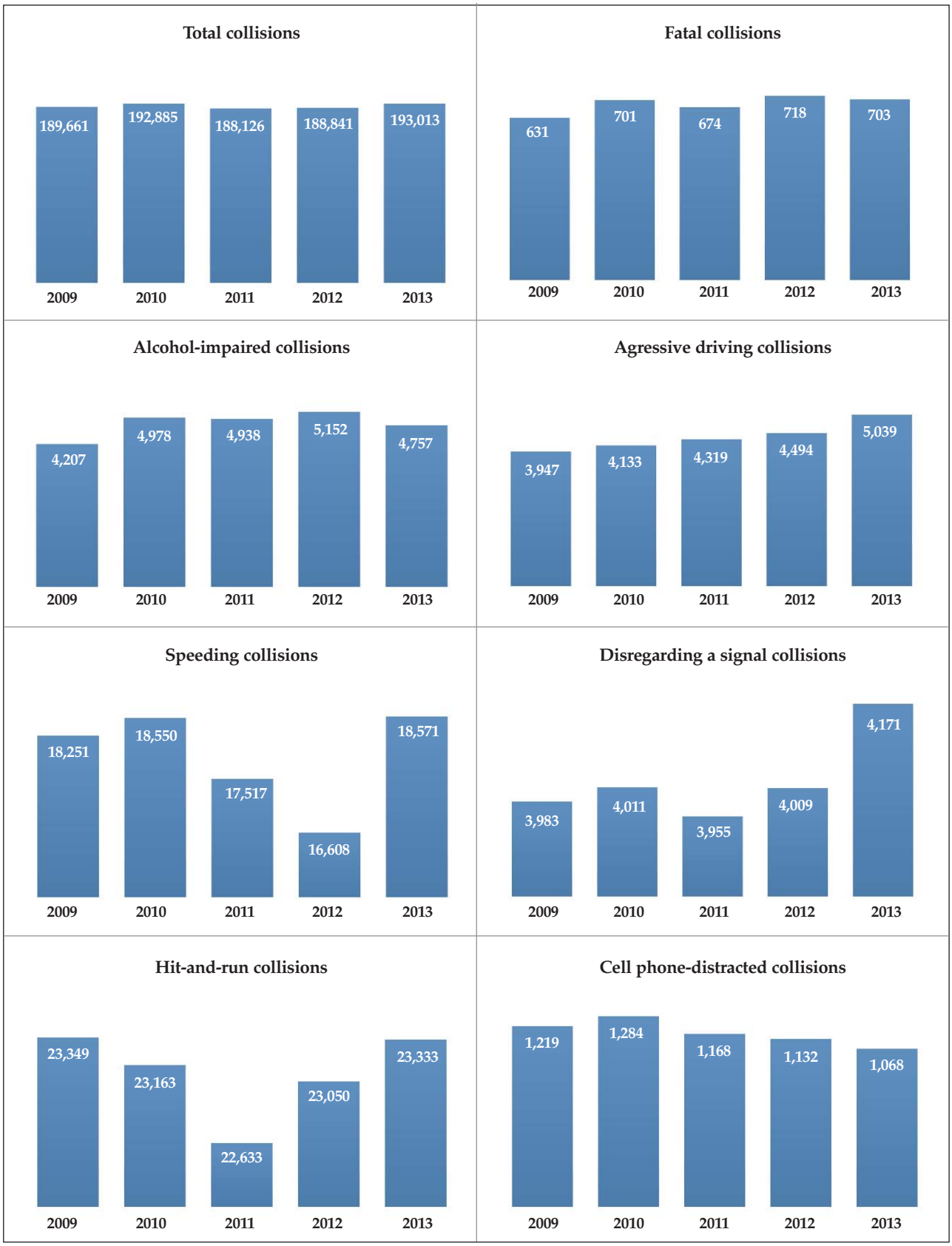
Table 2.2. Total and fatal traffic collisions, by day of week, 2009-2013

Month	Total collisions					Fatal collisions				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Sun	19,955	19,966	18,913	19,187	19,801	95	96	97	103	108
Mon	26,233	27,441	27,088	27,008	27,178	67	79	92	88	102
Tue	28,436	28,483	28,457	26,946	28,381	87	95	105	92	105
Wed	28,701	28,842	26,933	27,537	28,357	89	74	87	103	80
Thur	28,483	29,155	29,204	28,720	29,330	82	94	93	106	89
Fri	31,575	33,474	32,213	33,938	33,978	96	129	101	113	91
Sat	26,278	25,524	25,318	25,505	25,988	115	134	99	113	128
Total	**189,661**	**192,885**	**188,126**	**188,841**	**193,013**	**631**	**701**	**674**	**718**	**703**
High	*Fri*	*Fri*	*Fri*	*Fri*	*Fri*	*Sat*	*Sat*	*Tue*	*Fri*	*Sat*
Low	*Sun*	*Sun*	*Sun*	*Sun*	*Sun*	*Mon*	*Wed*	*Wed*	*Mon*	*Wed*

Low High

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Figure 2.2. Indiana collisions, by collision type, 2009-2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: See glossary for definition of *alcohol-impaired, aggressive driving,* and *speeding* collisions.

Table 2.3. Total traffic collisions and related injuries in Indiana, 2009-2013

	Collisions, by severity						Annual rate of change	
	Severity	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
	Fatal	631	701	674	718	703	-2.1%	2.7%
	Non-fatal injury	33,410	34,083	32,734	34,087	32,820	-3.7%	-0.4%
	Property damage	155,620	158,101	154,718	154,036	159,490	3.5%	0.6%
	Total	**189,661**	**192,885**	**188,126**	**188,841**	**193,013**	**2.2%**	**0.4%**
	Fatal, per 100m VMT	*0.89*	*0.96*	*0.89*	*0.94*	*0.92*	*-2.5%*	*0.7%*
	Total, per 100m VMT	*267.67*	*264.46*	*248.55*	*247.15*	*251.62*	*1.8%*	*-1.5%*
	Injuries, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
Driver	Fatal	491	520	523	540	524	-3.0%	1.6%
	Incapacitating	2,162	2,270	2,358	2,596	2,391	-7.9%	2.5%
	Non-incapacitating	29,904	30,355	28,810	30,040	28,965	-3.6%	-0.8%
	Subtotal	**32,557**	**33,145**	**31,691**	**33,176**	**31,880**	**-3.9%**	**-0.5%**
Injured occupant	Fatal	139	157	146	160	167	4.4%	4.7%
	Incapacitating	742	839	723	894	763	-14.7%	0.7%
	Non-incapacitating	11,510	11,733	10,995	11,247	10,949	-2.6%	-1.2%
	Subtotal	**12,391**	**12,729**	**11,864**	**12,301**	**11,879**	**-3.4%**	**-1.0%**
Non-motorist	Fatal	62	77	80	79	86	8.9%	8.5%
	Incapacitating	275	334	324	320	289	-9.7%	1.2%
	Non-incapacitating	1,996	2,080	2,034	2,061	1,943	-5.7%	-0.7%
	Subtotal	**2,333**	**2,491**	**2,438**	**2,460**	**2,318**	**-5.8%**	**-0.2%**
All	Fatal	692	754	749	779	777	-0.3%	2.9%
	Incapacitating	3,179	3,443	3,405	3,810	3,443	-9.6%	2.0%
	Non-incapacitating	43,410	44,168	41,839	43,348	41,857	-3.4%	-0.9%
	Total	**47,281**	**48,365**	**45,993**	**47,937**	**46,077**	**-3.9%**	**-0.6%**

Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Bureau of Transportation Statistics

Notes:

1) ***Non-fatal*** **injury collisions are those with no fatalities and at least one injury reported as** ***incapacitating, non-incapacitating,*** **or** ***possible.***

2) ***Non-incapacitating*** **includes injuries reported as** ***non-incapacitating*** **and** ***possible.***

3) ***Non-motorist*** **includes** ***pedestrians, pedalcyclists,*** **and** ***animal-drawn vehicle occupants.***

Table 2.4. Alcohol-impaired collisions and related injuries in Indiana, 2009-2013

	Alcohol-impaired collisions, by severity						Annual rate of change	
	Severity	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
	Fatal	120	130	133	150	114	-24.0%	-1.3%
	Non-fatal injury	1,217	1,517	1,434	1,507	1,381	-8.4%	3.2%
	Property damage	2,870	3,331	3,371	3,495	3,262	-6.7%	3.3%
	Total	**4,207**	**4,978**	**4,938**	**5,152**	**4,757**	**-7.7%**	**3.1%**
	Fatal, per 100m VMT	*0.17*	*0.18*	*0.18*	*0.20*	*0.15*	*-24.3%*	*-3.2%*
	Total, per 100m VMT	*5.94*	*6.83*	*6.52*	*6.74*	*6.20*	*-8.0%*	*1.1%*
	Injuries in alcohol-impaired collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
Driver	Fatal	105	102	119	132	99	-25.0%	-1.5%
	Incapacitating	110	179	157	184	154	-16.3%	8.8%
	Non-incapacitating	1,124	1,364	1,312	1,341	1,259	-6.1%	2.9%
	Subtotal	**1,339**	**1,645**	**1,588**	**1,657**	**1,512**	**-8.8%**	**3.1%**
Injured occupant	Fatal	20	24	19	20	23	15.0%	3.6%
	Incapacitating	39	68	53	56	68	21.4%	14.9%
	Non-incapacitating	367	449	431	429	419	-2.3%	3.4%
	Subtotal	**426**	**541**	**503**	**505**	**510**	**1.0%**	**4.6%**
Non-motorist	Fatal	2	9	2	6	2	-66.7%	0.0%
	Incapacitating	4	17	15	6	15	150.0%	39.2%
	Non-incapacitating	22	27	28	27	28	3.7%	6.2%
	Subtotal	**28**	**53**	**45**	**39**	**45**	**15.4%**	**12.6%**
All	Fatal	127	135	140	158	124	-21.5%	-0.6%
	Incapacitating	153	264	225	246	237	-3.7%	11.6%
	Non-incapacitating	1,513	1,840	1,771	1,797	1,706	-5.1%	3.0%
	Total	**1,793**	**2,239**	**2,136**	**2,201**	**2,067**	**-6.1%**	**3.6%**

Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Bureau of Transportation Statistics

Notes:
1) See glossary for definition of *alcohol-impaired*.
2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating*, *non-incapacitating*, or *possible*.
3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.
3) *Non-motorist* includes *pedestrians*, *pedalcyclists*, and *animal-drawn vehicle occupants*.

Table 2.5. Aggressive driving collisions and related injuries in Indiana, 2009-2013

	Aggressive driving collisions, by severity						Annual rate of change	
	Severity	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
	Fatal	22	20	30	33	54	63.6%	25.2%
	Non-fatal injury	982	1,125	1,120	1,215	1,342	10.5%	8.1%
	Property damage	2,943	2,988	3,169	3,246	3,643	12.2%	5.5%
	Total	**3,947**	**4,133**	**4,319**	**4,494**	**5,039**	**12.1%**	**6.3%**
	Fatal, per 100m VMT	*0.03*	*0.03*	*0.04*	*0.04*	*0.07*	*63.0%*	*22.7%*
	Total, per 100m VMT	*5.57*	*5.67*	*5.71*	*5.88*	*6.57*	*11.7%*	*4.2%*
	Injuries in aggressive driving collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
Driver	Fatal	19	13	28	24	38	58.3%	18.9%
	Incapacitating	69	97	107	144	109	-24.3%	12.1%
	Non-incapacitating	951	1,136	1,131	1,206	1,368	13.4%	9.5%
	Subtotal	**1,039**	**1,246**	**1,266**	**1,374**	**1,515**	**10.3%**	**9.9%**
Injured occupant	Fatal	6	6	11	9	24	166.7%	41.4%
	Incapacitating	28	47	39	57	33	-42.1%	4.2%
	Non-incapacitating	412	540	448	477	587	23.1%	9.3%
	Subtotal	**446**	**593**	**498**	**543**	**644**	**18.6%**	**9.6%**
Non-motorist	Fatal	0	2	0	3	1	-66.7%	na
	Incapacitating	5	1	5	5	4	-20.0%	-5.4%
	Non-incapacitating	32	32	26	27	26	-3.7%	-5.1%
	Subtotal	**37**	**35**	**31**	**35**	**31**	**-11.4%**	**-4.3%**
All	Fatal	25	21	39	36	63	75.0%	26.0%
	Incapacitating	102	145	151	206	146	-29.1%	9.4%
	Non-incapacitating	1,395	1,708	1,605	1,710	1,981	15.8%	9.2%
	Total	**1,522**	**1,874**	**1,795**	**1,952**	**2,190**	**12.2%**	**9.5%**

Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Bureau of Transportation Statistics

Notes:

1) See glossary for definition of *aggressive driving*.

2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating, non-incapacitating,* or *possible*.

3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.

4) *Non-motorist* includes *pedestrians, pedalcyclists,* and *animal-drawn vehicle occupants*.

Table 2.6. Speeding collisions and related injuries in Indiana, 2009-2013

	Speeding collisions, by severity						Annual rate of change	
	Severity	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
	Fatal	136	136	131	163	183	12.3%	7.7%
	Non-fatal injury	4,117	4,143	4,104	4,054	4,264	5.2%	0.9%
	Property damage	13,998	14,271	13,282	12,391	14,124	14.0%	0.2%
	Total	**18,251**	**18,550**	**17,517**	**16,608**	**18,571**	**11.8%**	**0.4%**
	Fatal, per 100m VMT	*0.19*	*0.19*	*0.17*	*0.21*	*0.24*	*11.8%*	*5.6%*
	Total, per 100m VMT	*25.76*	*25.43*	*23.14*	*21.74*	*24.21*	*11.4%*	*-1.5%*
	Injuries in speeding collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
Driver	Fatal	115	98	105	131	145	10.7%	6.0%
	Incapacitating	359	380	409	435	413	-5.1%	3.6%
	Non-incapacitating	3,678	3,745	3,729	3,604	3,812	5.8%	0.9%
	Subtotal	**4,152**	**4,223**	**4,243**	**4,170**	**4,370**	**4.8%**	**1.3%**
Injured occupant	Fatal	40	41	38	40	65	62.5%	12.9%
	Incapacitating	147	171	150	192	157	-18.2%	1.7%
	Non-incapacitating	1,676	1,583	1,459	1,456	1,583	8.7%	-1.4%
	Subtotal	**1,863**	**1,795**	**1,647**	**1,688**	**1,805**	**6.9%**	**-0.8%**
Non-motorist	Fatal	3	6	7	4	4	0.0%	7.5%
	Incapacitating	8	15	19	19	19	0.0%	24.1%
	Non-incapacitating	79	87	84	81	90	11.1%	3.3%
	Subtotal	**90**	**108**	**110**	**104**	**113**	**8.7%**	**5.9%**
All	Fatal	158	145	150	175	214	22.3%	7.9%
	Incapacitating	514	566	578	646	589	-8.8%	3.5%
	Non-incapacitating	5,433	5,415	5,272	5,141	5,485	6.7%	0.2%
	Total	**6,105**	**6,126**	**6,000**	**5,962**	**6,288**	**5.5%**	**0.7%**

Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Bureau of Transportation Statistics

Notes:

1) See glossary for definition of *speeding*.

2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating*, *non-incapacitating*, or *possible*.

3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.

4) *Non-motorist* includes *pedestrians*, *pedalcyclists*, and *animal-drawn vehicle occupants*.

Table 2.7. Disregarded traffic signal collisions and related injuries in Indiana, 2009-2013

	Disregarded traffic signal collisions, by severity						Annual rate of change	
	Severity	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
	Fatal	14	15	15	22	18	-18.2%	6.5%
	Non-fatal injury	1,506	1,519	1,451	1,577	1,523	-3.4%	0.3%
	Property damage	2,463	2,477	2,489	2,410	2,630	9.1%	1.7%
	Total	**3,983**	**4,011**	**3,955**	**4,009**	**4,171**	**4.0%**	**1.2%**
	Fatal, per 100m VMT	*0.02*	*0.02*	*0.02*	*0.03*	*0.02*	*-18.5%*	*4.4%*
	Total, per 100m VMT	*5.62*	*5.50*	*5.23*	*5.25*	*5.44*	*3.6%*	*-0.8%*
	Injuries in disregarded traffic signal collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
Driver	Fatal	12	12	12	14	15	7.1%	5.7%
	Incapacitating	95	82	107	124	89	-28.2%	-1.6%
	Non-incapacitating	1,613	1,662	1,533	1,717	1,655	-3.6%	0.6%
	Subtotal	**1,720**	**1,756**	**1,652**	**1,855**	**1,759**	**-5.2%**	**0.6%**
Injured occupant	Fatal	3	3	5	8	4	-50.0%	7.5%
	Incapacitating	26	46	35	30	39	30.0%	10.7%
	Non-incapacitating	683	669	591	700	724	3.4%	1.5%
	Subtotal	**712**	**718**	**631**	**738**	**767**	**3.9%**	**1.9%**
Non-motorist	Fatal	1	0	0	1	0	-100.0%	-100.0%
	Incapacitating	2	0	0	3	2	-33.3%	0.0%
	Non-incapacitating	12	11	14	18	10	-44.4%	-4.5%
	Subtotal	**15**	**11**	**14**	**22**	**12**	**-45.5%**	**-5.4%**
All	Fatal	16	15	17	23	19	-17.4%	4.4%
	Incapacitating	123	128	142	157	130	-17.2%	1.4%
	Non-incapacitating	2,308	2,342	2,138	2,435	2,389	-1.9%	0.9%
	Total	**2,447**	**2,485**	**2,297**	**2,615**	**2,538**	**-2.9%**	**0.9%**

Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Bureau of Transportation Statistics

Notes:
1) See glossary for definition of *disregarding a signal*.
2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating, non-incapacitating*, or *possible*.
3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.
4) *Non-motorist* includes *pedestrians, pedalcyclists*, and *animal-drawn vehicle occupants*.

Table 2.8 Hit-and-run collisions and related injuries in Indiana, 2009-2013

	Hit-and-run collisions, by severity						Annual rate of change	
	Severity	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
	Fatal	22	28	28	33	27	-18.2%	5.3%
	Non-fatal injury	1,932	1,850	1,825	1,842	1,790	-2.8%	-1.9%
	Property damage	21,395	21,285	20,780	21,175	21,516	1.6%	0.1%
	Total	**23,349**	**23,163**	**22,633**	**23,050**	**23,333**	**1.2%**	**0.0%**
	Fatal, per 100m VMT	*0.03*	*0.04*	*0.04*	*0.04*	*0.04*	*-18.5%*	*3.2%*
	Total, per 100m VMT	*32.95*	*31.76*	*29.90*	*30.17*	*30.42*	*0.8%*	*-2.0%*
	Injuries in hit-and-run collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
Driver	Fatal	7	10	3	14	10	-28.6%	9.3%
	Incapacitating	68	56	47	65	64	-1.5%	-1.5%
	Non-incapacitating	1,311	1,212	1,212	1,251	1,219	-2.6%	-1.8%
	Subtotal	**1,386**	**1,278**	**1,262**	**1,330**	**1,293**	**-2.8%**	**-1.7%**
Injured occupant	Fatal	5	4	3	5	4	-20.0%	-5.4%
	Incapacitating	40	35	32	60	30	-50.0%	-6.9%
	Non-incapacitating	559	550	502	543	614	13.1%	2.4%
	Subtotal	**604**	**589**	**537**	**608**	**648**	**6.6%**	**1.8%**
Non-motorist	Fatal	11	14	22	14	14	0.0%	6.2%
	Incapacitating	38	44	43	38	31	-18.4%	-5.0%
	Non-incapacitating	340	365	367	298	289	-3.0%	-4.0%
	Subtotal	**389**	**423**	**432**	**350**	**334**	**-4.6%**	**-3.7%**
All	Fatal	23	28	28	33	28	-15.2%	5.0%
	Incapacitating	146	135	122	163	125	-23.3%	-3.8%
	Non-incapacitating	2,210	2,127	2,081	2,092	2,122	1.4%	-1.0%
	Total	**2,379**	**2,290**	**2,231**	**2,288**	**2,275**	**-0.6%**	**-1.1%**

Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Bureau of Transportation Statistics

Notes:

1) See glossary for definition of *hit-and-run*.

2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating, non-incapacitating,* or *possible*.

3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.

4) *Non-motorist* includes *pedestrians, pedalcyclists,* and *animal-drawn vehicle occupants*.

Table 2.9. Cell phone-distracted collisions and related injuries in Indiana, 2009-2013

	Cell phone-distracted collisions, by severity						Annual rate of change	
	Severity	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
	Fatal	2	4	5	7	5	-28.6%	25.7%
	Non-fatal injury	313	334	319	283	269	-4.9%	-3.7%
	Property damage	904	946	844	842	794	-5.7%	-3.2%
	Total	**1,219**	**1,284**	**1,168**	**1,132**	**1,068**	**-5.7%**	**-3.3%**
	Fatal, per 100m VMT	*0.00*	*0.01*	*0.01*	*0.01*	*0.01*	*-28.9%*	*23.3%*
	Total, per 100m VMT	*1.72*	*1.76*	*1.54*	*1.48*	*1.39*	*-6.0%*	*-5.2%*
	Injuries in cell phone-distracted collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
Driver	Fatal	2	5	4	3	4	33.3%	18.9%
	Incapacitating	15	19	18	22	16	-27.3%	1.6%
	Non-incapacitating	306	306	289	262	265	1.1%	-3.5%
	Subtotal	**323**	**330**	**311**	**287**	**285**	**-0.7%**	**-3.1%**
Injured occupant	Fatal	0	0	1	3	1	-66.7%	na
	Incapacitating	7	3	1	5	5	0.0%	-8.1%
	Non-incapacitating	80	110	106	90	78	-13.3%	-0.6%
	Subtotal	**87**	**113**	**108**	**98**	**84**	**-14.3%**	**-0.9%**
Non-motorist	Fatal	0	0	2	3	1	-66.7%	na
	Incapacitating	0	3	3	1	2	100.0%	na
	Non-incapacitating	7	11	12	13	10	-23.1%	9.3%
	Subtotal	**7**	**14**	**17**	**17**	**13**	**-23.5%**	**16.7%**
All	Fatal	2	5	7	9	6	-33.3%	31.6%
	Incapacitating	22	25	22	28	23	-17.9%	1.1%
	Non-incapacitating	393	427	407	365	353	-3.3%	-2.6%
	Total	**417**	**457**	**436**	**402**	**382**	**-5.0%**	**-2.2%**

Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Bureau of Transportation Statistics

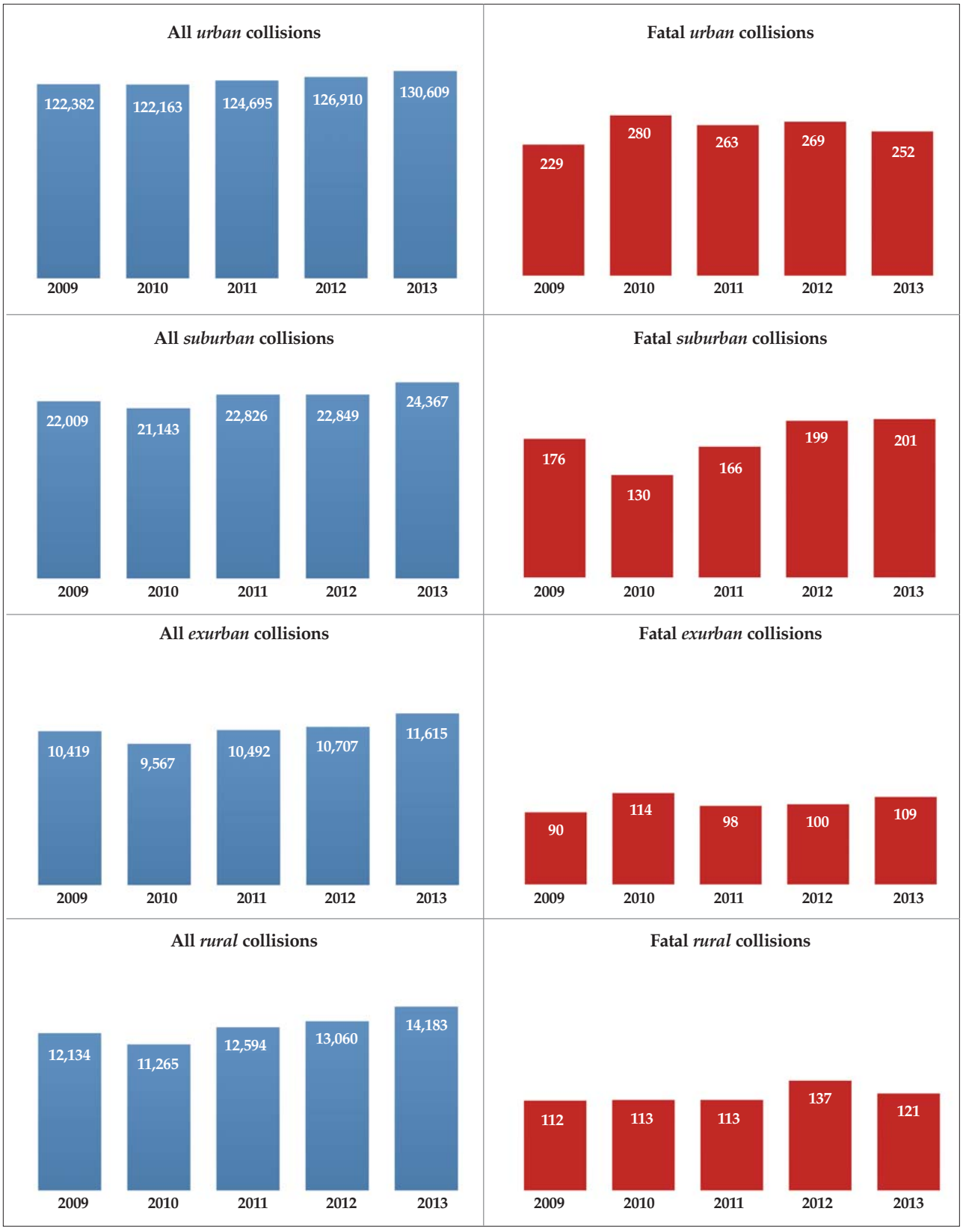
Notes:
1) See glossary for definition of *cell phone-distracted*.
2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating, non-incapacitating,* or *possible*.
3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.
4) *Non-motorist* includes *pedestrians, pedalcyclists,* and *animal-drawn vehicle occupants*.

Table 2.10. Indiana collisions and injuries, by driver action, 2009-2013

Action	2009	2010	2011	2012	2013
Fatal collisions					
Alcohol-impaired	19.0%	18.5%	19.7%	20.9%	16.2%
Aggressive driving	3.5%	2.9%	4.5%	4.6%	7.7%
Speeding	21.6%	19.4%	19.4%	22.7%	26.0%
Disregarded traffic signal	2.2%	2.1%	2.2%	3.1%	2.6%
Hit-and-run	3.5%	4.0%	4.2%	4.6%	3.8%
Cell phone-distracted	0.3%	0.6%	0.7%	1.0%	0.7%
Total collisions					
Alcohol-impaired	2.2%	2.6%	2.6%	2.7%	2.5%
Aggressive driving	2.1%	2.1%	2.3%	2.4%	2.6%
Speeding	9.6%	9.6%	9.3%	8.8%	9.6%
Disregarded traffic signal	2.1%	2.1%	2.1%	2.1%	2.2%
Hit-and-run	12.3%	12.0%	12.0%	12.2%	12.1%
Cell phone-distracted	0.6%	0.7%	0.6%	0.6%	0.6%
Fatal injuries					
Alcohol-impaired	18.4%	17.9%	18.7%	20.3%	16.0%
Aggressive driving	3.6%	2.8%	5.2%	4.6%	8.1%
Speeding	22.8%	19.2%	20.0%	22.5%	27.5%
Disregarded traffic signal	2.3%	2.0%	2.3%	3.0%	2.4%
Hit-and-run	3.3%	3.7%	3.7%	4.2%	3.6%
Cell phone-distracted	0.3%	0.7%	0.9%	1.2%	0.8%
Total injuries					
Alcohol-impaired	3.8%	4.6%	4.6%	4.6%	4.5%
Aggressive driving	3.2%	3.9%	3.9%	4.1%	4.8%
Speeding	12.9%	12.7%	13.0%	12.4%	13.6%
Disregarded traffic signal	5.2%	5.1%	5.0%	5.5%	5.5%
Hit-and-run	5.0%	4.7%	4.9%	4.8%	4.9%
Cell phone-distracted	0.9%	0.9%	0.9%	0.8%	0.8%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: *Total injuries* include injuries reported as *fatal, incapacitating, non-incapacitating,* and *possible*.

Figure 2.3. Indiana collisions, by locale, 2009-2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) See glossary for definition of census locale.
2) Excludes collisions where locale could not be determined.

CHAPTER 3

COLLISIONS

COLLISIONS, 2013

In 2013, 193,013 traffic collisions occurred in Indiana, a 2.2 percent increase from 2012. Fatal collisions decreased 2.1 percent from 718 in 2012 to 703 in 2013. From 2009 to 2013, total collisions declined 0.4 percent annually (Table 3.1). The rate of fatal collisions per 1,000 collisions decreased slightly in 2013 (Figure 3.1).

In 2013, collisions involving pedestrians declined 4.7 percent from 2012. The rate of pedestrian collisions fell from 8.9 to 8.3. Collisions involving pedalcyclists decreased by 7.5 percent between 2012 and 2013. The rate of collisions involving pedalcyclists decreased from 5.8 to 5.3 from 2012 to 2013 (Figure 3.2).

The largest number of collisions per month in 2013 occurred in the late fall and early winter (October, November, and December). In both 2012 and 2013, December accounted for the largest monthly total collisions. Late summer and early fall months (August, September, and October) accounted for the highest monthly fatal collisions in 2013 (Table 3.2).

In general, collisions were most common on weekdays during 3pm - 5:59pm. In 2013, the highest proportion of fatal collisions occurred on Sundays and Saturdays between the hours of 3am and 5:59am, and on Mondays during the 12am – 2:59am time frame (Table 3.3).

On average, monthly counts of daytime collisions are higher than counts of nighttime collisions. Average monthly daytime collisions in 2013 were 10,899 compared to 5,185 nighttime collisions. Both daytime and nighttime counts exceeded monthly averages in October, November, and December (Figure 3.3). Monthly average fatal collisions are slightly higher during the day (30) than night (28). The lowest number of daytime fatal collisions occurred in February (Figure 3.4).

In 2013, *alcohol-impaired* collisions represented 2.5 percent of all collisions. Collisions that involved speeding accounted for 9.6 percent of total collisions, and *hit-and-run* collisions accounted for 12 percent of total collisions. *Speed-related* collisions were proportionally most likely to occur during winter and early spring months (December–March). The highest proportion of *alcohol-impaired* collisions occurred in April, May, and August (Table 3.4). In 2013, *speed-related* collisions represented 16 percent (114 of 703) of fatal collisions; *alcohol-impaired* collisions accounted for 26 percent (183 of 703) of fatal collisions (not shown in table).

With regard to time of day, the highest proportion of *hit-and-run* and *alcohol-impaired* collisions occurred from 12am – 5:59am across all days of the week, in particular on Saturday and Sunday. Proportions of speed-related collisions were greater during overnight and early morning hours (Table 3.5).

In 2013, driver-related factors accounted for 84 percent of collisions and 95 percent of fatal collisions (calculated from Table 3.6). *Driver unsafe actions* represented the largest number of collisions in 2013. 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 and incapacitating injury collisions were higher among primary factors attributed to driver actions (21.0) than those with primary factors attributed to vehicles or the environment. In 2013, 59 of 1,000 collisions where the driver was identified with a *cognitive/physical impairment* were fatal or incapacitating 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 28 percent of all fatal collisions, but only 10 percent of non-fatal collisions. *Environmental factors* (12 percent) were more likely to have been the primary factor in non-fatal collisions than in fatal collisions (Figure 3.5).

Collision counts in 2013 were higher in Indiana *urban* (130,609) and *suburban* (24,367) areas than surrounding *exurban* and *rural* locales. However, rates of fatal and incapacitating injury collisions per 1,000 total collisions were higher in *exurban* (36.8) and *rural* (35.0) locales than in areas identified as suburban and urban. Between 2012 and 2013, rates of fatal and incapacitating injury collisions declined across all locales (Figure 3.6). In general during 2009 to 2013, collision counts were highest on *local/city roads* (86,497 in 2013) and lowest on *interstates*. In 2013, rates of fatal and incapacity injury collisions were higher on *county roads* and *state roads* than on other road types (Figure 3.7).

When observing collisions by junction type, 77 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 serious injury per 1,000 collisions (32.9 in 2013) than those on a *straight* road (17.6) (Table 3.7). *Ran off road* as the manner of collision accounted for 12 percent of all collisions, 28 percent of fatal collisions (calculated from table), and had a fatal and incapacitating injury per 1,000 collision rate of 38.2 in 2013 (Table 3.8).

Collisions that involved traffic control types identified as *no passing zone* (39.1), *railroad crossing* (35.9), and *flashing signal* (27.6) had the highest rates of fatal and incapacitating injury 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 rates of fatal and incapacitating injury collisions (25.7 per 1,000 collisions). *Fog/smoke/smog* (24.8) had the highest rate of fatal and incapacitating injury collisions per 1,000 collisions for a weather condition (Table 3.10).

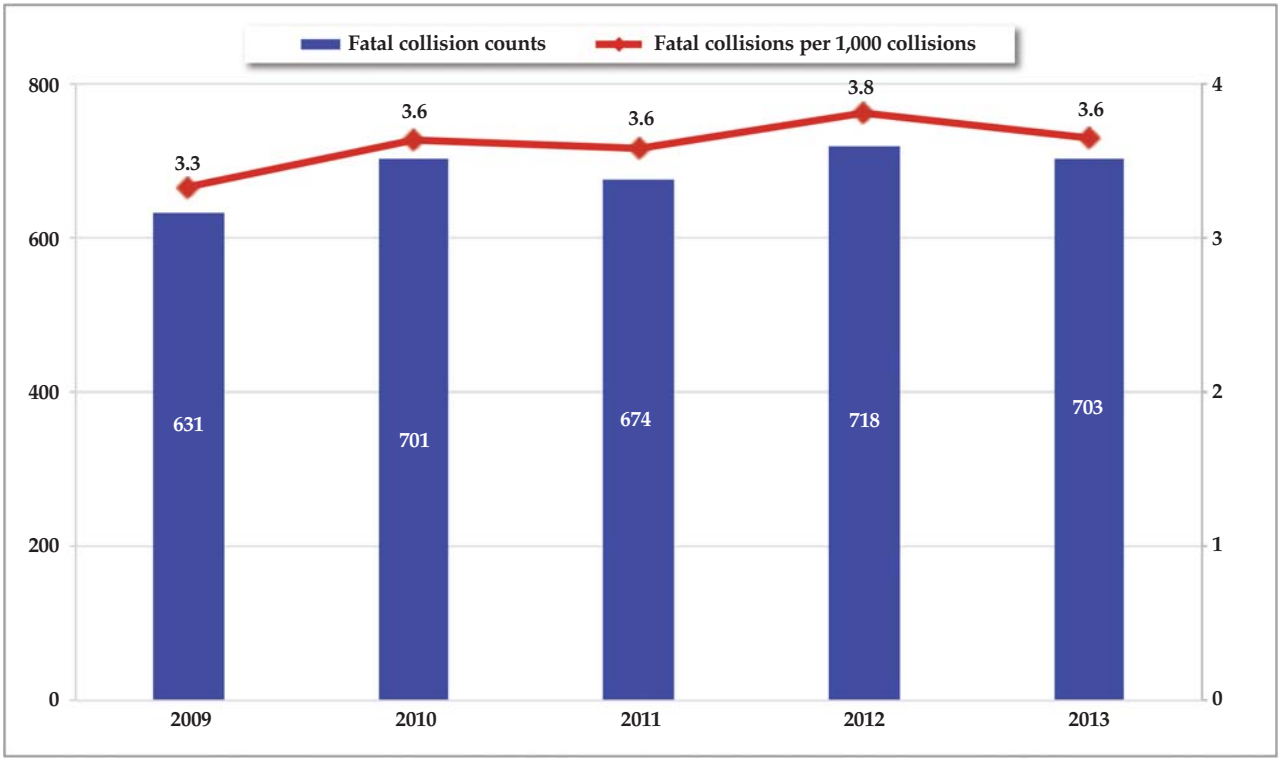
In 2013, the estimated economic cost of Indiana traffic collisions totaled $3.6 billion. On average, the cost of each collision was estimated at $18,405. The estimated economic cost of *speeding* collisions was nearly $520 million, with an average cost of $27,992. The average cost of *alcohol-impaired* collisions was $44,883, with a total economic cost of $214 million (Table 3.11 and Figure 3.8).

Table 3.1. Indiana traffic collisions, by collision severity, 2009-2013

						Annual rate of change	
	2009	2010	2011	2012	2013	2012-13	2009-13
All collisions	**189,661**	**192,885**	**188,126**	**188,841**	**193,013**	**2.2%**	**0.4%**
Fatal	631	701	674	718	703	-2.1%	2.7%
Incapacitating	2,732	2,912	2,858	3,234	2,939	-9.1%	1.8%
Non-incapacitating	30,678	31,171	29,876	30,853	29,881	-3.2%	-0.7%
Property damage only	155,620	158,101	154,718	154,036	159,490	3.5%	0.6%

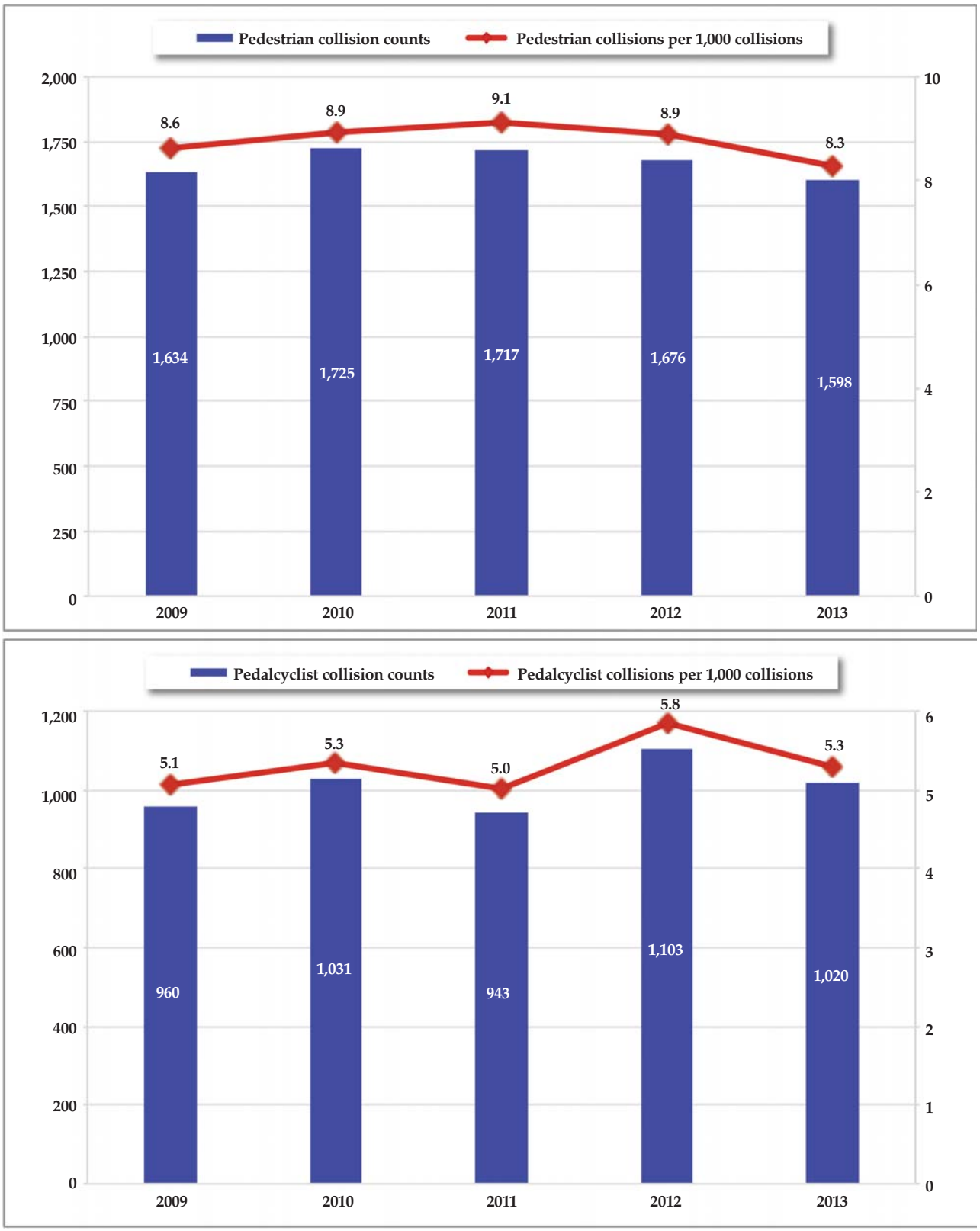
Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Figure 3.1. Indiana fatal traffic collisions, 2009-2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Figure 3.2. Indiana collisions involving pedestrians and pedalcyclists, 2009-2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Table 3.2. Indiana traffic collisions, by month, 2012-2013

Month	Fatal collisions			Total collisions			% Change (2012-13)	
	2012	2013	Change	2012	2013	Change	Fatal	Total
Jan	45	45	0	17,434	15,481	-1,953	0.0%	-11.2%
Feb	43	43	0	14,169	14,242	73	0.0%	0.5%
Mar	58	54	-4	14,581	15,935	1,354	-6.9%	9.3%
Apr	49	65	16	13,881	14,030	149	32.7%	1.1%
May	63	49	-14	15,976	16,317	341	-22.2%	2.1%
Jun	84	49	-35	15,120	15,256	136	-41.7%	0.9%
Jul	79	57	-22	14,422	15,010	588	-27.8%	4.1%
Aug	70	74	4	15,490	15,493	3	5.7%	0.0%
Sep	62	78	16	14,860	15,743	883	25.8%	5.9%
Oct	54	71	17	17,608	17,622	14	31.5%	0.1%
Nov	50	62	12	16,565	18,418	1,853	24.0%	11.2%
Dec	61	56	-5	18,735	19,466	731	-8.2%	3.9%
Total	**718**	**703**	**-15**	**188,841**	**193,013**	**4,172**	**-2.1%**	**2.2%**

Low High

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Table 3.3. Indiana traffic collisions, by day of the week and time of day, 2013

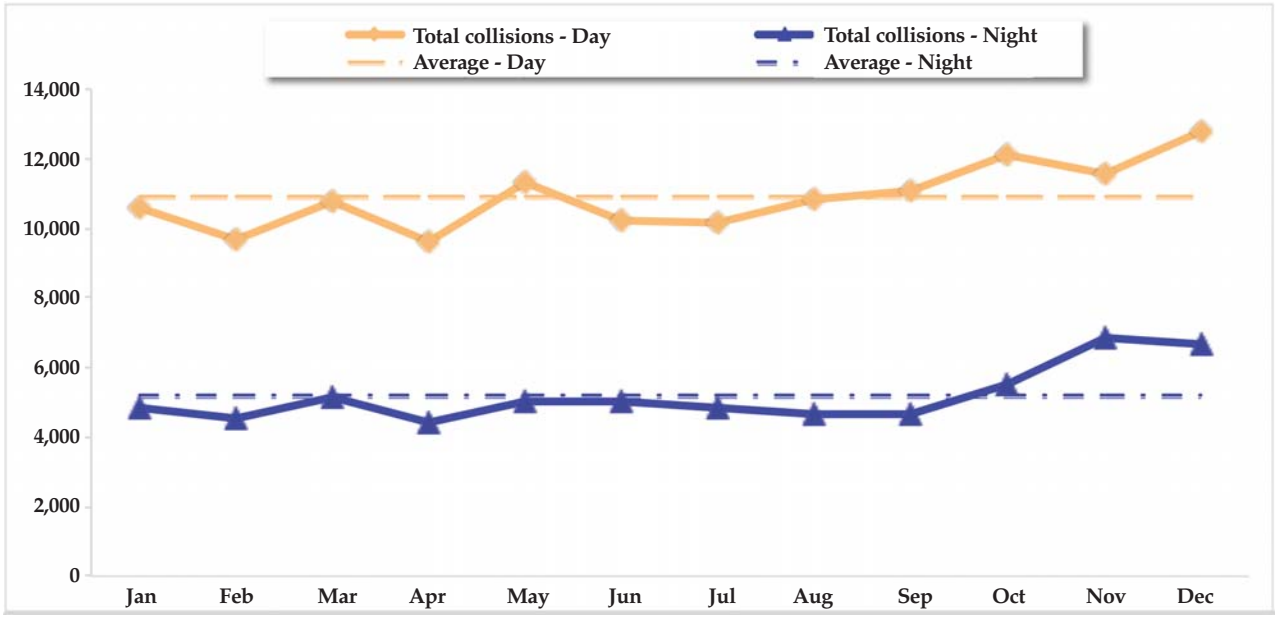
Day of week	Time of day								All hours
	12am-2:59am	3am-5:59am	6am-8:59am	9am-11:59am	12pm-2:59pm	3pm-5:59pm	6pm-8:59pm	9pm-11:59pm	
Total collisions	**8,791**	**8,902**	**24,696**	**25,158**	**34,606**	**46,328**	**27,969**	**16,563**	**193,013**
Sunday	1,986	1,489	1,224	2,228	3,694	3,702	3,425	2,053	19,801
Monday	898	1,200	4,168	3,535	4,853	6,837	3,809	1,878	27,178
Tuesday	1,007	1,114	4,147	3,463	4,802	7,728	4,038	2,082	28,381
Wednesday	909	1,158	4,509	3,752	4,999	7,108	3,829	2,093	28,357
Thursday	980	1,172	4,325	3,728	4,999	7,395	4,248	2,483	29,330
Friday	1,174	1,273	4,303	4,466	6,196	8,788	4,822	2,956	33,978
Saturday	1,837	1,496	2,020	3,986	5,063	4,770	3,798	3,018	25,988
Fatal collisions	**75**	**64**	**76**	**68**	**86**	**134**	**103**	**97**	**703**
Sunday	18	17	7	7	7	24	17	11	108
Monday	10	6	8	9	16	26	14	13	102
Tuesday	6	6	11	11	16	22	15	18	105
Wednesday	9	9	10	9	6	14	10	13	80
Thursday	9	4	17	10	9	12	18	10	89
Friday	7	5	13	8	17	15	10	16	91
Saturday	16	17	10	14	15	21	19	16	128
% Fatal	**0.9%**	**0.7%**	**0.3%**	**0.3%**	**0.2%**	**0.3%**	**0.4%**	**0.6%**	**0.4%**
Sunday	0.9%	1.1%	0.6%	0.3%	0.2%	0.6%	0.5%	0.5%	0.5%
Monday	1.1%	0.5%	0.2%	0.3%	0.3%	0.4%	0.4%	0.7%	0.4%
Tuesday	0.6%	0.5%	0.3%	0.3%	0.3%	0.3%	0.4%	0.9%	0.4%
Wednesday	1.0%	0.8%	0.2%	0.2%	0.1%	0.2%	0.3%	0.6%	0.3%
Thursday	0.9%	0.3%	0.4%	0.3%	0.2%	0.2%	0.4%	0.4%	0.3%
Friday	0.6%	0.4%	0.3%	0.2%	0.3%	0.2%	0.2%	0.5%	0.3%
Saturday	0.9%	1.1%	0.5%	0.4%	0.3%	0.4%	0.5%	0.5%	0.5%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Note: Limited to collisions where day and time were reported.

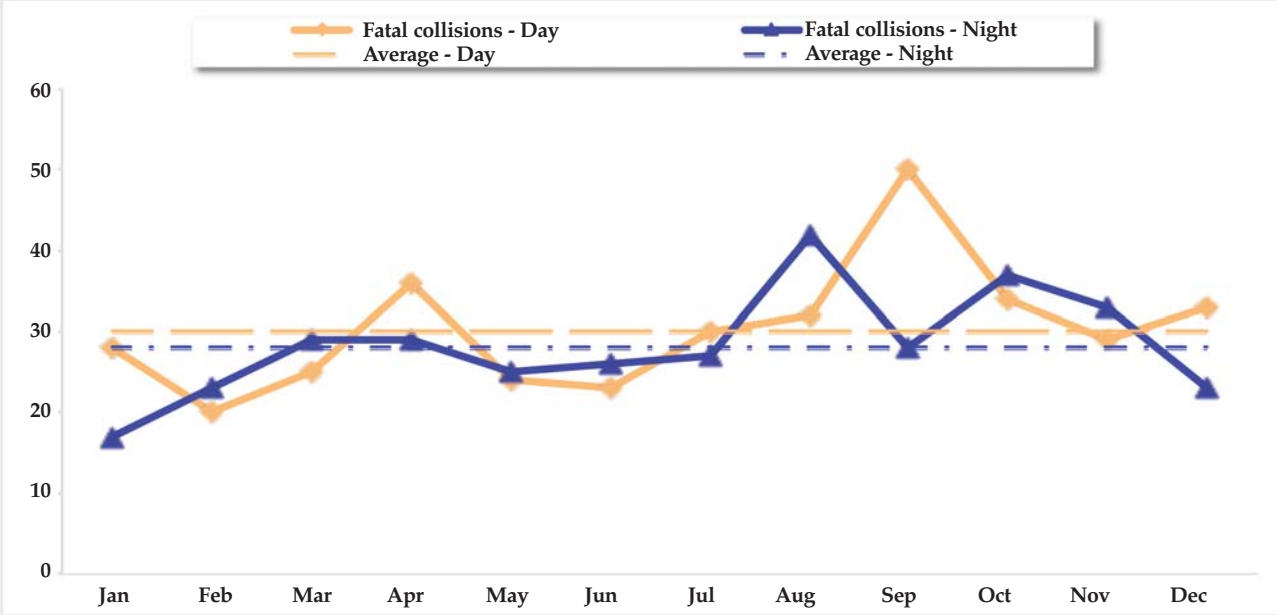
Low High

Figure 3.3. Indiana traffic collisions, by month and day/night, 2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014
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, 2013

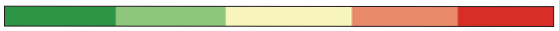


Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014
Note: Day is defined as 6am - 5:59pm. Night is defined as 6pm - 5:59am.

Table 3.4. Collisions by month and collision circumstances, 2013

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	15,481	392	2.5	401	2.6	2,233	14.4	318	2.1	1,903	12.3	617	4.0	72	0.5
Feb	14,242	374	2.6	434	3.0	2,289	16.1	280	2.0	1,737	12.2	595	4.2	77	0.5
Mar	15,935	407	2.6	449	2.8	2,408	15.1	354	2.2	1,991	12.5	750	4.7	91	0.6
Apr	14,030	389	2.8	378	2.7	891	6.4	324	2.3	1,836	13.1	788	5.6	85	0.6
May	16,317	442	2.7	412	2.5	934	5.7	343	2.1	1,919	11.8	872	5.3	103	0.6
Jun	15,256	392	2.6	406	2.7	918	6.0	336	2.2	1,932	12.7	838	5.5	100	0.7
Jul	15,010	397	2.6	376	2.5	883	5.9	346	2.3	1,939	12.9	895	6.0	97	0.6
Aug	15,493	414	2.7	379	2.4	821	5.3	348	2.2	2,001	12.9	916	5.9	84	0.5
Sep	15,743	363	2.3	367	2.3	890	5.7	361	2.3	1,885	12.0	882	5.6	98	0.6
Oct	17,622	383	2.2	454	2.6	1,202	6.8	408	2.3	2,002	11.4	884	5.0	107	0.6
Nov	18,418	402	2.2	447	2.4	1,419	7.7	390	2.1	1,991	10.8	806	4.4	86	0.5
Dec	19,466	402	2.1	536	2.8	3,683	18.9	363	1.9	2,197	11.3	708	3.6	68	0.3
Total	**193,013**	**4,757**	**2.5**	**5,039**	**2.6**	**18,571**	**9.6**	**4,171**	**2.2**	**23,333**	**12.1**	**9,551**	**4.9**	**1,068**	**0.6**

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014



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, 2013

Day	Time	All collisions	Alcohol-impaired		Aggressive driving		Speed-related		Disregard signal		Hit-and-run		Distracted, any type		Distracted, cell phone	
		Total	Count	As % day/ time total	Count	As % day/ time total	Count	As % day/ time total	Count	As % day/ time total	Count	As % day/ time total	Count	As % day/ time total	Count	As % day/ time total
Mon	12am - 5:59am	2,098	139	6.6	45	2.1	361	17.2	25	1.2	363	17.3	71	3.4	16	0.8
	6am - 11:59am	7,703	27	0.4	204	2.6	977	12.7	209	2.7	695	9.0	354	4.6	33	0.4
	12pm - 5:59pm	11,690	69	0.6	324	2.8	675	5.8	244	2.1	1,180	10.1	679	5.8	74	0.6
	6pm - 11:59pm	5,687	208	3.7	120	2.1	509	9.0	114	2.0	783	13.8	258	4.5	32	0.6
Tue	12am - 5:59am	2,121	150	7.1	40	1.9	260	12.3	26	1.2	403	19.0	54	2.5	9	0.4
	6am - 11:59am	7,610	31	0.4	218	2.9	582	7.6	206	2.7	670	8.8	391	5.1	41	0.5
	12pm - 5:59pm	12,530	90	0.7	389	3.1	1,055	8.4	255	2.0	1,259	10.0	723	5.8	75	0.6
	6pm - 11:59pm	6,120	223	3.6	139	2.3	745	12.2	127	2.1	798	13.0	276	4.5	39	0.6
Wed	12am - 5:59am	2,067	128	6.2	41	2.0	324	15.7	18	0.9	391	18.9	62	3.0	11	0.5
	6am - 11:59am	8,261	29	0.4	254	3.1	956	11.6	225	2.7	687	8.3	361	4.4	26	0.3
	12pm - 5:59pm	12,107	88	0.7	359	3.0	805	6.6	272	2.2	1,116	9.2	714	5.9	69	0.6
	6pm - 11:59pm	5,922	204	3.4	127	2.1	540	9.1	117	2.0	839	14.2	298	5.0	48	0.8
Thu	12am - 5:59am	2,152	152	7.1	46	2.1	307	14.3	35	1.6	390	18.1	67	3.1	17	0.8
	6am - 11:59am	8,053	27	0.3	259	3.2	738	9.2	198	2.5	676	8.4	370	4.6	27	0.3
	12pm - 5:59pm	12,394	78	0.6	358	2.9	886	7.1	280	2.3	1,190	9.6	724	5.8	66	0.5
	6pm - 11:59pm	6,731	273	4.1	150	2.2	737	10.9	121	1.8	932	13.8	288	4.3	32	0.5
Fri	12am - 5:59am	2,447	217	8.9	40	1.6	376	15.4	36	1.5	502	20.5	83	3.4	18	0.7
	6am - 11:59am	8,769	51	0.6	262	3.0	1,106	12.6	223	2.5	782	8.9	394	4.5	27	0.3
	12pm - 5:59pm	14,984	110	0.7	407	2.7	909	6.1	287	1.9	1,459	9.7	894	6.0	75	0.5
	6pm - 11:59pm	7,778	316	4.1	161	2.1	617	7.9	141	1.8	1,172	15.1	352	4.5	51	0.7
Sat	12am - 5:59am	3,333	543	16.3	61	1.8	499	15.0	58	1.7	948	28.4	114	3.4	38	1.1
	6am - 11:59am	6,006	75	1.2	143	2.4	838	14.0	142	2.4	652	10.9	276	4.6	25	0.4
	12pm - 5:59pm	9,833	139	1.4	254	2.6	805	8.2	222	2.3	1,102	11.2	505	5.1	50	0.5
	6pm - 11:59pm	6,816	370	5.4	148	2.2	620	9.1	139	2.0	1,158	17.0	322	4.7	42	0.6
Sun	12am - 5:59am	3,475	582	16.7	75	2.2	465	13.4	55	1.6	1,067	30.7	143	4.1	31	0.9
	6am - 11:59am	3,452	72	2.1	82	2.4	387	11.2	105	3.0	473	13.7	168	4.9	21	0.6
	12pm - 5:59pm	7,396	103	1.4	205	2.8	724	9.8	195	2.6	864	11.7	375	5.1	43	0.6
	6pm - 11:59pm	5,478	263	4.8	128	2.3	768	14.0	96	1.8	782	14.3	235	4.3	32	0.6
Mon	(Total)	27,178	443	1.6	693	2.5	2,522	9.3	592	2.2	3,021	11.1	1,362	5.0	155	0.6
Tue	(Total)	28,381	494	1.7	786	2.8	2,642	9.3	614	2.2	3,130	11.0	1,444	5.1	164	0.6
Wed	(Total)	28,357	449	1.6	781	2.8	2,625	9.3	632	2.2	3,033	10.7	1,435	5.1	154	0.5
Thu	(Total)	29,330	530	1.8	813	2.8	2,668	9.1	634	2.2	3,188	10.9	1,449	4.9	142	0.5
Fri	(Total)	33,978	694	2.0	870	2.6	3,008	8.9	687	2.0	3,915	11.5	1,723	5.1	171	0.5
Sat	(Total)	25,988	1,127	4.3	606	2.3	2,762	10.6	561	2.2	3,860	14.9	1,217	4.7	155	0.6
Sun	(Total)	19,801	1,020	5.2	490	2.5	2,344	11.8	451	2.3	3,186	16.1	921	4.7	127	0.6
		193,013	4,757	2.5	5,039	2.6	18,571	9.6	4,171	2.2	23,333	12.1	9,551	4.9	1,068	0.6

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

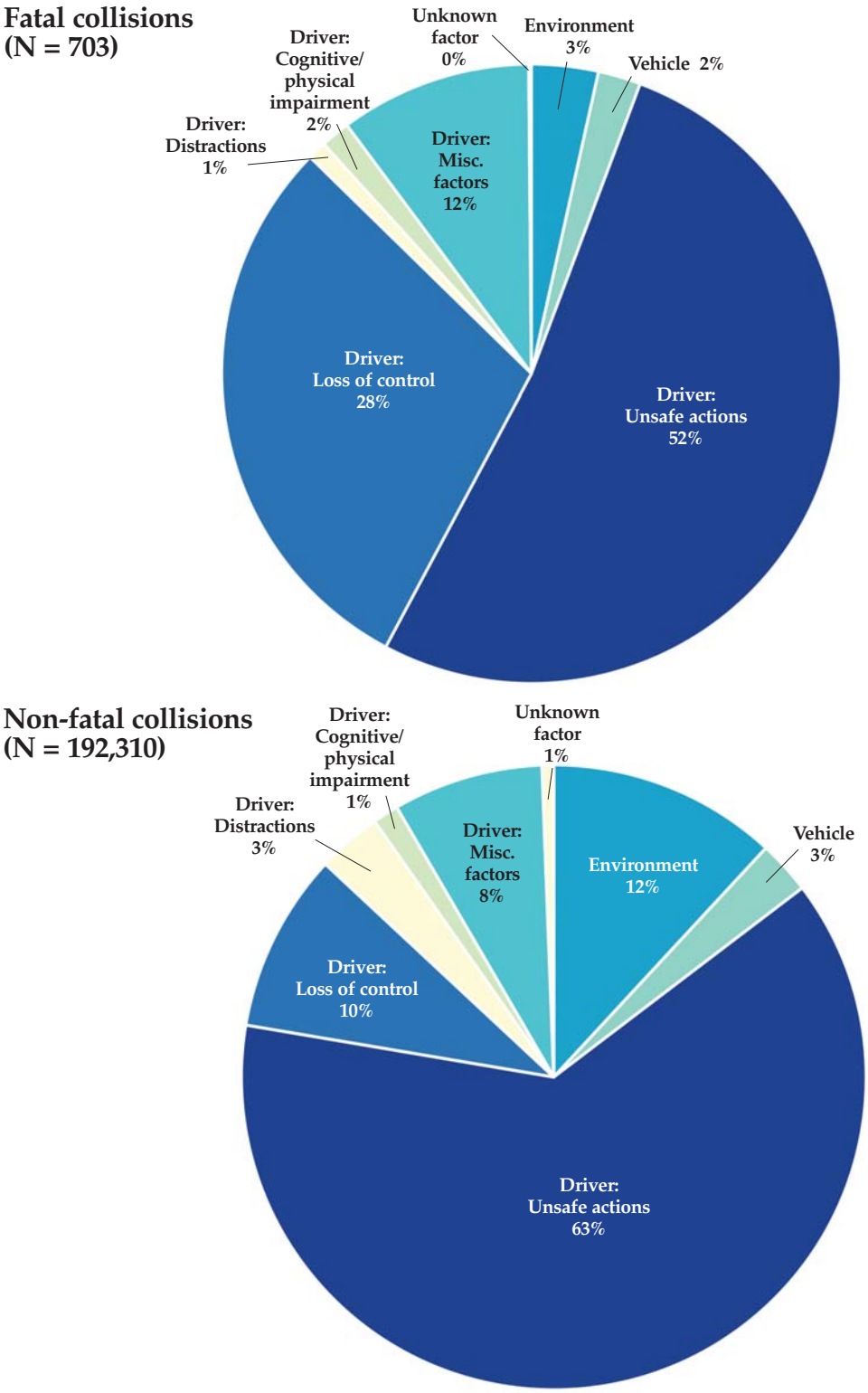
Notes:
1) Total daily counts exclude collisions with invalid time reported.
2) Color comparisons are applied within collision-type categories.
3) Counts of different collisions circumstances will not sum to the total number of collisions.
4) See glossary for definitions of *alcohol-impaired, aggressive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

Table 3.6. Indiana collisions, by primary factor and collision severity, 2013

Primary factor	Collisions, by severity					Fatal/incap injuries per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
Driver: Unsafe actions	**122,342**	**367**	**1,652**	**19,710**	**100,613**	**16.5**
Following too closely	31,278	11	232	5,300	25,735	7.8
Failure to yield right of way	29,508	86	604	6,788	22,030	23.4
Unsafe backing	18,857	1	17	343	18,496	1.0
Speed too fast for weather conditions	9,043	23	104	1,348	7,568	14.0
Disregard signal/reg sign	6,843	46	197	2,251	4,349	35.5
Unsafe lane movement	6,337	13	67	660	5,597	12.6
Improper turning	6,211	6	34	420	5,751	6.4
Improper lane usage	4,797	4	30	401	4,362	7.1
Unsafe speed	4,285	75	190	1,171	2,849	61.8
Left of center	3,244	90	151	788	2,215	74.3
Improper passing	1,697	8	20	180	1,489	16.5
Wrong way on one way	242	4	6	60	172	41.3
Driver: Loss of control	**18,595**	**194**	**625**	**4,121**	**13,655**	**44.0**
Ran off road	15,519	174	560	3,499	11,286	47.3
Overcorrecting/over steering	3,076	20	65	622	2,369	27.6
Driver: Distractions	5,963	10	68	1,117	4,768	13.1
Unspecified distraction	5,548	10	61	1,039	4,438	12.8
Cell phone/other electronic device	415	0	7	78	330	16.9
Driver: Cognitive/physical impairment	**2,204**	**13**	**117**	**682**	**1,392**	**59.0**
Driver asleep or fatigued	1,362	2	35	365	960	27.2
Alcoholic beverages	67	0	2	14	51	29.9
Driver illness	769	11	80	302	376	118.3
Illegal drugs	4	0	0	1	3	0.0
Prescription drugs	2	0	0	0	2	0.0
Driver: Miscellaneous factors	**14,228**	**87**	**289**	**2,234**	**11,618**	**26.4**
Other (unspecified)	13,399	42	182	1,693	11,482	16.7
Influenced by pedestrian action	823	45	107	541	130	184.7
(Driver not a factor)	6	0	0	0	6	0.0
Driver factors (all)	**163,332**	**671**	**2,751**	**27,864**	**132,046**	**21.0**
Vehicle factors	**5,199**	**13**	**76**	**724**	**4,386**	**17.1**
Environmental factors	**23,175**	**18**	**104**	**1,251**	**21,802**	**5.3**
Unknown	**1,307**	**1**	**8**	**42**	**1,256**	**6.9**
All collisions	**193,013**	**703**	**2,939**	**29,881**	**159,490**	**18.9**

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014
Note: *Non-incapacitating* collisions include those with one ore more *non-incapacitating* or *possible* injuries.

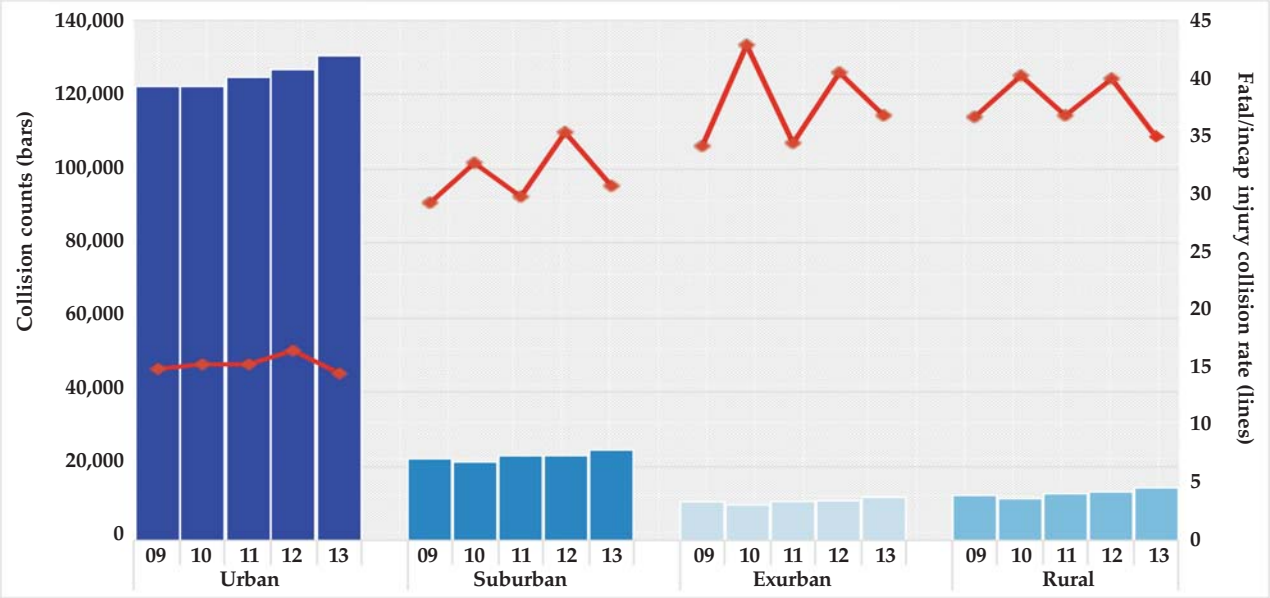
Figure 3.5. Indiana traffic collisions, by primary factor and severity, 2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) See Table 3.6 for definitions of factor categories related to driver actions.
2) Limited to collisions for which the primary factor is known.

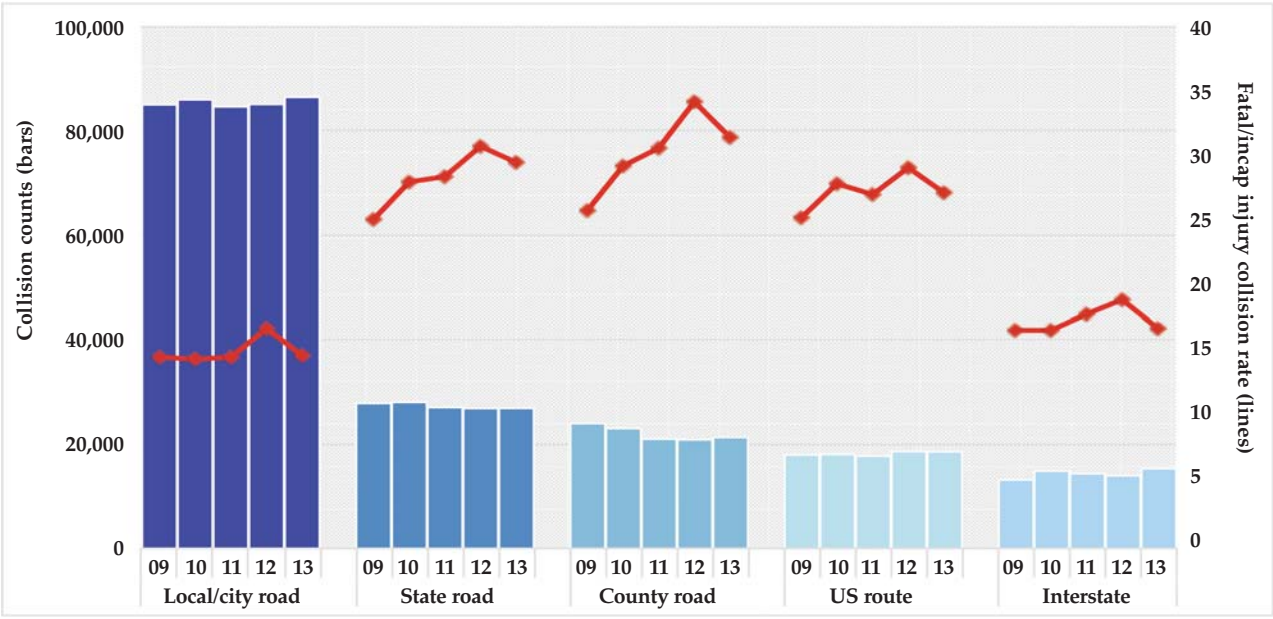
Figure 3.6. Indiana traffic collisions and fatal and incapacitating injury collision rates, by locale, 2009-2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Includes only collisions where valid locale was identified.
2) *Fatal* and *incapacitating 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 and incapacitating injury collision rates, by road class, 2009-2013



Source: Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Note: Excludes unknown road class.

Table 3.7. Indiana traffic collisions, by severity and road parameters, 2013

	Collisions, by severity					Fatal/incap injuries per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
Total collisions	**193,013**	**703**	**2,939**	**29,881**	**159,490**	**18.9**
By junction type						
No junction involved	128,583	539	1,891	17,019	109,134	18.9
Four-way intersection	38,375	109	651	8,483	29,132	19.8
T-intersection	19,424	40	303	3,358	15,723	17.7
Ramp	3,085	3	40	447	2,595	13.9
Interchange	1,192	4	19	209	960	19.3
Traffic circle/roundabout	809	0	6	64	739	7.4
Y-intersection	692	3	12	122	555	21.7
Five point or more	541	0	11	125	405	20.3
Railroad crossings	244	5	6	44	189	45.1
Trail crossings	14	0	0	7	7	0.0
Unknown	54	0	0	3	51	0.0
By road character						
Straight	**167,741**	**555**	**2,405**	**26,087**	**138,694**	**17.6**
Level	140,803	424	1,926	21,835	116,618	16.7
Graded	21,592	102	375	3,375	17,740	22.1
Hillcrest	5,346	29	104	877	4,336	24.9
Curve	**19,287**	**145**	**490**	**3,562**	**15,090**	**32.9**
Level	11,846	93	294	2,161	9,298	32.7
Graded	6,215	41	174	1,165	4,835	34.6
Hillcrest	1,226	11	22	236	957	26.9
Non-roadway crash	**5,696**	**3**	**44**	**219**	**5,430**	**8.3**
Unknown	**289**	**0**	**0**	**13**	**276**	**0.0**
Roadway surface type						
Asphalt	170,371	638	2,634	26,720	140,379	19.2
Concrete	19,048	53	247	2,825	15,923	15.7
Gravel	2,491	9	31	226	2,225	16.1
Other	827	3	27	101	696	36.3
Unknown	276	0	0	9	267	0.0

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Table 3.8. Indiana traffic collisions, by severity and manner of collision, 2013

Manner of collision	Collisions, by severity					Fata/incap injuries per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
Total collisions	**193,013**	**703**	**2,939**	**29,881**	**159,490**	**18.9**
Rear end	45,496	59	434	8,137	36,866	10.8
Right angle	31,472	121	674	6,997	23,680	25.3
Ran off road	23,259	199	690	5,144	17,226	38.2
Head on	22,183	190	542	3,280	18,171	33.0
Backing	20,597	4	29	405	20,159	1.6
Same direction sideswipe	18,961	18	81	1,246	17,616	5.2
Left turn	9,426	19	157	1,885	7,365	18.7
Other collisions manner	8,088	53	149	1,041	6,845	25.0
Opposite direction sideswipe	4,691	9	44	556	4,082	11.3
Right turn	2,776	2	14	277	2,483	5.8
Non-collision	2,473	21	101	554	1,797	49.3
Left/right turn	2,264	5	20	290	1,949	11.0
Unknown	942	3	4	37	898	7.4
Rear to rear	385	0	0	32	353	0.0

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Low — High

Table 3.9. Indiana collisions, by severity and traffic control type, 2013

Traffic control type	Collisions, by severity					Fata/incap injuries per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
Total collisions	**193,013**	**703**	**2,939**	**29,881**	**159,490**	**18.9**
Lane control	45,764	239	711	7,431	37,383	20.8
Traffic control signal	34,395	55	483	7,069	26,788	15.6
Stop sign	18,131	69	358	3,813	13,891	23.6
No passing zone	4,327	51	118	853	3,305	39.1
Yield sign	1,507	5	19	236	1,247	15.9
Other regulatory sign/marking	1,318	8	26	194	1,090	25.8
Flashing signal	1,302	7	29	309	957	27.6
Railroad crossing	390	5	9	73	303	35.9
Person directing traffic	184	0	2	39	143	10.9
None	85,315	263	1,184	9,851	74,017	17.0
Unknown	380	1	0	13	366	2.6

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Low — High

Table 3.10. Indiana traffic collisions by severity and environmental conditions, 2013

	Collisions, by severity					Fatal/incap injuries per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
All collisions	**193,013**	**703**	**2,939**	**29,881**	**159,490**	**18.9**
By light conditions						
Daylight	125,986	356	1,840	20,716	103,074	17.4
Dark (not lighted)	29,589	210	550	3,816	25,013	25.7
Dark (lighted)	26,754	88	417	4,016	22,233	18.9
Dawn/dusk	9,229	46	131	1,302	7,750	19.2
Unknown	1,455	3	1	31	1,420	2.7
By weather conditions						
Clear	117,018	478	1,938	18,353	96,249	20.6
Cloudy	42,893	149	624	6,755	35,365	18.0
Rain	17,338	44	214	2,861	14,219	14.9
Snow	9,296	12	85	1,050	8,149	10.4
Blowing sand/soil/snow	2,568	10	24	306	2,228	13.2
Sleet/hail/freezing rain	2,255	6	31	348	1,870	16.4
Fog/smoke/smog	847	3	18	152	674	24.8
Severe cross wind	237	1	4	48	184	21.1
Unknown	561	0	1	8	552	1.8
By road surface conditions						
Dry	142,688	573	2,336	22,504	117,275	20.4
Wet	29,546	80	377	4,886	24,203	15.5
Snow/slush	11,619	24	110	1,203	10,282	11.5
Ice	7,062	18	84	955	6,005	14.4
Water (standing or moving)	758	7	7	142	602	18.5
Loose material on road	688	1	20	165	502	30.5
Muddy	130	0	4	17	109	30.8
Unknown	522	0	1	9	512	1.9

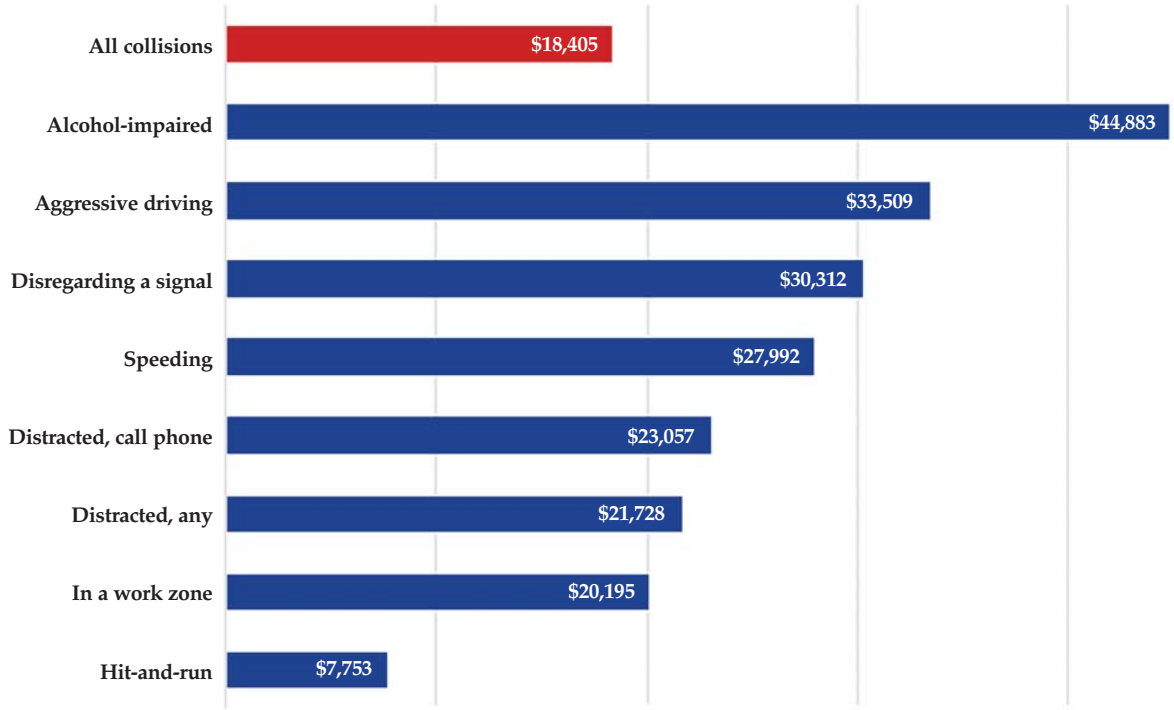
Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Table 3.11. Economic cost of traffic collisions in Indiana, by collision type, 2013

Collision Type	Count of collisions	Total cost (millions)
All collisions	**193,013**	**$3,552.5**
Speeding	18,571	$519.8
Alcohol-impaired	4,757	$213.5
Distracted, any	9,551	$207.5
Hit-and-run	23,333	$180.9
Aggressive driving	5,039	$168.9
Disregarding a signal	4,171	$126.4
In a work zone	2,874	$58.0
Distracted, cell phone	1,068	$24.6

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014
Note: Counts of different collisions circumstances will not sum to total number of collisions.

Figure 3.8. Average economic cost of Indiana traffic collisions, 2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014
Note: See Appendix A for details on economic cost computations.

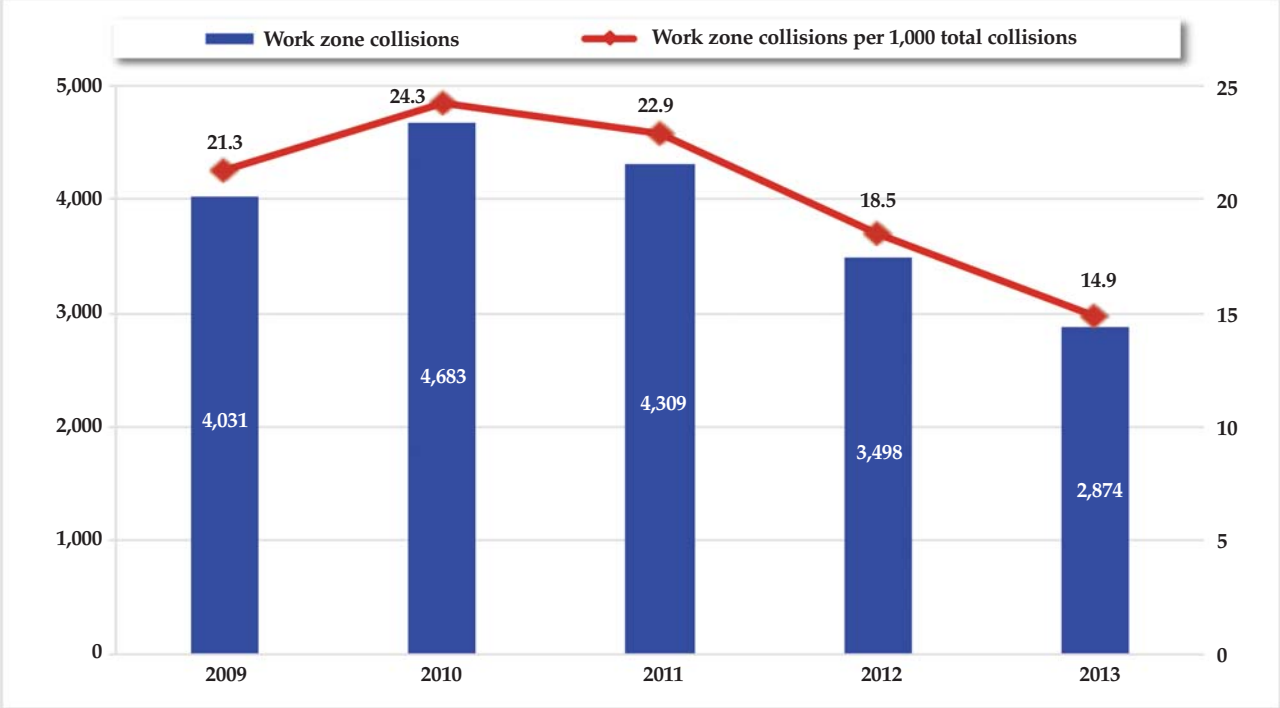
Work Zone Collisions

Since 2010, the number of collisions occurring in work zones decreased. The work zone collision rate was 14.9 per 1,000 collisions in 2013, down from 24.3 in 2010 (Figure 3.9). In 2013, the fatal and incapacitating injury rate for work zones (22.6) was higher than for non-work zone collisions (18.8). Work zone collisions occurring in the construction type of *intermittent/moving work* had the highest rate of fatal and incapacitating injury collisions, followed by *lane closure* (Table 3.12).

In 2013, work zone collision rates per 1,000 total collisions were highest in *suburban* (16.7) and *urban* (14.9) areas. Fatal and incapacitating injury collision rates were higher in *exurban* (64.3) areas than other locales (Figure 3.10). Work zone collision rates were highest on *interstates* (65.6) and lowest on *county roads* (3.5). In 2013, rates of fatal and incapacitating injury collisions were highest on *state roads* (37.6) (Figure 3.11).

While the majority of work zone collisions (73 percent, calculated from table) occurred during *daylight*, fatal and incapacitating injury work zone collision rates were highest at *dark (not lighted)* (32.4). In 2013, the weather condition with the highest rate of fatal and incapacitating injury in work zone collisions was *severe cross wind* (166.7) (Table 3.13). While *lane control* collisions represented the largest number of work zone collisions that occurred under traffic control, the highest rate of fatal and incapacitating injury rates occurred under *railroad crossing* (142.9) (Table 3.14).

Figure 3.9. Indiana work zone collisions, 2009-2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

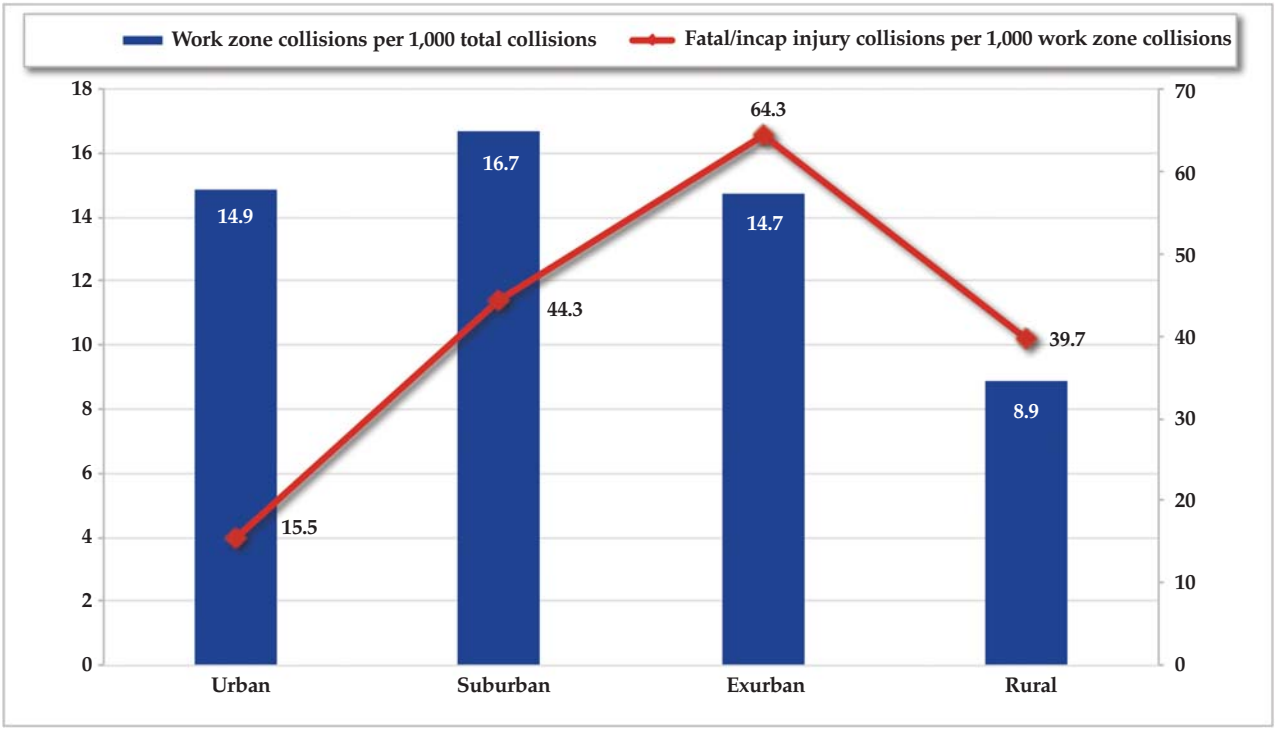
Table 3.12. Indiana collisions in work zones, by severity and construction type, 2013

	Collisions, by severity					Fatal/incap injuries per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
All collisions	**193,013**	**703**	**2,939**	**29,881**	**159,490**	**18.9**
All construction types	2,874	13	52	429	2,380	22.6
Not in construction zone	190,139	690	2,887	29,452	157,110	18.8
Construction zone type						
Lane closure	1,433	4	28	205	1,196	22.3
Work on shoulder	705	5	9	116	575	19.9
Intermittent or moving work	451	4	12	68	367	35.5
Cross over/lane shift	273	0	3	40	230	11.0
Unknown	12	0	0	0	12	0.0

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Low — High

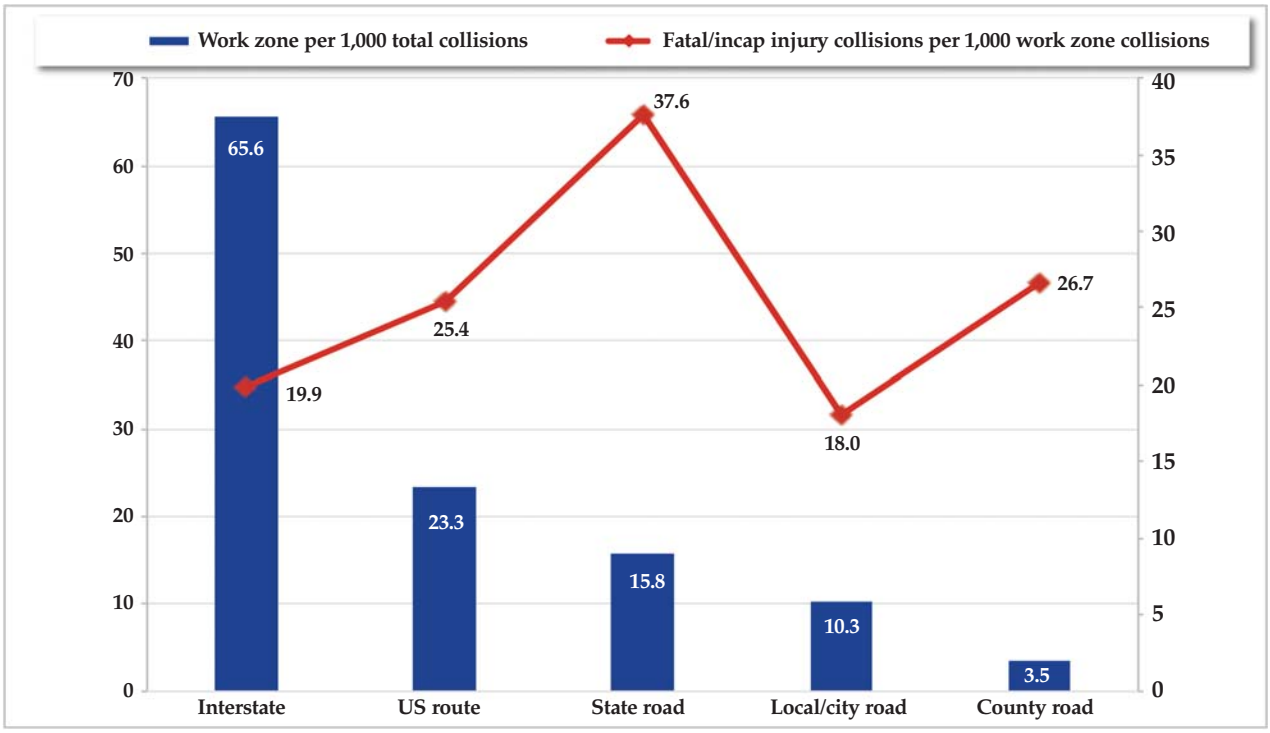
Figure 3.10. Indiana work zone collisions, by locale, 2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

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

Figure 3.11. Indiana work zone collisions, by road class, 2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014
Note: Includes only collisions with valid road class reported.

Table 3.13. Indiana work zone collisions, by severity and environmental conditions, 2013

	Work zone collisions, by severity					Fatal/incap injuries per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
All work zone collisions	**2,874**	**13**	**52**	**429**	**2,380**	**22.6**
By light conditions						
Daylight	2,085	8	35	314	1,728	20.6
Dark (not lighted)	340	4	7	49	280	32.4
Dark (lighted)	302	1	7	48	246	26.5
Dawn/dusk	138	0	3	18	117	21.7
Unknown	9	0	0	0	9	0.0
By weather conditions						
Clear	1,964	10	39	296	1,619	24.9
Cloudy	638	2	8	107	521	15.7
Rain	194	1	4	19	170	25.8
Snow	37	0	0	6	31	0.0
Fog/smoke/smog	14	0	0	0	14	0.0
Sleet/hail/freezing rain	10	0	0	1	9	0.0
Blowing sand/soil/snow	7	0	0	0	7	0.0
Severe cross wind	6	0	1	0	5	166.7
Unknown	4	0	0	0	4	0.0
By road surface conditions						
Dry	2,452	10	46	366	2,030	22.8
Wet	315	3	3	47	262	19.0
Loose material on road	36	0	2	7	27	55.6
Snow/slush	31	0	0	3	28	0.0
Ice	22	0	0	2	20	0.0
Water (standing or moving)	10	0	1	2	7	100.0
Muddy	6	0	0	2	4	0.0
Unknown	2	0	0	0	2	0.0

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Table 3.14. Indiana work zone collisions by severity and traffic control type, 2013

	Work zone collisions, by severity					Fatal/incap injuries per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
All work zone collisions	**2,874**	**13**	**52**	**429**	**2,380**	**22.6**
Traffic control type						
Lane control	1,212	8	20	176	1,008	23.1
Traffic control signal	578	0	12	88	478	20.8
Stop sign	115	2	3	18	92	43.5
Other regulatory sign/marking	111	0	3	15	93	27.0
Person directing traffic	67	0	2	16	49	29.9
No passing zone	62	0	3	14	45	48.4
Yield sign	38	0	0	4	34	0.0
Flashing signal	24	0	0	7	17	0.0
Railroad crossing	7	0	1	1	5	142.9
None	658	3	8	90	557	16.7
Unknown	2	0	0	0	2	0.0

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Low — High

CHAPTER 4

VEHICLES

VEHICLES, 2013

The vehicle section summarizes data on motor vehicles involved in Indiana collisions in 2013. Special emphasis is given to passenger cars, pickup trucks, sport utility vehicles, vans, large trucks, and school buses. Except as noted, motorcycles and mopeds are described in the Motorcycle section of this report and are not otherwise included in this vehicle chapter. Vehicle data are categorized by collision severity, vehicle use, location, road class, and collision primary factors. Note that numbers may vary from previous years due to updated information.

HIGHLIGHTS

In 2013, there were 337,045 vehicles involved in collisions in Indiana, a crash rate of 49.8 vehicles per 1,000 registered vehicles (Figure 4.1). Passenger cars composed 61 percent of the vehicles involved in collisions, while sport utility vehicles (SUVs) composed 13 percent and pickup trucks 12 percent of vehicles involved. Large trucks accounted for 4 percent of total vehicles in all collisions, but nearly 11 percent of vehicles involved in fatal collisions. Of all the passenger vehicles (passenger cars, pickup trucks, SUVs, vans), pickup trucks had the highest fatal collision rate (4.1) per 1,000 in all collisions (Table 4.1).

The majority of vehicles involved in collisions were for personal use. Overall, vehicles were involved in 3.4 fatal collisions per 1,000 collisions. Commercial use vehicles comprised 11 percent of the vehicles involved in fatal collisions, but less than 4 percent of vehicles involved in all collisions. Commercial vehicles (which include large trucks) had the highest fatality rate (10.1), and buses (not including school buses) had a fatality rate of 10.0 per 1,000 collisions (Table 4.2).

Prior to all collisions and fatal collisions, the majority of vehicles were *going straight.* Proportionately, the next highest pre-collision maneuver was *slowing or stopped in traffic* for all collisions for all vehicle types except large trucks; large trucks' second highest pre-collisions maneuver was *backing*. For fatal collisions, the pre-collision maneuver of *slowing or stopped in traffic* for SUVs and large trucks was much higher (8.1 and 9.8 percent, respectively) than for other vehicle types. The second highest percentage for passenger cars, pickup trucks, and vans involved in fatal collisions was *driving left of center* (Table 4.3).

Only 9 percent of collision-involved large trucks were in single-vehicle fatal collisions. This compared to 28 to 40 percent for other vehicle types, except buses. Approximately 80 percent of vehicles involved in injury collisions were in multiple-vehicle crashes (Table 4.4).

Based on U.S. Census locality definitions (*urban, suburban, exurban,* and *rural*), most passenger vehicles involved in fatal collisions occurred within *urban* locales. In addition, 67 percent of buses involved in fatal collisions occurred within *urban* locales. Large trucks involved in fatal collisions occurred more often in *suburban* locales (Figure 4.2). For all vehicle types involved in injury collisions, the majority were in *urban* locations (Figure 4.3).

While the distribution per month for all collisions was fairly similar across vehicle types, fatal collisions distribution was more varied. Generally, December, October, and November were proportionately the highest months in which vehicles were involved in all collisions. For vehicles involved in fatal collisions, however, the proportionately highest month varied by vehicle type (Table 4.5).

For every 1,000 passenger cars involved in collisions, 5.8 were involved in fatal collisions on *U.S. routes* and 5.7 on *state roads.* For every 1,000 large trucks involved, 16.2 were involved in fatal collisions on *state roads.* The highest rates for fatal collisions for pickup trucks occurred on *interstates* (8.6), for SUVs on *state roads* (6.1), for vans on *county roads* (8.7), and for buses on *interstates* (14.1). *Local/city roads* had the lowest fatal rates for all vehicle types, with the exception of buses (Table 4.6).

Every collision is assigned a *primary factor* (or cause) for that particular collision. All vehicle types involved in single-vehicle fatal or incapacitating injury collisions had *loss of control* as the most common primary factor. Generally, *unsafe actions* was proportionately the second highest primary factor in these types of collisions (Table 4.7).

In 2013, in multiple-vehicle fatal or incapacitating injury collisions, eight of ten passenger cars were involved in some form of *unsafe action*. Considering the likelihood of which vehicle may be at fault (i.e., a vehicle's *contributing circumstance* matched the *primary factor* in the collision), the fault was attributed to 51 percent of the passenger cars. For large trucks involved in multiple-vehicle fatal or incapacitating injury collisions, 75 percent were involved in some form of *unsafe action*. However, only 21 percent of those vehicles were attributed to the large truck involved (Table 4.8).

Considering fatal or incapacitating injury collisions, the majority of all passenger vehicles and large trucks collided with *another motor vehicle*. Generally, five percent of passenger cars, pickup trucks, and vans in fatal or incapacitating injury collisions collided with a *pedestrian* (Table 4.9).

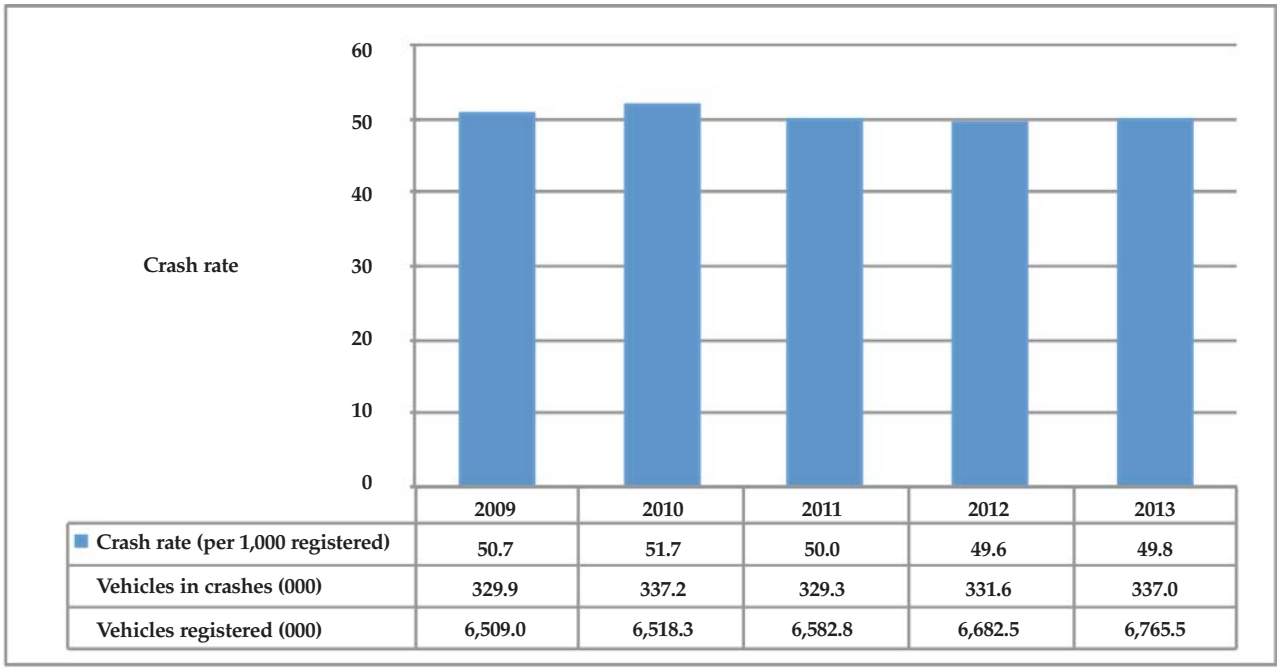
Overall, of the 13,310 large trucks involved in collisions, less than one percent had a hazard release in the collision. Of the 123 large trucks involved in fatal collisions, ten displayed a hazard placard and three had a hazard release (Table 4.10).

The mission of the Federal Motor Carrier Safety Administration (FMCSA) is to improve truck and bus safety on our nation's highways. Indiana receives federal funding through the Motor Carrier Safety Grant program each year upon compliance with certain regulations. Qualifications for funding include verification of commercial driver's licenses during all roadside inspections and uploading of commercial motor vehicle inspection data. In 2013, only 8 percent of large trucks involved in property damage collisions had some type of inspection completed, whereas, 56 percent of large trucks involved in fatal collisions had an inspection. A level 1 inspection (more detailed) was completed more often than a level 3 inspection in fatal and incapacitating injury collisions involving large trucks (Table 4.11).

Collisions involving school buses decreased in 2013. In all years, the vast majority of collisions involving school buses were *property damage only.* In 2013, there were no fatal school bus collisions (Table 4.12). Of the 717 school buses involved in collisions, 625 collided with *another vehicle*, 12 with a *parked motor vehicle,* and 10 with a *deer* (Table 4.13).

The most common primary factor for collisions involving school buses was *following too closely.* For single-vehicle school bus collisions, 15 of the 76 school buses involved had *unsafe backing* as the primary factor for the collisions. Over half of the school buses involved in multi-vehicle collisions had the primary factor attributed to them. Sixty-eight of the 78 school buses involved in multi-vehicle collisions where the primary factor was *improper turning* were reported as the vehicle involved in the improper turn. On the other hand, only 2 of the 26 school buses involved in multi-vehicle collisions where the primary factor was *disregard signal/reg sign* were attributed with this action (Table 4.14).

Figure 4.1. Indiana motor vehicle crash rate per 1,000 registrations, 2009-2013



	2009	2010	2011	2012	2013
Crash rate (per 1,000 registered)	50.7	51.7	50.0	49.6	49.8
Vehicles in crashes (000)	329.9	337.2	329.3	331.6	337.0
Vehicles registered (000)	6,509.0	6,518.3	6,582.8	6,682.5	6,765.5

Sources:
Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Indiana Bureau of Motor Vehicles

Note: Excludes *bicycles*, *pedestrians,* and *animal-drawn vehicles* as unit types.

Table 4.1. Vehicles involved in Indiana collisions, by vehicle type and collision severity, 2013

Vehicle type	Vehicles involved in:										Vehicles in fatal collisions per 1,000 in all collisions
	All collisions		Fatal collisions		Incapacitating collisions		Non-incapacitating collisions		Property damage only collisions		
	Count	% of total	Count	% of total	Count	% of total	Count	% of total	Count	% of total	
Passenger vehicles	**310,295**	**92.1%**	**875**	**77.1%**	**3,958**	**83.0%**	**49,184**	**92.2%**	**256,278**	**92.3%**	**2.8**
Passenger car	206,321	61.2%	526	46.3%	2,515	52.7%	32,715	61.3%	170,565	61.4%	2.5
Pickup truck	40,832	12.1%	167	14.7%	606	12.7%	5,945	11.1%	34,114	12.3%	4.1
Sport utility vehicle	44,719	13.3%	124	10.9%	570	12.0%	7,451	14.0%	36,574	13.2%	2.8
Van	18,423	5.5%	58	5.1%	267	5.6%	3,073	5.8%	15,025	5.4%	3.1
Other vehicles	**26,750**	**7.9%**	**260**	**22.9%**	**811**	**17.0%**	**4,152**	**7.8%**	**21,527**	**7.7%**	**9.7**
Buses	1,686	0.5%	3	0.3%	15	0.3%	203	0.4%	1,465	0.5%	1.8
Large trucks	13,313	3.9%	123	10.8%	202	4.2%	1,563	2.9%	11,425	4.1%	9.2
Motorcycle/moped	3,594	1.1%	115	10.1%	549	11.5%	1,941	3.6%	989	0.4%	32.0
Other vehicle types	850	0.3%	8	0.7%	21	0.4%	108	0.2%	713	0.3%	9.4
Unknown vehicle type	7,307	2.2%	11	1.0%	24	0.5%	337	0.6%	6,935	2.5%	1.5
Total vehicles	**337,045**	**100.0%**	**1,135**	**100.0%**	**4,769**	**100.0%**	**53,336**	**100.0%**	**277,805**	**100.0%**	**3.4**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Other vehicle types* include *combination vehicle, farm vehicle,* and *motor home/recreational vehicle.*
2) *Unknown vehicle type* includes vehicles reported as *unknown,* blank or invalid codes.
3) Excludes *bicycles, pedestrians,* and *animal-drawn vehicles* as unit types.

Table 4.2. Vehicles involved in Indiana collisions, by vehicle use and collision severity, 2013

Vehicle use	Vehicles involved in:										Vehicles in fatal collisions per 1,000 in all collisions
	All collisions		Fatal collisions		Incapacitating collisions		Non-incapacitating collisions		Property damage only collisions		
	Count	% of total	Count	% of total	Count	% of total	Count	% of total	Count	% of total	
Personal	309,281	91.8%	985	86.8%	4,481	94.0%	50,594	94.9%	253,221	91.2%	3.2
Commercial	12,125	3.6%	122	10.7%	189	4.0%	1,452	2.7%	10,362	3.7%	10.1
Police	2,455	0.7%	3	0.3%	14	0.3%	279	0.5%	2,159	0.8%	1.2
Other	2,027	0.6%	9	0.8%	25	0.5%	195	0.4%	1,798	0.6%	4.4
Rental, not leased	1,337	0.4%	4	0.4%	17	0.4%	163	0.3%	1,153	0.4%	3.0
School	901	0.3%	1	0.1%	8	0.2%	102	0.2%	790	0.3%	1.1
Highway department	412	0.1%	0	0.0%	4	0.1%	58	0.1%	350	0.1%	0.0
Ambulance	382	0.1%	2	0.2%	4	0.1%	53	0.1%	323	0.1%	5.2
Bus, not school	299	0.1%	3	0.3%	3	0.1%	46	0.1%	247	0.1%	10.0
Public utilities	250	0.1%	2	0.2%	1	0.0%	25	0.0%	222	0.1%	8.0
Fire	239	0.1%	0	0.0%	0	0.0%	19	0.0%	220	0.1%	0.0
Military	62	0.0%	0	0.0%	1	0.0%	3	0.0%	58	0.0%	0.0
Unknown	7,275	2.2%	4	0.4%	22	0.5%	347	0.7%	6,902	2.5%	0.5
Total vehicles	**337,045**	**100.0%**	**1,135**	**100.0%**	**4,769**	**100.0%**	**53,336**	**100.0%**	**277,805**	**100.0%**	**3.4**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Unknown vehicle use* includes vehicles reported as *unknown,* blank, or invalid codes.
2) *Commercial* use includes buses, taxis, carriers, etc.
3) *Other* use includes government, postal, etc.
4) *Public utilities* use includes gas, electric, etc.
5) Excludes *bicycles, pedestrians,* and *animal-drawn vehicles* as unit types.

Table 4.3. Percentage of vehicles involved in all and fatal collisions, by vehicle type and pre-collision vehicle maneuver, 2013

Vehicle maneuver	All collisions						Fatal collisions					
	Passenger car	Pickup truck	SUV	Van	Bus	Large truck	Passenger car	Pickup truck	SUV	Van	Bus	Large truck
Vehicle count	**206,321**	**40,832**	**44,719**	**18,423**	**1,686**	**13,313**	**526**	**167**	**124**	**58**	**3**	**123**
Going straight	49.7%	49.4%	46.1%	45.5%	38.1%	46.5%	70.3%	72.5%	69.4%	77.6%	66.7%	76.4%
Slowing or stopped in traffic	16.7%	13.5%	19.7%	17.5%	19.7%	8.8%	3.6%	4.2%	8.1%	1.7%	0.0%	9.8%
Parked	8.5%	7.8%	7.2%	8.1%	3.4%	7.9%	2.3%	2.4%	1.6%	1.7%	0.0%	5.7%
Turning left	7.6%	7.0%	7.4%	7.6%	14.7%	7.8%	7.0%	4.2%	6.5%	0.0%	33.3%	0.8%
Backing	5.6%	10.0%	8.0%	8.9%	7.3%	9.5%	0.0%	0.6%	0.0%	1.7%	0.0%	0.8%
Turning right	3.0%	3.5%	3.0%	3.6%	7.7%	8.0%	0.4%	1.2%	0.8%	0.0%	0.0%	0.0%
Changing lanes	2.0%	1.6%	1.7%	2.0%	1.8%	4.6%	1.7%	0.6%	0.0%	1.7%	0.0%	0.8%
Entering traffic lane	1.6%	1.3%	1.5%	1.5%	1.2%	1.1%	1.1%	0.6%	0.0%	3.4%	0.0%	0.0%
Starting in traffic	1.3%	1.3%	1.7%	1.6%	2.3%	1.0%	1.0%	0.6%	0.0%	0.0%	0.0%	0.8%
Leaving traffic lane	0.7%	0.8%	0.7%	0.7%	0.5%	1.1%	1.3%	3.0%	3.2%	1.7%	0.0%	2.4%
Avoiding object in roadway	0.7%	0.8%	0.6%	0.4%	0.6%	0.6%	0.4%	0.6%	0.8%	0.0%	0.0%	0.8%
Driving left of center	0.6%	1.0%	0.6%	0.6%	0.5%	0.3%	8.0%	8.4%	7.3%	10.3%	0.0%	0.0%
Overtaking/passing	0.6%	0.7%	0.6%	0.7%	0.9%	0.8%	1.5%	0.6%	1.6%	0.0%	0.0%	1.6%
Merging	0.5%	0.3%	0.4%	0.4%	0.5%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown	0.5%	0.5%	0.3%	0.4%	0.4%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Making U turn	0.2%	0.2%	0.2%	0.2%	0.2%	0.5%	0.2%	0.0%	0.8%	0.0%	0.0%	0.0%
Crossing median	0.1%	0.2%	0.1%	0.1%	0.0%	0.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Unattended moving vehicle	0.1%	0.2%	0.1%	0.1%	0.2%	0.1%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Note: Excludes *bicyles, pedestrians, motorcycles, mopeds, unknown, combination vehicle, farm vehicle, motor home/recreational vehicle,* and *animal-drawn vehicle (non-motor vehicle).*

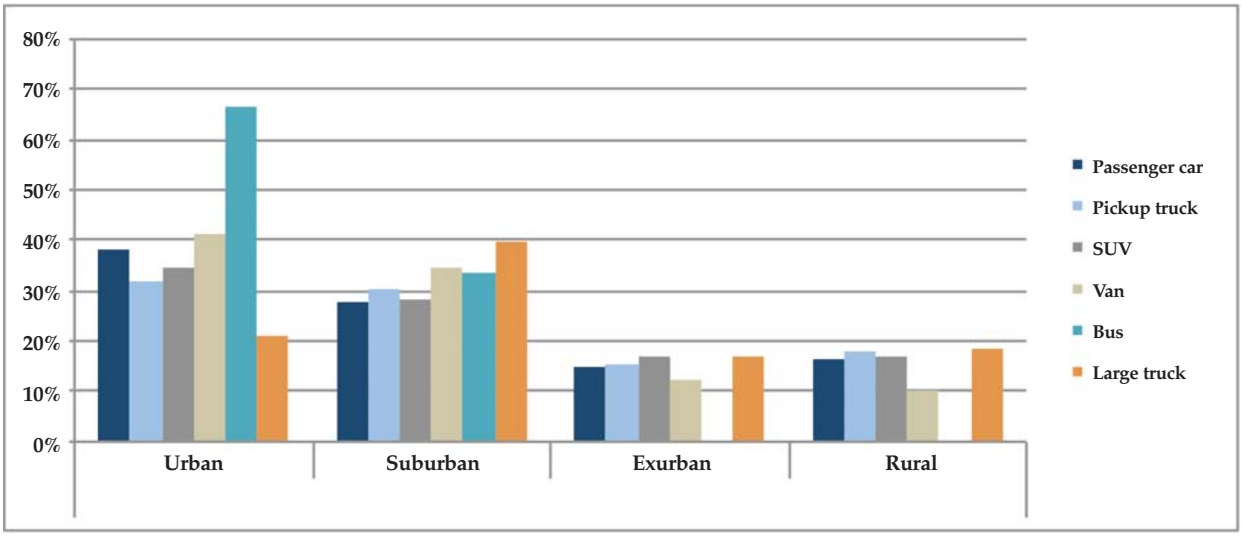
Table 4.4. Vehicles involved in fatal and injury collisions, by vehicle type and collision type, 2013

	Passenger car		Pickup truck		SUV		Van		Bus		Large truck	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Collision type												
Fatal	**526**	**100.0%**	**167**	**100.0%**	**124**	**100.0%**	**58**	**100.0%**	**3**	**100.0%**	**123**	**100.0%**
Single-vehicle	178	33.8%	60	35.9%	48	38.7%	16	27.6%	2	66.7%	11	8.9%
Multiple-vehicle	348	66.2%	107	64.1%	76	61.3%	42	72.4%	1	33.3%	112	91.1%
Injury	**35,230**	**100.0%**	**6,551**	**100.0%**	**8,021**	**100.0%**	**3,340**	**100.0%**	**218**	**100.0%**	**1,765**	**100.0%**
Single-vehicle	6,288	17.8%	1,447	22.1%	1,435	17.9%	486	14.6%	26	11.9%	310	17.6%
Multiple-vehicle	28,942	82.2%	5,104	77.9%	6,586	82.1%	2,854	85.4%	192	88.1%	1,455	82.4%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Injury collisions* are those with no fatal injuries, but contain at least one *incapacitating, non-incapacitating,* or *possible* injury.
2) Excludes *bicyles, pedestrians, motorcycles, mopeds, unknown, combination vehicle, farm vehicle, motor home/recreational vehicle,* and *animal-drawn vehicle (non-motor vehicle).*

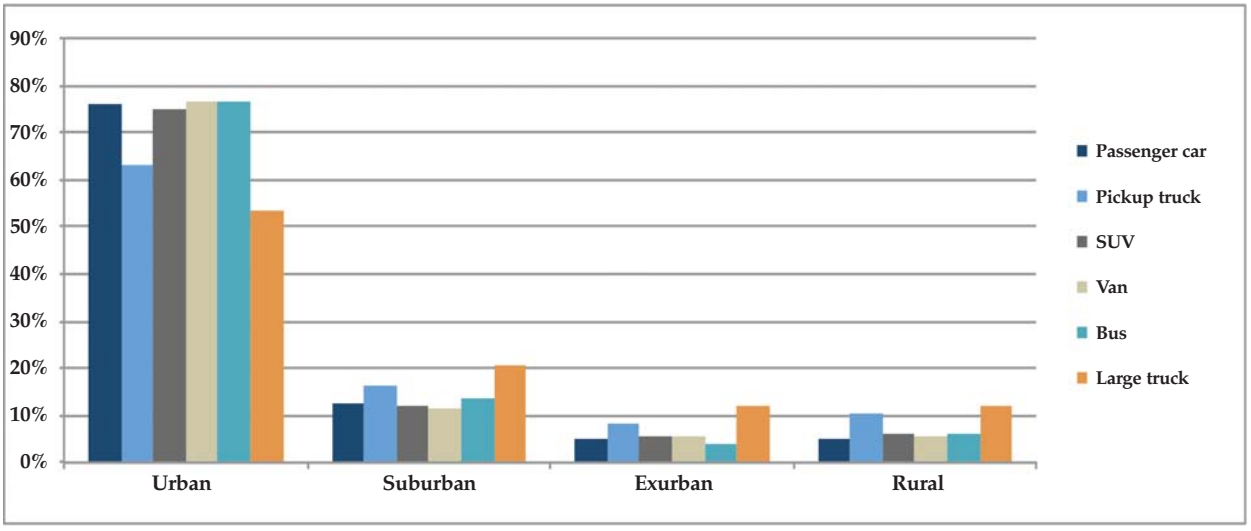
Figure 4.2. Vehicles involved in fatal collisions, by vehicle type and Census locality, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Excludes vehicles where the census locality was unknown.
2) See glossary for definition of U.S. Census localities *(urban, suburban, exurban, rural).*

Figure 4.3. Vehicles involved in injury collisions, by vehicle type and Census locality, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Excludes vehicles where the Census locality was unknown.
2) See glossary for definition of U.S. Census localities *(urban, suburban, exurban, rural).*
3) *Injury collisions* are those with no fatal injuries, but contain at least one *incapacitating, non-incapacitating,* or *possible* injury.

Table 4.5. Percentage of vehicles involved in collisions, by vehicle type and month, 2013

	Passenger car	Pickup truck	SUV	Van	Bus	Large truck	Total
All collisions	**206,321**	**40,832**	**44,719**	**18,423**	**1,686**	**13,313**	**325,294**
January	7.8%	8.1%	8.2%	8.4%	9.3%	8.8%	8.0%
February	7.1%	7.5%	7.6%	7.3%	9.0%	6.9%	7.3%
March	8.1%	8.4%	8.3%	8.0%	9.7%	8.9%	8.2%
April	7.5%	7.3%	7.0%	7.3%	8.4%	7.4%	7.4%
May	8.6%	8.4%	8.4%	8.6%	9.8%	8.2%	8.6%
June	8.1%	7.8%	7.8%	7.8%	4.0%	7.5%	7.9%
July	7.8%	7.9%	7.9%	8.3%	3.7%	8.2%	7.9%
August	8.3%	8.3%	8.0%	8.0%	8.2%	8.4%	8.2%
September	8.4%	8.2%	8.2%	8.3%	9.4%	8.1%	8.3%
October	9.3%	9.0%	8.8%	8.9%	10.3%	9.6%	9.2%
November	9.3%	9.1%	9.2%	9.0%	9.2%	8.6%	9.2%
December	9.7%	10.1%	10.5%	9.9%	9.0%	9.4%	9.9%
Fatal collisions	**526**	**167**	**124**	**58**	**3**	**123**	**1,001**
January	9.7%	8.4%	5.6%	8.6%	0.0%	20.3%	10.2%
February	7.0%	4.8%	8.9%	5.2%	0.0%	6.5%	6.7%
March	9.3%	7.2%	5.6%	5.2%	0.0%	10.6%	8.4%
April	7.8%	5.4%	11.3%	12.1%	0.0%	9.8%	8.3%
May	5.3%	4.8%	8.9%	8.6%	0.0%	2.4%	5.5%
June	5.1%	7.2%	7.3%	3.4%	0.0%	8.9%	6.1%
July	6.8%	9.6%	9.7%	6.9%	33.3%	6.5%	7.7%
August	9.1%	10.2%	6.5%	10.3%	0.0%	3.3%	8.3%
September	11.4%	9.0%	7.3%	10.3%	0.0%	8.1%	10.0%
October	8.4%	13.8%	9.7%	6.9%	66.7%	5.7%	9.2%
November	9.1%	12.0%	9.7%	12.1%	0.0%	8.9%	9.8%
December	10.8%	7.8%	9.7%	10.3%	0.0%	8.9%	9.9%

Low High

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Table 4.6. Vehicles involved in fatal collisions per 1,000 in all collisions, by vehicle type and road class, 2013

	Road class				
Vehicle type	**Local/city**	**County**	**State**	**U.S. route**	**Interstate**
Passenger car	1.2	4.8	5.7	5.8	4.0
Pickup truck	2.1	5.0	8.3	7.0	8.6
SUV	1.3	4.9	6.1	5.2	6.0
Van	1.1	8.7	6.3	7.7	6.7
Bus	0.9	0.0	0.0	13.2	14.1
Large truck	2.9	5.6	16.2	15.4	15.3

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: Excludes unknown road class.

Table 4.7. Vehicles involved in single-vehicle fatal and incapacitating injury collisions, by the primary collision factors and vehicle type, 2013

Primary factor	All passenger vehicles & large trucks		Passenger car		Pickup truck		Sport utility vehicle		Van		Large truck	
Total vehicles	**1,420**	**100.0%**	**843**	**100.0%**	**267**	**100.0%**	**188**	**100.0%**	**80**	**100.0%**	**42**	**100.0%**
	Count	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
Loss of control	640	45.1%	357	42.3%	140	52.4%	100	53.2%	31	38.8%	12	28.6%
Unsafe actions	347	24.4%	226	26.8%	46	17.2%	48	25.5%	16	20.0%	11	26.2%
All other	239	16.8%	145	17.2%	46	17.2%	25	13.3%	18	22.5%	5	11.9%
Cognitive impairment	83	5.8%	57	6.8%	12	4.5%	4	2.1%	8	10.0%	2	4.8%
Environmental	54	3.8%	33	3.9%	10	3.7%	5	2.7%	2	2.5%	4	9.5%
Vehicle	33	2.3%	11	1.3%	7	2.6%	3	1.6%	4	5.0%	8	19.0%
Distraction	18	1.3%	11	1.3%	4	1.5%	2	1.1%	1	1.3%	0	0.0%
Unknown	6	0.4%	3	0.4%	2	0.7%	1	0.5%	0	0.0%	0	0.0%

Source: IIndiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Note: See glossary for primary factors incorporated into each primary factor category.

Table 4.8. Vehicles involved in multiple-vehicle fatal and incapacitating injury collisions, by the primary collision factors, vehicle type, and attributability, 2013

Primary factor	All passenger vehicles & large trucks	Passenger car	Pickup truck	SUV	Van	Large truck
Total vehicles	**3,738**	**2,198**	**506**	**506**	**245**	**283**
Unsafe actions	**3,099**	**1,856**	**405**	**426**	**201**	**211**
% attributable		50.9%	50.4%	47.9%	44.3%	20.9%
All other	**174**	**85**	**27**	**27**	**13**	**22**
% attributable		55.3%	63.0%	51.9%	46.2%	31.8%
Distraction	**121**	**72**	**20**	**19**	**7**	**3**
% attributable		43.1%	35.0%	47.4%	42.9%	33.3%
Environmental	**100**	**48**	**20**	**5**	**7**	**20**
% attributable		72.9%	75.0%	40.0%	100.0%	90.0%
Loss of control	**94**	**51**	**9**	**12**	**8**	**14**
% attributable		52.9%	22.2%	58.3%	37.5%	35.7%
Cognitive impairment	**88**	**52**	**12**	**13**	**4**	**7**
% attributable		57.7%	33.3%	46.2%	50.0%	0.0%
Vehicle	**61**	**34**	**12**	**4**	**5**	**6**
% attributable		38.2%	33.3%	50.0%	40.0%	33.3%
Unknown	**1**	**0**	**1**	**0**	**0**	**0**
% attributable		na	0.0%	na	na	na

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) See glossary for primary factors incorporated into each primary factor category.
2) na=not applicable

Table 4.9. Vehicles involved in fatal and incapacitating injury collisions, by the top ten overall objects collided with, and vehicle type, 2013

Object collided with	Passenger cars	Pickup trucks	Sport utility vehicles	Vans	Large trucks	Total
Total vehicles - fatal and incapacitating injury collisions	**3,041**	**773**	**694**	**325**	**325**	**5,158**
Another motor vehicle	68.2%	61.7%	69.3%	71.1%	81.8%	68.4%
Ran off roadway	11.0%	14.2%	12.0%	8.9%	5.8%	11.2%
Pedestrian	4.7%	5.0%	4.3%	4.9%	2.5%	4.6%
Bicycle	2.1%	1.4%	1.6%	1.5%	0.3%	1.8%
Other	1.7%	2.2%	2.0%	1.2%	1.2%	1.7%
Tree	1.6%	1.8%	1.4%	2.2%	0.3%	1.6%
Ditch	1.3%	1.7%	1.7%	1.2%	2.2%	1.5%
Crossing center line/median	1.2%	0.8%	0.7%	0.6%	0.0%	1.0%
Utility pole	0.9%	1.6%	0.7%	0.9%	0.0%	0.9%
Curb	0.8%	0.6%	0.3%	1.2%	0.3%	0.7%
Top objects subtotal	*2,845*	*704*	*653*	*305*	*307*	*4,814*
Top as % of each vehicle fatal and incapacitating injury collision total	*93.6%*	*91.1%*	*94.1%*	*93.8%*	*94.5%*	*93.3%*

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Table 4.10. Large trucks involved in collisions, by hazard placard, hazard release, and collision severity, 2013

	Large trucks involved in collisions:									
	All		Fatal		Incapacitating		Non-incapacitating		Property damage only	
	Count	%	Count	%	Count	%	Count	%	Count	%
Large truck w/trailer	**8,558**		**93**		**142**		**980**		**7,343**	
w/hazard placard	257	3.0%	8	8.6%	8	5.6%	35	3.6%	206	2.8%
hazard release	84	1.0%	3	3.2%	1	0.7%	8	0.8%	72	1.0%
placard+release	31	0.4%	1	1.1%	1	0.7%	6	0.6%	23	0.3%
Large truck single unit	**4,752**		**30**		**60**		**583**		**4,079**	
w/hazard placard	64	1.3%	2	6.7%	1	1.7%	11	1.9%	50	1.2%
hazard release	38	0.8%	0	0.0%	1	1.7%	2	0.3%	35	0.9%
placard+release	6	0.1%	0	0.0%	1	1.7%	1	0.2%	4	0.1%
Total large trucks	**13,310**		**123**		**202**		**1,563**		**11,422**	
w/hazard placard	321	2.4%	10	8.1%	9	4.5%	46	2.9%	256	2.2%
hazard release	122	0.9%	3	2.4%	2	1.0%	10	0.6%	107	0.9%
placard+release	37	0.3%	1	0.8%	2	1.0%	7	0.4%	27	0.2%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) **Excludes the three pickup trucks that are designated due to their weight as large trucks.**
2) **Placard and release information is where known.**
3) ***w/hazard placard:*** **Federal Motor Carriers Safty Regulations (FMCSR) requires the use of *hazardous materials placards* (signs) when shipping hazardous materials cargo and dangerous goods in the United States. These are square colored placards/signs posted on the cargo hold of the trailer. This is the count of vehicles involved in collisions that had a proper placard posted on the trailer.**
4) ***hazard release:*** **This is the count of trucks that as a result of the collision released some/all of the hazardous materials they were carrying at the accident site.**

Table 4.11. Large trucks involved in collisions, by type of inspection, 2013

	Large trucks involved in collisions:									
	All		Fatal		Incapacitating		Non-incapacitating		Property damage only	
	Count	%	Count	%	Count	%	Count	%	Count	%
Large truck w/trailer	**8,558**		**93**		**142**		**980**		**7,343**	
Level 1 inspection	313	3.7%	40	43.0%	24	16.9%	88	9.0%	161	2.2%
Level 3 inspection	514	6.0%	7	7.5%	17	12.0%	100	10.2%	390	5.3%
Unknown level	221	2.6%	10	10.8%	6	4.2%	31	3.2%	174	2.4%
Large truck single unit	**4,752**		**30**		**60**		**583**		**4,079**	
Level 1 inspection	83	1.7%	9	30.0%	5	8.3%	24	4.1%	45	1.1%
Level 3 inspection	75	1.6%	3	10.0%	1	1.7%	13	2.2%	58	1.4%
Unknown level	61	1.3%	0	0.0%	2	3.3%	8	1.4%	51	1.3%
Total large trucks	**13,310**		**123**		**202**		**1,563**		**11,422**	
Level 1 inspection	396	3.0%	49	39.8%	29	14.4%	112	7.2%	206	1.8%
Level 3 inspection	589	4.4%	10	8.1%	18	8.9%	113	7.2%	448	3.9%
Unknown level	282	2.1%	10	8.1%	8	4.0%	39	2.5%	225	2.0%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Excludes the three pickup trucks that are designated due to their weight as large trucks.
2) Level 1 inspection - North American Standard Inspection (see definitions in glossary).
3) Level 3 inspection - Driver-only inspection (see definitions in glossary).
4) Unknown level - an inspection occurred but the level is unknown.

Table 4.12. Indiana collisions involving school buses, by collision severity and injuries, 2009-2013

	2009		2010		2011		2012		2013	
	Count	%	Count	%	Count	%	Count	%	Count	%
Total collisions involving school buses	**837**	**100.0%**	**808**	**100.0%**	**903**	**100.0%**	**761**	**100.0%**	**701**	**100.0%**
Fatal	2	0.2%	3	0.4%	5	0.6%	1	0.1%	0	0.0%
Incapacitating	10	1.2%	5	0.6%	7	0.8%	10	1.3%	6	0.9%
Non-incapacitating	77	9.2%	79	9.8%	87	9.6%	71	9.3%	65	9.3%
Property damage only	748	89.4%	721	89.2%	804	89.0%	679	89.2%	630	89.9%
Known injuries										
Fatal	**2**	**100.0%**	**3**	**100.0%**	**5**	**100.0%**	**1**	**100.0%**	**0**	**na**
School bus occupant	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	na
Non-motorist	2	100.0%	0	0.0%	1	20.0%	0	0.0%	0	na
Other vehicle occupant	0	0.0%	3	100.0%	4	80.0%	1	100.0%	0	na
Incapacitating	**10**	**100.0%**	**6**	**100.0%**	**8**	**100.0%**	**14**	**100.0%**	**6**	**100.0%**
School bus occupant	0	0.0%	2	33.3%	4	50.0%	2	14.3%	3	50.0%
Non-motorist	1	10.0%	0	0.0%	1	12.5%	2	14.3%	1	16.7%
Other vehicle occupant	9	90.0%	4	66.7%	3	37.5%	10	71.4%	2	33.3%
Non-incapacitating	**227**	**100.0%**	**198**	**100.0%**	**254**	**100.0%**	**166**	**100.0%**	**215**	**100.0%**
School bus occupant	167	73.6%	135	68.2%	166	65.4%	103	62.0%	158	73.5%
Non-motorist	5	2.2%	1	0.5%	3	1.2%	6	3.6%	2	0.9%
Other vehicle occupant	55	24.2%	62	31.3%	85	33.5%	57	34.3%	55	25.6%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Non-incapacitating injuries* include injuries reported as *non-incapacitating* and *possible* injuries.
2) na=not applicable

Table 4.13. School buses involved in collisions by the top ten objects collided with, and collision severity, 2013

Object collided with	School buses involved in: All collisions	Fatal collisions	Incapacitating collisions	Non-incapacitating collisions	Property damage only collisions
School buses	**717**	**0**	**9**	**68**	**640**
Another motor vehicle	625	0	8	63	554
Other	12	0	0	0	12
Parked motor vehicle	12	0	0	0	12
Utility pole	12	0	0	1	11
Deer	10	0	0	0	10
Ran off roadway	5	0	0	1	4
Ditch	5	0	0	1	4
Tree	5	0	0	0	5
Other post/pole or support	5	0	0	0	5
Wall/building/tunnel	4	0	0	0	4
Top 10 subtotal	*695*	*0*	*8*	*66*	*621*
Top 10 as % of school bus total	*96.9%*	*na*	*88.9%*	*97.1%*	*97.0%*

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Note: na=not applicable

Table 4.14. School buses involved in Indiana collisions, by the top ten primary collision factors, type of collision, and collision severity, 2013

Top primary collision factors	School buses involved in: All collisions	Single-vehicle collisions	Multiple-vehicle collisions: Count	Count where factor attributable to school bus	% attributable to school bus	Fatal and incapacitating injury collisions	Fatal/incap count where factor attributable to school bus
School buses	**717**	**76**	**641**	**340**	**53.0%**	**8**	**2**
Following too closely	106	0	106	29	27.4%	4	1
Other - driver (explained in narrative)	92	10	82	67	81.7%	0	0
Failure to yield right of way	91	1	90	35	38.9%	2	1
Improper turning	86	8	78	68	87.2%	0	0
Unsafe backing	66	15	51	30	58.8%	0	0
Left of center	34	1	33	18	54.5%	1	0
Improper lane usage	29	0	29	22	75.9%	0	0
Disregard signal/reg sign	26	0	26	2	7.7%	1	0
Driver distracted	25	4	21	6	28.6%	0	0
Improper passing	23	1	22	17	77.3%	0	0
Top 10 subtotal	*578*	*40*	*538*	*294*	*54.6%*	*8*	*2*

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Note: Top primary factors are counts of vehicles involved in collisions. For example, there were 106 school buses involved in collisions where the primary factor for each collision was *Following too closely*. Note that if the collision was a multi-vehicle collision, more than one vehicle may have contributing circumstances that match the primary factor.

CHAPTER 5

MOTORCYCLES

MOTORCYCLES, 2013

Collisions

In a year in which overall traffic collisions increased by 2.2 percent, collisions involving motorcycles decreased 14.2 percent from 2012 to 2013, while *fatal collisions* decreased 22.6 percent, from 146 in 2012 to 113 (non-motorcycle-involved fatal collisions *increased* 3.1 percent). (Unless specified otherwise, *motorcycles* include *mopeds*.) Roughly seven of ten motorcycle collisions involved injuries from 2009 to 2013. Each year from 2009 to 2013, there were more *multi-vehicle* (MV) than *single-vehicle* (SV) motorcycle collisions. SV *injury* rates are higher than MV rates (Tables 5.1 and 5.2).

Injury rates in motorcycle collisions are associated with different collision characteristics. As in previous years, motorcycle collisions in 2013 occurred predominately during *clear weather conditions,* on *straight/level* roads not involving *road junctions*, on *local/city roads*, and during *daylight*. The probability of fatal motorcycle collisions was highest under *dark (not lighted)* conditions (7.1 percent), *dawn/dusk* (6.0 percent), *interstates* (5.8), *highways* (4.9), and *curves* (4.9) (Table 5.3).

In all MV motorcycle collisions, the likelihood of alcohol impairment is typically higher for motorcyclists than other involved drivers. In 2013, motorcycle operators in MV collisions were roughly twice as likely as the other driver to be impaired (Table 5.4).

In MV motorcycle collisions, there is little difference between motorcyclists and other involved vehicles in terms of which primary factors (to the collision occurrence) predominated, but there is a difference between the likelihood the motorcycle or the other vehicle was at fault (i.e., a vehicle's *contributing circumstance* matched the *primary factor* in the collision). In 2013, MV collisions involving motorcycles most frequently involved some type of *unsafe action* by either or both the motorcyclist and/or the other vehicle driver. Because the overall relative risk of at-fault attributability (motorcycles versus other vehicles) in 2013 was 0.71, this means motorcyclists were about 29 percent less likely to be at fault than the other vehicles involved. Collisions involving selected primary factors were more likely to be the fault of motorcyclists in MV motorcycle collisions in 2013; this included *unsafe speed* (relative risk = 7.0), *improper passing* (3.3), and driving *too fast for weather conditions* (2.4) (Table 5.5).

When collisions occur involving motorcycles and other vehicles, motorcycles are considerably more likely to be speeding (Table 5.6). Thus, examining only MV collisions, motorcycles are more likely than other involved vehicles to be categorized as *speeding*. The relative risk for speeding (motorcycles/other involved) in 2009 was 6.2, but dropped to 3.5 by 2013. However, compared to vehicles in other SV collisions, motorcycles were generally slightly less or no more likely to be speeding than other vehicles involved in SV collisions (Table 5.7). But motorcycles in MV collisions were more likely to be speeding than vehicles in other non-motorcycle MV collisions.

Individuals

From 2012 to 2013, the number of *motorcyclists killed* decreased 21.9 percent, from 151 to 118, and the count of riders with *incapacitating injuries* decreased 6.4 percent, from 614 to 575. In 2013, the fatal and incapacitating injury rate for motorcyclists was 18.3 percent. Overall in 2013, nearly 2,900 motorcycle riders experienced some type of injury (2,755) or death (118) (Table 5.8).

The likelihood of injuries from motorcycle collisions is partly a function of the object(s) of impact (Table 5.9). Considering the first object with which motorcyclists collided in 2013, among the most deadly were *other actions* such as rollover (5.1 percent fatality rate) and *off-roadway* crashes (4.6 percent fatality rate). Likewise, the highest incapacitating injury rates in 2013 were linked to *posts-signs-mailboxes* (23.8 percent) and *road/bridge infrastructure* (19.2 percent).

Among the 118 motorcycle fatalities in 2013, 65 occurred in MV collisions (12.3 percent of the motorcycle drivers were alcohol impaired) and 53 in SV collisions (11.3 percent impairment rate) (Table 5.10). In terms of *blood alcohol content (BAC)* results from 2009 to 2013, the number of motorcycle operators with a BAC of 0.08 g/dL or more declined from 2012 to 2013. Over the five-year period, the number of operators with 0.15 BAC and greater grew annually by three percent. Among the reported BAC results each year from 2009 to 2013, more than 50 percent of motorcycle operators were in excess of 0.08 BAC (Table 5.11). The number of operators with reported results has improved from 2009 to 2013.

Among motorcyclists involved in Indiana collisions, helmet use is associated with lower fatality and injury rates. However, most collision-involved riders are not wearing helmets (Table 5.12 and Figure 5.1). Of the 118 motorcycle fatalities in 2013, only 19 (16 percent) were reported to be wearing helmets. Among only motorcyclists for whom helmet use was known, those without helmets experienced higher fatal (3.4 percent) and incapacitating injury rates (16.5 percent) than those wearing helmets (1.9 percent and 14.2 percent, respectively). Across six of the seven

operator age categories, fatality rates for helmeted riders were lower than fatality rates of unhelmeted riders (the exception was the 35-44 year group, for which fatality rates among helmeted and unhelmeted riders were not different). The highest fatality rate was among unhelmeted riders between the ages of 55 and 64. Helmeted riders older than 24 years sustained lower incapacitating rates than unhelmeted riders.

Considering all injuries sustained by motorcyclists, injuries to *helmeted* and *unhelmeted* riders do not vary much by nature, but do vary by injury location (Table 5.13). In 2013, unhelmeted riders experienced injuries to the *neck and above* 34.4 percent of the time, compared to 30.7 percent of the time for riders with helmets. Helmeted riders were reported with proportionately more injuries to the *entire body* (32.2 percent) and *torso* (16 percent) than were unhelmeted riders (9.6 percent and 10.5 percent, respectively). In terms of fatalities, however, unhelmeted riders is the dominant category (Table 5.14). Among the 118 motorcyclist fatalities in 2013, there were 67 (56.8 percent) unhelmeted riders with injuries to the *neck or above.* Among fatal injuries to unhelmeted riders, the location was to the *neck and above* 67.7 percent of the time, compared to 26.3 percent for helmeted riders killed. Otherwise, there was no clear pattern of differences in the *nature* of fatal injuries for both helmeted and unhelmeted motorcyclists (e.g., about 47 percent of both groups were reported to have *internal* injuries).

Table 5.1. Number of collisions by motorcycle involvement and severity, 2009-2013

	Count of Collisions					Annual rate of change	
	2009	2010	2011	2012	2013	2012-13	2009-13
All collisions	**189,661**	**192,885**	**188,126**	**188,841**	**193,013**	**2.2%**	**0.4%**
Motorcycle involved	**3,276**	**3,429**	**3,551**	**4,104**	**3,522**	**-14.2%**	**1.8%**
Fatal	111	110	117	146	113	-22.6%	0.4%
Incapacitating	438	493	511	580	536	-7.6%	5.2%
Non-incapacitating	1,786	1,917	1,910	2,312	1,905	-17.6%	1.6%
Property damage	941	909	1,013	1,066	968	-9.2%	0.7%
No motorcycle involved	**186,385**	**189,456**	**184,575**	**184,737**	**189,491**	**2.6%**	**0.4%**
Fatal	520	591	557	572	590	3.1%	3.2%
Incapacitating	2,294	2,419	2,347	2,654	2,403	-9.5%	1.2%
Non-incapacitating	28,892	29,254	27,966	28,541	27,976	-2.0%	-0.8%
Property damage	154,679	157,192	153,705	152,970	158,522	3.6%	0.6%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Table 5.2. Number of collisions involving motorcycles, by collision type and severity, 2009-2013

	Count of collisions					Annual rate of change	
	2009	2010	2011	2012	2013	2012-13	2009-13
Multi-vehicle	**1,783**	**1,872**	**1,985**	**2,336**	**2,031**	**-13.1%**	**3.3%**
Fatal	63	61	63	83	61	-26.5%	-0.8%
Incapacitating	210	235	259	266	291	9.4%	8.5%
Non-incapacitating	852	939	931	1,199	975	-18.7%	3.4%
Property damage	658	637	732	788	704	-10.7%	1.7%
Single-vehicle	**1,493**	**1,557**	**1,566**	**1,768**	**1,491**	**-15.7%**	**0.0%**
Fatal	48	49	54	63	52	-17.5%	2.0%
Incapacitating	228	258	252	314	245	-22.0%	1.8%
Non-incapacitating	934	978	979	1,113	930	-16.4%	-0.1%
Property damage	283	272	281	278	264	-5.0%	-1.7%
% injury collisions							
Multi-vehicle	63.1%	66.0%	63.1%	66.3%	65.3%		
Single-vehicle	81.0%	82.5%	82.1%	84.3%	82.3%		

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Note: Injury collisions include *fatal*, *incapacitating*, and *non-incapacitating*.

Table 5.3. Characteristics of motorcycle collisions, by severity of collision, 2013

	Number of collisions					Probability of collision severity	
Characteristics	Fatal	Incapa-citating	Non-incapacitating	Property damage	Total	Fatal	Incapa-citating
Weather conditions							
Clear	90	425	1,477	777	2,769	3.3%	15.3%
Cloudy or poor visibility	21	89	327	141	578	3.6%	15.4%
Extreme weather	2	22	100	49	173	1.2%	12.7%
Road junctions							
No junction involved	78	335	1,171	629	2,213	3.5%	15.1%
Intersections	34	190	707	328	1,259	2.7%	15.1%
Interchange/ramp	1	11	27	11	50	2.0%	22.0%
Road character							
Straight (level)	63	347	1,265	709	2,384	2.6%	14.6%
Curves	31	104	375	122	632	4.9%	16.5%
Straight (non-level)	19	76	250	112	457	4.2%	16.6%
Non-roadway	0	9	14	24	47	0.0%	19.1%
Road class							
Local/city	36	241	1,011	496	1,784	2.0%	13.5%
Highway	44	164	474	224	906	4.9%	18.1%
County	25	87	292	122	526	4.8%	16.5%
Interstate	6	23	49	26	104	5.8%	22.1%
Light conditions							
Daylight	58	381	1,399	719	2,557	2.3%	14.9%
Dark (lighted)	20	62	230	127	439	4.6%	14.1%
Dark (not lghted)	25	72	186	71	354	7.1%	20.3%
Dawn/dusk	10	21	88	47	166	6.0%	12.7%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

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 *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,* 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.*

Table 5.4. Vehicles involved in multi-vehicle motorcycle collisions, by operator alcohol impairment, 2009-2013

Alcohol status/type of vehicle	2009	2010	2011	2012	2013	Annual rate of change 2012-13	Annual rate of change 2009-13
Not alcohol-impaired							
Motorcycles	1,821	1,893	2,013	2,392	2,063	-13.8%	3.2%
Other vehicles	1,745	1,849	1,983	2,290	2,007	-12.4%	3.6%
Alcohol-impaired							
Motorcycles	40	45	45	45	40	-11.1%	0.0%
Other vehicles	20	23	27	36	20	-44.4%	0.0%
Probability of alcohol-impaired (within vehicle type)							
Motorcycles	2.1%	2.3%	2.2%	1.8%	1.9%		
Other vehicles	1.1%	1.2%	1.3%	1.5%	1.0%		
Relative risk (motorcycle/other vehicles)	**1.90***	**1.89***	**1.63***	**1.19**	**1.93***		
Lower limit	1.11	1.15	1.01	0.77	1.13		
Upper limit	3.23	3.11	2.61	1.84	3.29		

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) ***Other vehicles*** **excludes** ***unknown, pedestrians, bicycles,*** **and** ***non-motorized*** **vehicles.**
2) **Relative risk of alcohol-impaired calculated as units alcohol-impaired/not alcohol-impaired.**
3) ***Relative risk ratios significant at p < 0.05.**
4) **Data discrepancies that exist between this report and previous publications can be attributed to ARIES database updates that have occurred since the original date of publication.**

Table 5.5. Vehicles involved in multi-vehicle motorcycle collisions, by vehicle type, primary factor, and risk of vehicle attributability to collision occurrence, 2013

	Vehicles involved		Count of vehicles attributable		% Attributable		Relative risk of attributability (motorcycle/other)	Confidence intervals		
Primary factor	Motorcycle	Other vehicles	Motorcycle	Other vehicles	Motorcycle	Other vehicles		Lower	Upper	P-value
Unsafe actions	**1,773**	**1,714**	**681**	**1,052**	**38.4%**	**61.4%**	**0.63**	**0.58**	**0.67**	**0.000**
Failure to yield right of way	765	756	152	610	19.9%	80.7%	0.25	0.21	0.29	0.000
Following too closely	409	381	236	154	57.7%	40.4%	1.43	1.23	1.65	0.000
Unsafe backing	110	109	5	101	4.5%	92.7%	0.05	0.02	0.12	0.000
Disregard signal/reg sign	93	91	53	43	57.0%	47.3%	1.21	0.91	1.60	0.189
Unsafe lane movement	74	72	24	46	32.4%	63.9%	0.51	0.35	0.74	0.000
Left of center	67	66	43	22	64.2%	33.3%	1.93	1.31	2.83	0.001
Unsafe speed	67	66	57	8	85.1%	12.1%	7.02	3.64	13.54	0.000
Improper turning	58	55	21	35	36.2%	63.6%	0.57	0.38	0.85	0.005
Improper lane usage	59	50	38	16	64.4%	32.0%	2.01	1.29	3.15	0.002
Improper passing	54	52	41	12	75.9%	23.1%	3.29	1.96	5.53	0.000
Speed too fast for weather conditions	12	11	8	3	66.7%	27.3%	2.44	0.86	6.95	0.094
Wrong way on one way	5	5	3	2	60.0%	40.0%	1.50	0.41	5.45	0.538
Distraction	**50**	**58**	**22**	**27**	**44.0%**	**46.6%**	**0.95**	**0.62**	**1.43**	**0.791**
Vehicle-related	**45**	**45**	**33**	**11**	**73.3%**	**24.4%**	**3.00**	**1.74**	**5.16**	**0.000**
Loss of control	**34**	**30**	**23**	**8**	**67.6%**	**26.7%**	**2.54**	**1.34**	**4.80**	**0.004**
Environmental	**28**	**26**	**14**	**17**	**50.0%**	**65.4%**	**0.76**	**0.48**	**1.22**	**0.257**
Cognitive impairment	**8**	**8**	**2**	**4**	**25.0%**	**50.0%**	**0.50**	**0.13**	**2.00**	**0.327**
All other	**149**	**136**	**93**	**68**	**62.4%**	**50.0%**	**1.25**	**1.01**	**1.54**	**0.038**
Total	**2,087**	**2,017**	**868**	**1,187**	**41.6%**	**58.8%**	**0.71**	**0.66**	**0.75**	**0.000**

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) **A vehicle 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.***
2) **Data exclude single-vehicle collisions involving motorcycles.**
3) ***Relative risk of attributability*** **defined as ratio of** ***% attributable (motorcycles)*** **to** ***% attributable (other vehicles).*** **A value greater than 1 indicates that motorcycles are more likely to have been attributable to the collision occurring for that particular factor.**
4) ***P-values*** **greater than 0.05 considered to be insignificant.**
5) ***Other vehicles*** **excludes** ***unknown*** **unit type,** ***pedestrians, bicycles,*** **and** ***non-motorized vehicles.***
6) **Due to reorganizations of primary factors and vehicle classifications, some numbers are not comparable to previous factbooks.**

Table 5.6. Speeding status of motorcycles and other vehicles involved in multi-vehicle motorcycle collisions, 2009-2013

Speeding/type of vehicle	Vehicles involved in multi-vehicle collisions					Annual rate of change	
	2009	2010	2011	2012	2013	2012-13	2009-13
Not speeding							
Motorcycles	1,756	1,845	1,951	2,300	1,998	-13.1%	3.3%
Other vehicles	1,749	1,852	1,982	2,297	1,998	-13.0%	3.4%
Speeding							
Motorcycles	105	93	107	137	105	-23.4%	0.0%
Other vehicles	16	20	28	29	29	0.0%	16.0%
Probability of speeding (within vehicle type)							
Motorcycles	5.6%	4.8%	5.2%	5.6%	5.0%		
Other vehicles	0.9%	1.1%	1.4%	1.2%	1.4%		
Relative risk (motorcycle/others)	**6.22**	**4.49**	**3.73**	**4.51**	**3.49**		
Lower limit	3.69	2.78	2.47	3.03	2.32		
Upper limit	10.49	7.25	5.63	6.70	5.24		

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Relative risk ratios significant at p < 0.001.
2) *Other vehicles* exclude *unknown* unit type, *pedestrians, bicycles,* and *animal-drawn vehicles.*

Table 5.7. Speeding status of motorcycles and other vehicles involved in all collisions, 2009-2013

Collision type/speeding/type of vehicle	2009	2010	2011	2012	2013	Annual rate of change 2012-13	Annual rate of change 2009-13
Single-vehicle collisions							
Not speeding							
Motorcycles	1,299	1,319	1,289	1,484	1,221	-17.7%	-1.5%
Other vehicles	49,449	48,302	47,061	46,709	48,112	3.0%	-0.7%
Speeding							
Motorcycles	194	238	277	284	270	-4.9%	8.6%
Other vehicles	8,945	9,425	8,533	8,294	9,514	14.7%	1.6%
Probability of speeding (within vehicle type)							
Motorcycles	13.0%	15.3%	17.7%	16.1%	18.1%		
Other vehicles	15.3%	16.3%	15.3%	15.1%	16.5%		
Relative risk (motorcycle/others)	**0.85***	**0.94**	**1.15***	**1.07**	**1.10**		
Lower limit	0.74	0.83	1.03	0.96	0.98		
Upper limit	0.97	1.05	1.28	1.19	1.22		
Multi-vehicle collisions							
Not speeding							
Motorcycles	1,756	1,845	1,951	2,300	1,998	-13.1%	3.3%
Other vehicles	251,331	259,845	254,306	257,319	259,939	1.0%	0.8%
Speeding							
Motorcycles	105	93	107	137	105	-23.4%	0.0%
Other vehicles	8,921	8,645	8,497	7,875	8,579	8.9%	-1.0%
Probability of speeding (within vehicle type)							
Motorcycles	5.6%	4.8%	5.2%	5.6%	5.0%		
Other vehicles	3.4%	3.2%	3.2%	3.0%	3.2%		
Relative risk (motorcycle/others)	**1.65***	**1.49***	**1.61***	**1.89***	**1.56***		
Lower limit	1.37	1.22	1.34	1.61	1.30		
Upper limit	1.98	1.82	1.94	2.23	1.89		

Source: Indiana State Police Automated Reporting and Information Exchange System, as of March 21, 2014

Notes:
1) *All relative risk ratios significant: p < 0.01
2) *Other vehicles* exclude *unknown* unit type, *pedestrians, bicycles,* and *animal-drawn vehicles.*

Table 5.8. Indiana motorcycle rider injuries, 2009-2013

Injury status	Count of individuals					Annual rate of change	
	2009	2010	2011	2012	2013	2012-13	2009-13
Total	**3,486**	**3,722**	**3,809**	**4,458**	**3,793**	**-14.9%**	**2.1%**
Fatal	111	110	118	151	118	-21.9%	1.5%
Incapacitating	468	529	553	614	575	-6.4%	5.3%
Non-incapacitating	1,986	2,158	2,148	2,632	2,166	-17.7%	2.2%
Other	32	25	18	33	14	-57.6%	-18.7%
Not injured	889	900	972	1,028	920	-10.5%	0.9%
% Injured	**74.5%**	**75.8%**	**74.5%**	**76.9%**	**75.7%**		

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Note: *Other injury* includes *unknown, '+', not reported, refused,* and *died from natural causes.*

Table 5.9. Probability of injury status of motorcycle operators and passengers, by (first) object of impact, 2013

Object of impact	Total	Probability of injury status (sum = 100%)				
		Fatal	Incapacitating	Non-incapa-citating	Other	No injury
Other motor vehicle	2,012	2.8%	15.1%	51.8%	0.4%	29.8%
Off the roadway	547	4.6%	16.3%	62.7%	0.7%	15.7%
Other objects	427	3.0%	14.5%	62.5%	0.0%	19.9%
Fell from vehicle	222	2.7%	13.1%	68.0%	0.0%	16.2%
Road/bridge infrastructure	198	3.0%	19.2%	65.2%	0.0%	12.6%
Animals	181	1.1%	11.6%	58.0%	0.0%	29.3%
Other actions	158	5.1%	17.7%	63.3%	0.6%	13.3%
Other traffic units	24	4.2%	0.0%	62.5%	0.0%	33.3%
Posts, signs, mailbox	21	0.0%	23.8%	52.4%	0.0%	23.8%
Unknown	3	0.0%	0.0%	66.7%	0.0%	33.3%
Total	**3,793**	**3.1%**	**15.2%**	**57.1%**	**0.4%**	**24.3%**

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:

1) *Other injury* includes *unknown, '+', not reported, refused,* and *died from natural causes.*

2) Due to rounding, percentages might not add to 100 percent.

Table 5.10. Individuals involved in Indiana motorcycle collisions by collision type, vehicle type, driver alcohol impairment, and injury status, 2013

Type of vehicle/alcohol status	Count of individuals, by injury status					
	Fatal	Incapacitating	Non-incapacitating	Other injury	No injury	Total
Single-vehicle collisions						
Motorcycles	**53**	**259**	**1,055**	**3**	**290**	**1,660**
Alcohol-impaired unit	6	24	68	1	19	118
% alcohol-impaired	11.3%	9.3%	6.4%	33.3%	6.6%	7.1%
Multi-vehicle collisions						
Motorcycles	**65**	**316**	**1,111**	**11**	**630**	**2,133**
Alcohol-impaired unit	8	9	16	1	11	45
% alcohol-impaired	12.3%	2.8%	1.4%	9.1%	1.7%	2.1%
All other vehicles	**0**	**6**	**103**	**83**	**1,644**	**1,836**
Alcohol-impaired unit	0	0	2	2	16	20
% alcohol-impaired	--	*0.0%*	*1.9%*	*2.4%*	*1.0%*	*1.1%*

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) See glossary for definitions of *alcohol-impaired*.
2) Excludes *unknown* unit type, *pedestrians*, *pedalcyclists*, and *animal-drawn* vehicles.
3) *Other injury* includes *unknown*, '+', *not reported*, *refused*, and *died from natural causes*.

Table 5.11. Motorcycle operators involved in Indiana collisions, by blood alcohol content (BAC) (g/dL), 2009-2013

BAC range, g/dL	2009	2010	2011	2012	2013	Annual rate of change 2009-13	Annual rate of change 2012-13
Total motorcycle operators	**3,180**	**3,338**	**3,456**	**4,021**	**3,435**	**-14.6%**	**1.9%**
No BAC reported	2,938	3,060	3,137	3,654	3,158	-13.6%	1.8%
% total operators	*92.4%*	*91.7%*	*90.8%*	*90.9%*	*91.9%*		
< 0.01	76	80	106	123	99	-19.5%	6.8%
% total operators	*2.4%*	*2.4%*	*3.1%*	*3.1%*	*2.9%*		
0.01 < 0.08	32	38	35	38	35	-7.9%	2.3%
% total operators	*1.0%*	*1.1%*	*1.0%*	*0.9%*	*1.0%*		
0.08 < 0.15	47	66	54	69	45	-34.8%	-1.1%
% total operators	*1.5%*	*2.0%*	*1.6%*	*1.7%*	*1.3%*		
0.15 and greater	87	94	124	137	98	-28.5%	3.0%
% total operators	*2.7%*	*2.8%*	*3.6%*	*3.4%*	*2.9%*		
As % of reported results							
< 0.01	31.4%	28.8%	33.2%	33.5%	35.7%		
0.01 < 0.08	13.2%	13.7%	11.0%	10.4%	12.6%		
0.08 < 0.15	19.4%	23.7%	16.9%	18.8%	16.2%		
0.15 and greater	36.0%	33.8%	38.9%	37.3%	35.4%		

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Note: g/dL = grams per deciliter.

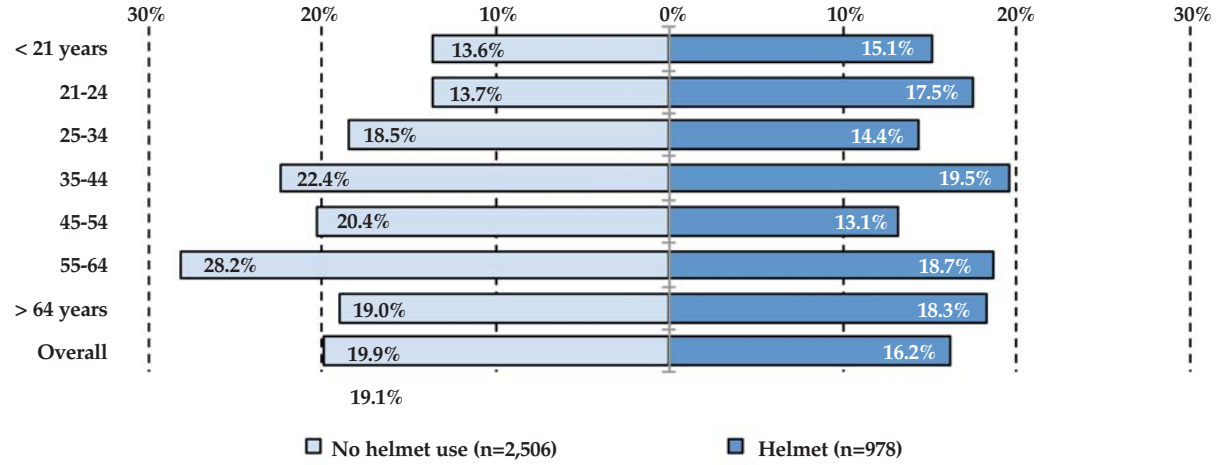
Table 5.12. Motorcyclists involved in collisions, by rider characteristics and injury status, 2013

Characteristics	Count of individuals, by injury status						Probability of injury status	
	Fatal	Incapa-citating	Non-incapacitating	Other injury	No injury	Total	Fatal	Incapa-citating
Type of individual	**118**	**575**	**2,166**	**14**	**920**	**3,793**	**3.1%**	**15.2%**
Operator	104	513	1,895	13	910	3,435	3.0%	14.9%
Injured passenger	14	62	271	1	10	358	3.9%	17.3%
Helmet use/age group								
Helmet	**19**	**139**	**557**	**8**	**255**	**978**	**1.9%**	**14.2%**
Under 21	1	22	88	2	39	152	0.7%	14.5%
21-24	1	17	58	0	27	103	1.0%	16.5%
25-34	1	23	97	0	46	167	0.6%	13.8%
35-44	5	20	66	2	35	128	3.9%	15.6%
45-54	3	25	127	2	56	213	1.4%	11.7%
55-64	5	24	90	1	35	155	3.2%	15.5%
65 and older	3	8	31	1	17	60	5.0%	13.3%
No helmet	**84**	**414**	**1,458**	**3**	**547**	**2,506**	**3.4%**	**16.5%**
Under 21	7	35	209	0	57	308	2.3%	11.4%
21-24	7	27	156	1	58	249	2.8%	10.8%
25-34	13	75	289	1	97	475	2.7%	15.8%
35-44	20	95	288	1	110	514	3.9%	18.5%
45-54	12	103	306	0	144	565	2.1%	18.2%
55-64	21	68	154	0	73	316	6.6%	21.5%
65 and older	4	11	56	0	8	79	5.1%	13.9%
Gender								
Male	**101**	**478**	**1,760**	**13**	**872**	**3,224**	**3.1%**	**14.8%**
Operator	100	469	1,706	12	864	3,151	3.2%	14.9%
Injured passenger	1	9	54	1	8	73	1.4%	12.3%
Female	**17**	**97**	**406**	**1**	**47**	**568**	**3.0%**	**17.1%**
Operator	4	44	189	1	45	283	1.4%	15.5%
Injured passenger	13	53	217		2	285	4.6%	18.6%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

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) *Other injury* includes *unknown, '+', not reported, refused,* and *died from natural causes.*

Figure 5.1. Fatal and incapacitating injuries as percent of total motorcyclist injuries, by helmet use and age group, 2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Includes only cases where *helmet use* and *age* are known.
2) Include injuries reported as *fatal* or *incapacitating*.

Table 5.13. Nature and location of injuries to motorcycle operators and passengers in collisions, by reported helmet use, 2013

Nature of injury	Location of injury					Total	Percent injuries by nature
	Neck and above	Arms	Entire body	Legs	No injury/ unknown		
Total	**753**	**598**	**256**	**741**	**318**	**2,666**	
Helmet	**82**	**219**	**69**	**230**	**114**	**714**	**100%**
Other injury	35	133	42	138	79	427	59.8%
Fracture/dislocaton	7	43	6	69	14	139	19.5%
Minor bleeding	24	39	8	15	1	87	12.2%
Internal	10	3	13	2	18	46	6.4%
Severe bleeding	5	1	0	2	0	8	1.1%
None visible	0	0	0	2	2	4	0.6%
Severed	0	0	0	2	0	2	0.3%
Burns	1	0	0	0	0	1	0.1%
Percent injuries by location	*30.7%*	*9.7%*	*32.2%*	*11.5%*	*16.0%*	*100%*	
No helmet indicated	**671**	**379**	**187**	**511**	**204**	**1,952**	**100%**
Other injury	278	248	103	288	145	1,062	54.4%
Minor bleeding	168	69	25	51	12	325	16.6%
Fracture/dislocaton	45	56	18	147	22	288	14.8%
Internal	85	0	28	5	24	142	7.3%
Severe bleeding	90	4	5	11	1	111	5.7%
Severed	1	1	4	6	0	12	0.6%
None visible	4	1	4	2	0	11	0.6%
Burns	0	0	0	1	0	1	0.1%
Percent injuries by location	*34.4%*	*19.4%*	*9.6%*	*26.2%*	*10.5%*	*100%*	

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

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.*

Table 5.14. Motorcyclist fatalities by helmet use, nature, and location of injuries, 2013

Helmet use/nature of injury	Location					Total	Percent by nature
	Neck and above	Entire body	Legs	Torso	Not reported		
No helmet	**67**	**23**	**4**	**3**	**2**	**99**	**100%**
Internal	31	12	0	3	0	46	46.5%
Severe bleeding	15	1	2	0	0	18	18.2%
Fracture/dislocaton	11	0	2	0	0	13	13.1%
Other injury	7	5	0	0	0	12	12.1%
Severed	2	4	0	0	0	6	6.1%
Minor bleeding	1	0	0	0	0	1	1.0%
Not reported	0	1	0	0	2	3	3.0%
Helmet	**5**	**7**	**0**	**4**	**3**	**19**	**100%**
Internal	0	6	0	3	0	9	47.4%
Fracture/dislocaton	3	0	0	0	0	3	15.8%
Severe bleeding	2	0	0	0	0	2	10.5%
Other injury	0	0	0	1	1	2	10.5%
Not reported	0	1	0	0	2	3	15.8%
Total	**72**	**30**	**4**	**7**	**5**	**118**	
Percent by location							
No helmet	67.7%	23.2%	4.0%	3.0%	2.0%	100%	
Helmet	26.3%	36.8%	0.0%	21.1%	15.8%	100%	

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:

1) ***Other injury* includes *abrasion, complaint of pain, contusion/bruise,* and *other.***
2) ***Burns* includes *minor burn* and *severe burn.***
3) ***Location of injury* is defined as follows based on ARIES categories:**
   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) ***No helmet indicated* includes *null* and *unknown* safety equipment types.**

CHAPTER 6

PEOPLE

PEOPLE, 2013

This section documents individuals involved in Indiana collisions in 2013, as well as trends from 2009 to 2013. Tables and figures detail the individuals involved (i.e., drivers, occupants, pedestrians, and pedalcyclists) by age, gender, type of injury, physical condition, and restraint use. More detailed information regarding drivers and restraint use can be found in the previous PPI publications, *Young Drivers, 2013; Dangerous Driving, 2013*; and *Occupant Protection, 2013.* In addition, motorcycle operators and occupants are covered in detail in a separate section of this publication.

In 2013, of the 309,975 individuals involved in collisions, 294,939 were drivers of vehicles. In addition, 1,757 pedestrians and 1,080 pedalcyclists were involved. Total numbers of all individuals involved increased from 2012 to 2013. However, the number of pedalcylists and pedestrians involved in collisions decreased 2012 to 2013 (Table 6.1).

Fatality risk is largely a function of the level of protection afforded the individual involved. Enclosed vehicles provide greater protection and result in lower fatality rates. In 2013, 777 individuals were killed in collisions. Pedestrians, the most vulnerable of person types, were killed at a rate of 39.3 per 1,000 involved. Similarly, motorcyclists were killed at a rate of 31.1 per 1,000 involved. By contrast, vehicle drivers were killed at a rate of 1.4 per 1,000 involved (Table 6.2).

In 2013, of all age groups for males, those ages 18 to 20 had the highest fatality rate of 36.9 per 100,000 population, while females ages 75 and over had the highest female fatality rate (13.5 per 100,000). Males and females ages 18 to 20 had the highest non-fatal injury rate per 100,000 population. Among the driving age population (16 years and older), males always had significantly higher fatality rates than females, regardless of age; however, up to age 74, females experienced higher non-fatal injury rates than males (Table 6.3).

Drivers ages 21 to 24 years old had the highest rate of involvement in fatal collisions per 10,000 licensed drivers. Drivers age 15 had the highest rate of drivers killed per 10,000 licensed, followed by drivers ages 21 to 24. Young drivers (ages 16 to 24) generally had the highest rate of collision involvement (Table 6.4).

Nearly 27 percent of drivers killed in 2013 were identified as having an apparent physical condition of *normal*. Seventeen percent of drivers killed were identified as having a condition of *had been drinking* (Table 6.5).

Over 80 percent of drivers involved in collisions had a valid license. Of the drivers killed in collisions, 5.2 percent had no license. In addition, those with no license had the second highest fatal rate of all licensed type drivers (second to those with a motorcycle license type). Drivers with a conditional license status had the highest fatal rate followed by the lifetime habitual traffic violators (Tables 6.6 and 6.7).

The number of pedestrians and pedalcyclists involved in collisions decreased slightly from 2012 to 2013, while the percentage of fatalities for both increased slightly (Figure 6.1). Pedestrians aged 25 to 34 and pedalcyclists aged 8 to 15 involved in collisions had the highest involvement rate of the age groups (Figure 6.2).

The most common action of pedestrians and pedalcyclists involved in collisions in 2013 was *crossing at intersection*. Pedestrians *getting off/on school bus* had the highest fatality rate, while pedalcyclists *riding on shoulder* had the highest fatality rate. Pedestrians and pedalcyclists generally were involved in collisions during the hours of 3pm to 6pm and on weekdays (Tables 6.8, 6.9, and 6.10).

Overall restraint use by individuals involved in collisions has remained constant from 2009 to 2013. In 2013, of the 570 persons killed where restraint use was known, only 51 percent were properly restrained. The extremes of restraint use of individuals killed fell into two age groups: 31 percent of those killed aged 21 to 24 were restrained, while 81 percent of those killed aged 65 to 74 were restrained. For *passenger cars* and *SUVs,* 89 percent of vehicle occupants involved in collisions that sustained an injury were restrained. Of the 68 males killed in *pickup trucks* in 2013, only 34 percent were restrained (Tables 6.11, 6.12, 6.13).

Unrestrained passenger vehicle occupants were more likely to be *ejected*, or *partially ejected* than occupants who were restrained. Of those occupants *not ejected or trapped*, 62 percent were restrained while 28 percent were not restrained (Figure 6.3).

Table 6.1. Individuals involved in Indiana collisions, by person type and gender, 2009-2013

	Count of individuals					Annual rate of change	
	2009	2010	2011	2012	2013	2009-13	2012-13
Driver	**288,974**	**295,224**	**288,436**	**290,289**	**294,939**	**0.5%**	**1.6%**
Male	160,335	164,380	159,745	160,310	163,101	0.4%	1.7%
Female	128,024	130,253	128,084	129,351	131,041	0.6%	1.3%
Unknown gender	615	591	607	628	797	6.7%	26.9%
Injured occupant	**12,715**	**13,085**	**12,215**	**12,531**	**12,090**	**-1.3%**	**-3.5%**
Male	4,811	4,984	4,700	4,723	4,605	-1.1%	-2.5%
Female	7,855	8,094	7,507	7,796	7,480	-1.2%	-4.1%
Unknown gender	49	7	8	12	5	-43.5%	-58.3%
Pedalcyclist	**975**	**1,045**	**956**	**1,155**	**1,080**	**2.6%**	**-6.5%**
Male	785	837	776	931	875	2.8%	-6.0%
Female	186	205	180	222	205	2.5%	-7.7%
Unknown gender	4	3	0	2	0	-100.0%	-100.0%
Pedestrian	**1,719**	**1,797**	**1,809**	**1,816**	**1,757**	**0.5%**	**-3.2%**
Male	972	1,017	1,062	1,070	1,028	1.4%	-3.9%
Female	740	778	746	746	727	-0.4%	-2.5%
Unknown gender	7	2	1	0	2	-26.9%	na
Animal-drawn vehicle operator	**6**	**79**	**100**	**102**	**109**	**106.5%**	**6.9%**
Male	5	55	72	71	83	101.8%	16.9%
Female	1	22	28	29	25	123.6%	-13.8%
Unknown gender	0	2	0	2	1	na	-50.0%
All individuals	**304,389**	**311,230**	**303,516**	**305,893**	**309,975**	**0.5%**	**1.3%**
Male	166,908	171,273	166,355	167,105	169,692	0.4%	1.5%
Female	136,806	139,352	136,545	138,144	139,478	0.5%	1.0%
Unknown gender	675	605	616	644	805	4.5%	25.0%

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) ***Animal-drawn vehicle operator*** **was added as a person type in late 2009.**
2) **Data from previous years may vary due to updated information.**
3) **Some pedestrians and pedalcyclists were listed in ARIES as a person type of *injured occupants*. They are counted here in *pedestrian* and *pedalcyclist* categories.**
4) **na= not applicable**

Table 6.2. Individuals involved in Indiana collisions, by person type and injury status, 2013

	Injury status						
Unit type/person type	Fatal	Fatalities per 1,000 total involved	Incapacitating	Non-incapacitating	Unknown/ other injury	Not injured	Total individuals
Vehicle occupants	**572**	**1.9**	**2,564**	**37,648**	**2,129**	**260,297**	**303,210**
Drivers	420	1.4	1,878	27,070	2,029	260,107	291,504
Passengers	152	13.0	686	10,578	100	190	11,706
Non-motorists	**87**	**29.3**	**304**	**2,043**	**44**	**494**	**2,972**
Pedestrians	69	39.3	211	1,240	33	204	1,757
Pedalcyclists	15	13.9	84	762	10	209	1,080
Animal-drawn vehicle operator	2	18.3	2	25	1	79	109
Animal-drawn vehicle passenger	1	38.5	7	16	0	2	26
Motorcycle/moped	**118**	**31.1**	**575**	**2,166**	**14**	**920**	**3,793**
Operators	104	30.3	513	1,895	13	910	3,435
Passengers	14	39.1	62	271	1	10	358
TOTAL	**777**	**2.5**	**3,443**	**41,857**	**2,187**	**261,711**	**309,975**

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) ***Unknown/other injury*** **includes injury status of *not reported, unknown, refused* (treatment), and invalid injury codes.**
2) ***Non-incapacitating*** **includes *non-incapacitating* and *possible* injuries.**
3) **Reporting officers are instructed to enter passengers into ARIES only if some injury occurs; therefore, uninjured passenger counts are not valid.**
4) **Some pedestrians and pedalcyclists were listed in ARIES as a person type of *injured occupants*. They are counted here in *pedestrian* and *pedalcyclist* categories.**

Table 6.3. Individuals injured or killed in Indiana collisions, by age group and gender, 2013

Age group	Population			Fatalities			Fatalities per 100K population			Non-fatal injuries			Non-fatal injuries per 100K population		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
< 4	171,907	163,409	335,316	4	6	10	2.3	3.7	3.0	299	286	585	173.9	175.0	174.5
4 - 7	179,370	171,960	351,330	4	4	8	2.2	2.3	2.3	446	433	879	248.6	251.8	250.2
8 - 15	367,574	351,694	719,268	14	8	22	3.8	2.3	3.1	1,171	1,206	2,377	318.6	342.9	330.5
16 - 17	91,959	88,154	180,113	14	4	18	15.2	4.5	10.0	992	1,178	2,170	1,078.7	1,336.3	1,204.8
18 - 20	146,348	138,206	284,554	54	10	64	36.9	7.2	22.5	2,095	2,389	4,484	1,431.5	1,728.6	1,575.8
21 - 24	192,860	188,999	381,859	60	24	84	31.1	12.7	22.0	2,496	2,655	5,151	1,294.2	1,404.8	1,348.9
25 - 34	422,529	420,054	842,583	100	31	131	23.7	7.4	15.5	4,044	4,491	8,535	957.1	1,069.1	1,013.0
35 - 44	414,185	412,271	826,456	79	25	104	19.1	6.1	12.6	3,229	3,459	6,688	779.6	839.0	809.2
45 - 54	448,617	456,287	904,904	80	25	105	17.8	5.5	11.6	3,315	3,523	6,838	738.9	772.1	755.7
55 - 64	404,143	425,343	829,486	81	28	109	20.0	6.6	13.1	2,481	2,729	5,210	613.9	641.6	628.1
65 - 74	240,500	274,023	514,523	31	22	53	12.9	8.0	10.3	1,271	1,480	2,751	528.5	540.1	534.7
75 and over	156,276	244,234	400,510	36	33	69	23.0	13.5	17.2	777	1,023	1,800	497.2	418.9	449.4
TOTAL	**3,236,268**	**3,334,634**	**6,570,902**	**557**	**220**	**777**	**17.2**	**6.6**	**11.8**	**22,616**	**24,852**	**47,468**	**698.8**	**745.3**	**722.4**

Sources:
Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; U.S. Census, 2013 estimates

Low — High

Notes:
1) **Excludes unknown gender.**
2) ***Non-fatal injuries*** **includes injury status of *incapacitating, non-incapacitating, possible, unknown, not reported, refused* (treatment), and invalid injury categories.**
3) **Conditional formatting color-scales show column values from low to high.**

Table 6.4. Drivers in Indiana collisions, by age group, 2013

Age	Licensed drivers		Drivers in fatal collisions			Drivers killed			Drivers in all collisions		
	Count	% Total	Count	% Total	Per 10,000 licensed	Count	% Total	Per 10,000 licensed	Count	% Total	Per 10,000 licensed
15	12,925	0.3%	3	0.3%	2.3	3	0.6%	2.3	288	0.1%	222.8
16 - 17	109,532	2.4%	28	2.6%	2.6	9	1.7%	0.8	11,805	4.0%	1,077.8
18 - 20	226,354	5.0%	70	6.4%	3.1	32	6.1%	1.4	27,702	9.4%	1,223.8
21 - 24	320,419	7.1%	126	11.5%	3.9	60	11.5%	1.9	33,079	11.3%	1,032.4
25 - 34	746,365	16.6%	216	19.7%	2.9	94	18.0%	1.3	58,663	20.0%	786.0
35 - 44	732,714	16.3%	170	15.5%	2.3	85	16.3%	1.2	48,602	16.5%	663.3
45 - 54	815,732	18.1%	170	15.5%	2.1	69	13.2%	0.8	46,932	16.0%	575.3
55 - 64	769,569	17.1%	171	15.6%	2.2	83	15.9%	1.1	36,363	12.4%	472.5
65 - 74	480,032	10.7%	67	6.1%	1.4	36	6.9%	0.7	19,144	6.5%	398.8
75 and over	286,550	6.4%	74	6.8%	2.6	51	9.8%	1.8	11,247	3.8%	392.5
Total	**4,500,192**	**100.0%**	**1,095**	**100.0%**	**2.4**	**522**	**100.0%**	**1.2**	**293,825**	**100.0%**	**652.9**

Sources:
Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Indiana Bureau of Motor Vehicles

Low — High

Notes:
1) **Includes only drivers where age was known.**
2) **Due to revised licensed driver counts from the Indiana BMV in 2013, rates per 10,000 licensed drivers may not be comparable to previous publications.**
3) **Conditional formatting color-scales show column values from low to high.**

Table 6.5. Drivers killed in collisions, by apparent physical condition, 2013

Apparent physical condition	In fatal collisions	
	Killed	% killed of total unique drivers killed
Normal	139	26.6%
Had been drinking	86	16.5%
Handicapped	23	4.4%
Illness	23	4.4%
Asleep/fatigued	5	1.0%
On drugs/medication	4	0.8%
Other/unknown	285	54.6%
Total	565	
Total unique drivers killed	522	

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) A driver can be assigned more than one condition *type*; total will not match actual *unique* driver total.
2) Includes only drivers with a reported age of 15 to 109.

Table 6.6. Drivers involved in Indiana collisions, by license type and injury status, 2013

License type	Driver injury status							
	Fatal	% of total fatal	Incapa-citating	Non-incapac-itating	Unknown/ other	No injury	Total	Fatal per 1,000 overall total
Operator	385	73.8%	1,815	25,194	1,746	229,233	258,373	1.5
Commercial driver	26	5.0%	74	799	117	14,369	15,385	1.7
Motorcycle	61	11.7%	262	1,221	33	5,382	6,959	8.8
Chauffeur	12	2.3%	50	369	42	4,330	4,803	2.5
No license	27	5.2%	124	807	45	3,619	4,622	5.8
Learner permit	8	1.5%	43	398	31	2,074	2,554	3.1
Probationary operator	0	0.0%	1	16	1	134	152	0.0
Unknown license type	3	0.6%	12	88	15	859	977	3.1
Total	**522**	**100.0%**	**2,381**	**28,892**	**2,030**	**260,000**	**293,825**	**1.8**

Low — High

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

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*.
5) *Non-incapacitating injuries* include those reported as *non-incapacitating* and *possible* injuries.

Table 6.7. Drivers involved in Indiana collisions by license status and driver injury status, 2013

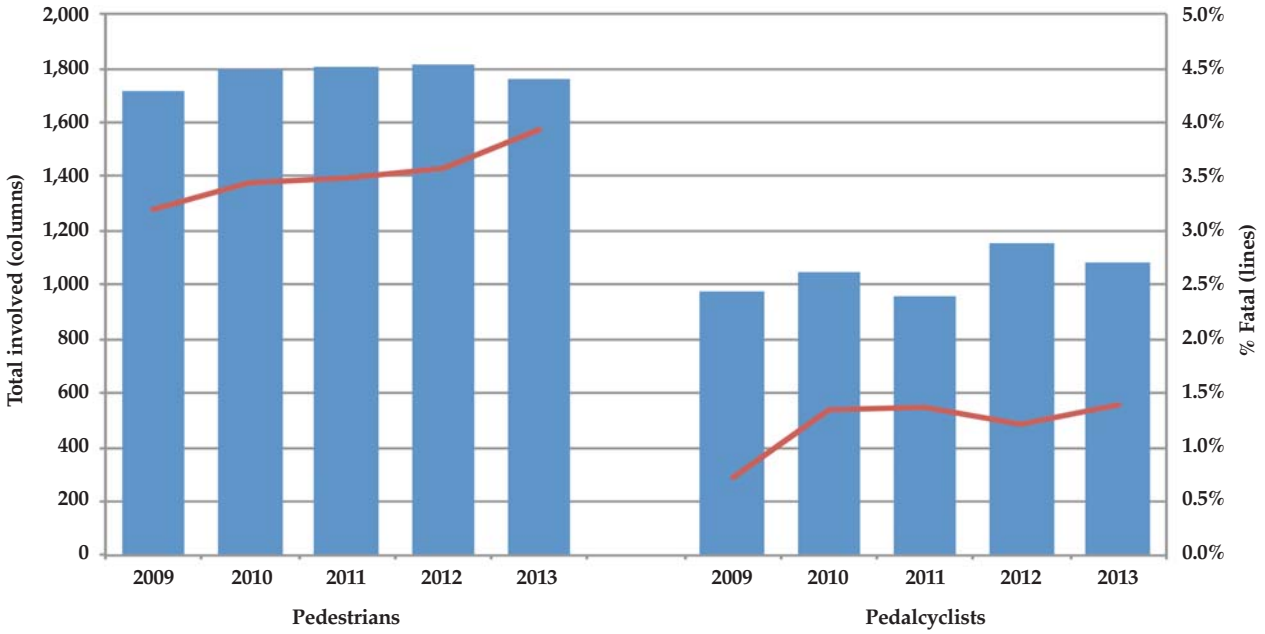
	Driver injury status							
License status	Fatal	% of fatal total	Incapacitating	Non-incapacitating	Unknown/ other	Not injured	Total	Fatal per 1,000 overall total
Valid	388	74.3%	1,811	23,810	1,650	217,030	244,689	1.6
Unknown	61	11.7%	275	2,967	253	31,757	35,313	1.7
Suspended - infraction	26	5.0%	130	1,011	62	5,980	7,209	3.6
Suspended - prior	26	5.0%	72	604	29	2,747	3,478	7.5
Unlicensed	6	1.1%	40	228	15	1,125	1,414	4.2
Cancelled	0	0.0%	9	71	6	578	664	0.0
Habitual traffic violator	4	0.8%	19	71	6	176	276	14.5
Conditional	7	1.3%	2	24	2	200	235	29.8
Suspended - misdemeanor	0	0.0%	4	28	3	158	193	0.0
Invalid-revoked	0	0.0%	2	18	1	155	176	0.0
Habitual traffic violator - life	4	0.8%	17	60	3	90	174	23.0
Fraudulent	0	0.0%	0	0	0	4	4	0.0
Total	**522**	**100.0%**	**2,381**	**28,892**	**2,030**	**260,000**	**293,825**	**1.8**

Low High

Sources: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Indiana Bureau of Motor Vehicles

Note: Includes drivers reported with ages ranging from 15 to 109. Excludes unknown and invalid ages.

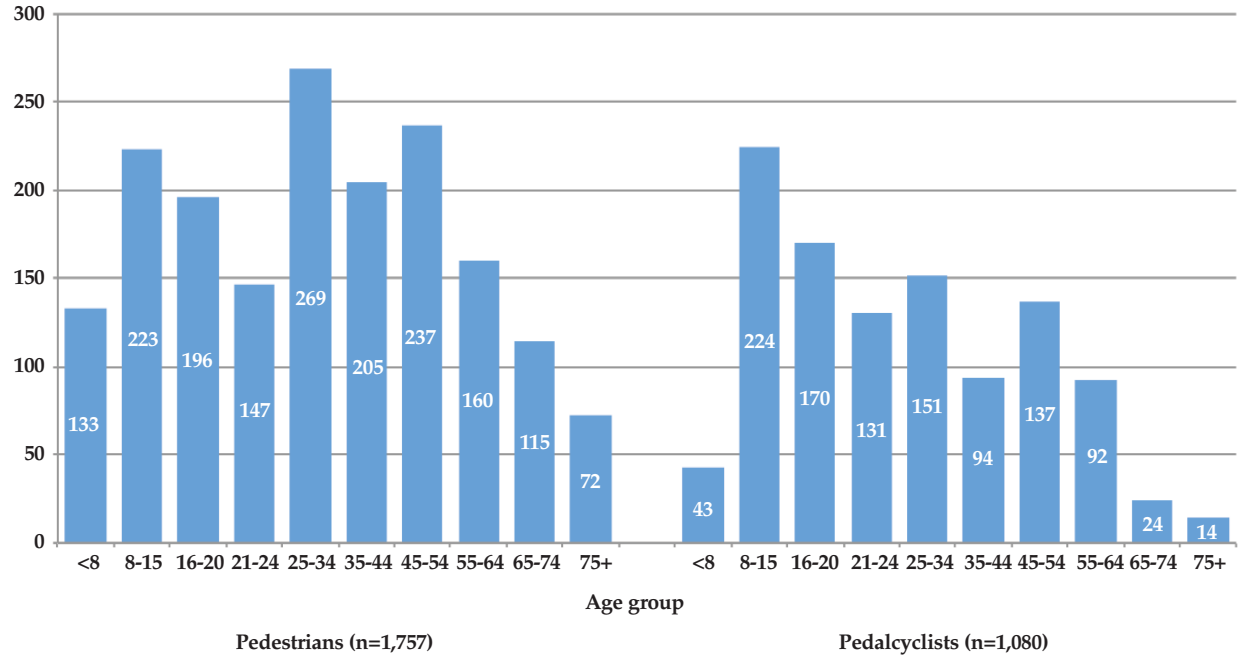
Figure 6.1. Pedestrians and pedalcyclists involved in collisions, 2009-2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Note: Some pedestrians and pedalcyclists were listed in ARIES as *injured occupants*. They are counted here in *pedestrian* and *pedalcyclist* categories.

Figure 6.2. Pedestrians and pedalcyclists involved in Indiana collisions, by age group, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: Some pedestrians and pedalcyclists were listed in ARIES as *injured occupants*. They are counted here in *pedestrian* and *pedalcyclist* categories.

Table 6.8. Pedestrians involved in Indiana collisions, by pedestrian action and injury status, 2013

Pedestrian action	Fatal	Non-fatal	Total involved	% Fatal
Crossing at intersection	6	316	322	1.9%
Crossing not at intersection	22	283	305	7.2%
On roadway	21	227	248	8.5%
Other	4	182	186	2.2%
Unknown	1	181	182	0.5%
Not in roadway	5	130	135	3.7%
Moving	0	108	108	0.0%
Standing	4	76	80	5.0%
On shoulder	2	45	47	4.3%
Against traffic	1	41	42	2.4%
On designated non-motorist lane	1	27	28	3.6%
Getting in/out of vehicle	1	26	27	3.7%
With traffic	0	25	25	0.0%
Working	0	18	18	0.0%
Getting off/on school bus	1	3	4	25.0%
Total	**69**	**1,688**	**1,757**	**3.9%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Non-fatal* includes injury status' of *incapacitating, non-incapacitating, possible, refused (treatment), not reported,* and *unknown.*
2) Some pedestrians were listed in ARIES as *injured occupants*; they are included here.

Table 6.9. Pedalcyclists involved in Indiana collisions, by pedalcyclist action and injury status, 2013

Pedalcyclist action	Fatal	Non-fatal	Total involved	% Fatal
Crossing at intersection	1	336	337	0.3%
On roadway	5	145	150	3.3%
Unknown	0	127	127	0.0%
Moving	1	103	104	1.0%
Crossing not at intersection	1	82	83	1.2%
Against traffic	0	74	74	0.0%
With traffic	3	66	69	4.3%
Other	1	43	44	2.3%
Not in roadway	0	34	34	0.0%
On designated non-motorist lane	0	31	31	0.0%
On shoulder	3	22	25	12.0%
Standing	0	2	2	0.0%
Total	**15**	**1,065**	**1,080**	**1.4%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Non-fatal* includes injury status of *incapacitating, non-incapacitating, possible, refused (treatment), not reported,* and *unknown.*
2) Some pedestrians were listed in ARIES as *injured occupants*; they are included here.

Table 6.10. Pedestrians and pedalcyclists involved in Indiana collisions, by time of day and day of week, 2013

	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Total by hour	% by hour
12am-	13	8	4	5	4	5	15	54	1.9%
1am-	5	3	0	3	1	6	11	29	1.0%
2am-	7	2	2	1	2	3	1	18	0.6%
3am-	14	1	4	3	3	3	9	37	1.3%
4am-	6	3	2	3	0	1	5	20	0.7%
5am-	1	3	10	5	10	1	6	36	1.3%
6am-	4	15	14	13	14	13	4	77	2.7%
7am-	2	24	23	27	33	19	10	138	4.9%
8am-	0	15	17	18	21	21	7	99	3.5%
9am-	6	5	11	12	11	8	7	60	2.1%
10am-	13	19	17	13	19	14	25	120	4.2%
11am-	10	20	16	11	22	18	25	122	4.3%
12pm-	19	16	20	21	23	25	32	156	5.5%
1pm-	16	23	22	23	22	30	21	157	5.5%
2pm-	12	24	23	34	28	27	22	170	6.0%
3pm-	22	39	35	37	38	40	17	228	8.0%
4pm-	20	34	42	39	26	37	24	222	7.8%
5pm-	19	31	34	36	46	43	24	233	8.2%
6pm-	27	23	48	41	44	43	28	254	9.0%
7pm-	15	30	32	17	41	30	21	186	6.6%
8pm-	13	20	20	22	20	18	19	132	4.7%
9pm-	17	18	12	13	13	21	23	117	4.1%
10pm-	7	12	8	11	15	17	24	94	3.3%
11pm-	8	8	8	14	7	16	17	78	2.7%
Total	**276**	**396**	**424**	**422**	**463**	**459**	**397**	**2,837**	**100%**
% by day	**9.7%**	**14.0%**	**14.9%**	**14.9%**	**16.3%**	**16.2%**	**14.0%**	**100%**	

Low High

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: Conditional formatting color-scales indicate the highest and lowest numbers for the entire week.

Table 6.11. Vehicle occupants involved in Indiana collisions, by restraint use and injury status, 2009-2013

Individuals	2009	2010	2011	2012	2013	Annual rate of change 2009-13	Annual rate of change 2012-13
All occupants	**297,800**	**304,235**	**296,527**	**298,016**	**302,878**	**0.4%**	**1.6%**
% restrained	90.0%	90.6%	90.4%	90.4%	90.5%	0.1%	0.0%
Fatal injuries	**519**	**565**	**546**	**545**	**570**	**2.4%**	**4.6%**
% restrained	48.0%	46.5%	48.0%	47.9%	50.5%	1.3%	5.5%
Incapacitating injuries	**2,433**	**2,576**	**2,522**	**2,853**	**2,557**	**1.3%**	**-10.4%**
% restrained	71.5%	73.6%	73.0%	71.9%	72.7%	0.4%	1.0%
Non-incapacitating injuries	**39,385**	**39,898**	**37,636**	**38,553**	**37,615**	**-1.1%**	**-2.4%**
% restrained	87.2%	88.4%	88.3%	88.2%	88.2%	0.3%	0.0%
Unknown/other injuries	**4,075**	**2,425**	**1,827**	**1,842**	**2,124**	**-15.0%**	**15.3%**
% restrained	93.3%	88.3%	87.9%	89.0%	89.5%	-1.0%	0.6%
Not injured	**251,388**	**258,771**	**253,996**	**254,223**	**260,012**	**0.8%**	**2.3%**
% restrained	90.7%	91.2%	91.0%	91.1%	91.1%	0.1%	0.0%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Excludes unit types of *farm vehicles, motorcycles, mopeds, animal drawn vehicles, bicycles,* and *pedestrians.*
2) *Restraint use* includes the use of one of the following: *Lap belt only, Harness, Airbag deployed and harness, Child restraint,* or *Lap and harness.*
3) *Non-incapacitating injuries* include those injuries reported as *non-incapacitating* and *possible.*
4) *Unknown/other injuries* include *not reported, unknown, refused* (treatment), and invalid injury codes.
5) *Not injured* includes individuals reported with blank values in the injury status code field. Reporting officers are instructed to enter passengers in ARIES only if an injury occurs; therefore, *not injured* counts should be interpreted with caution.

Table 6.12. Vehicle occupants involved in Indiana collisions, by age, restraint use and injury severity, 2013

Age group	Injury status: Fatal	Incapacitating	Non-incapacitating	Unknown/other injury	Not injured	Total
<16	**28**	**150**	**2,962**	**60**	**919**	**4,119**
% restrained	46.4%	67.3%	83.9%	70.0%	47.3%	74.7%
16 - 17	**17**	**109**	**1,775**	**88**	**10,514**	**12,503**
% restrained	47.1%	61.5%	84.9%	92.0%	91.8%	90.5%
18 - 20	**51**	**222**	**3,679**	**223**	**24,471**	**28,646**
% restrained	39.2%	65.3%	86.0%	89.2%	91.5%	90.5%
21 - 24	**70**	**310**	**4,103**	**230**	**29,080**	**33,793**
% restrained	31.4%	68.1%	85.0%	86.5%	90.9%	89.8%
25 - 34	**103**	**447**	**6,798**	**427**	**51,711**	**59,486**
% restrained	35.9%	69.6%	86.1%	85.7%	90.9%	90.1%
35 - 44	**68**	**356**	**5,237**	**332**	**43,028**	**49,021**
% restrained	51.5%	70.8%	88.9%	90.4%	91.4%	90.9%
45 - 54	**67**	**408**	**5,210**	**306**	**41,175**	**47,166**
% restrained	52.2%	77.5%	90.5%	94.1%	91.6%	91.3%
55 - 64	**68**	**278**	**4,107**	**242**	**31,958**	**36,653**
% restrained	63.2%	83.1%	92.8%	93.8%	91.8%	91.8%
65 - 74	**36**	**163**	**2,237**	**132**	**16,974**	**19,542**
% restrained	80.6%	81.6%	93.3%	93.9%	91.4%	91.5%
75 and over	**62**	**114**	**1,506**	**84**	**9,868**	**11,634**
% restrained	74.2%	79.8%	93.8%	90.5%	90.8%	91.0%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Includes only individuals with valid age.
2) Excludes unit types of *farm vehicles, motorcycles, mopeds, animal-drawn vehicles, bicycles,* and *pedestrians.*
3) *Restraint use* includes the use of one of the following: *Lap belt only, Harness, Airbag deployed and harness, Child restraint,* or *Lap and harness.*
4) *Non-incapacitating injuries* include those injuries reported as *non-incapacitating* and *possible.*
5) *Unknown/other injuries* include *not reported, unknown, refused* (treatment), and invalid injury codes.
6) *Not injured* includes individuals reported with blank values in the injury status code field. Reporting officers are instructed to enter passengers in ARIES only if an injury occurs; therefore, *not injured* counts should be interpreted with caution.

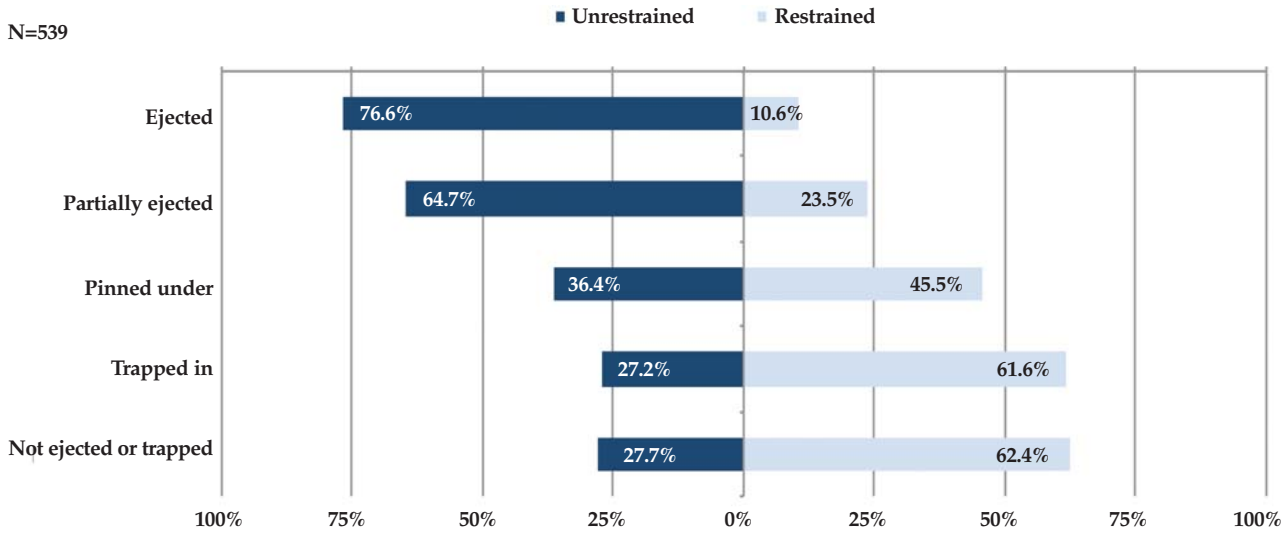
Table 6.13. Vehicle occupants killed or injured in Indiana collisions, by restraint use, vehicle type and gender, 2013

	Fatal		Non-fatal injury		
Vehicle type	Male	Female	Male	Female	Total
Buses	**1**	**2**	**176**	**194**	**373**
% restrained	0.0%	0.0%	19.9%	23.7%	21.7%
Passenger cars	**233**	**125**	**11,173**	**16,714**	**28,245**
% restrained	48.5%	65.6%	86.2%	91.3%	88.8%
Pickup trucks	**68**	**16**	**3,098**	**1,163**	**4,345**
% restrained	33.8%	81.3%	79.1%	82.4%	79.3%
SUVs	**41**	**30**	**2,317**	**3,818**	**6,206**
% restrained	36.6%	46.7%	86.2%	91.7%	89.1%
Vans	**24**	**8**	**1,217**	**1,529**	**2,778**
% restrained	54.2%	62.5%	83.6%	89.4%	86.5%
Large trucks	**13**	**1**	**669**	**43**	**726**
% restrained	69.2%	0.0%	87.0%	79.1%	86.1%
Other vehicle types	**6**	**2**	**112**	**54**	**174**
% restrained	16.7%	0.0%	36.6%	38.9%	36.2%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Excludes unit types of *farm vehicles, motorcycles, mopeds, animal-drawn vehicles, bicycles* and *pedestrians* and individuals with unknown gender.
2) *Other vehicle* types consists of *unknown, combination vehicles,* and *motor homes/RVs.*
3) *Restraint use* includes the use of one of the following: *Lap belt only, Harness, Airbag deployed and harness, Child restraint,* or *Lap and harness.*
4) *Non-fatal injury* includes injury statuses of incapacitating, non-incapacitating, possible, unknown, not reported, refused (treatment), and invalid injury categories.

Figure 6.3. Passenger vehicle fatalities in Indiana collisions, by ejection status and restraint use, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Passenger vehicles* are defined as *passenger cars, pickup trucks, SUVs,* and *vans.*
2) Excludes unknown ejection status.
3) Percents are individuals killed known to be restrained or not restrained as a percent of the total of individuals for each ejection status. For example, 76.6 percent represents 72 individuals killed who were *ejected*, and known not restrained out of the total of 94 individual fatalitites known to be *ejected*.

CHAPTER 7

ALCOHOL

ALCOHOL, 2013

In 2013, there were 114 fatal crashes and 124 fatalities (decreases from 2012 of 24 percent and 21 percent, respectively) involving a vehicle driver legally impaired by alcohol (i.e., blood alcohol content at or above 0.08 g/dL) (Table 7.1). During the 2009-2013 period, the numbers of persons killed in crashes involving alcohol-impaired drivers decreased less than one percent annually. Alcohol-impaired drivers in fatal crashes decreased nearly 2 percent annually from 2009 to 2013, and decreased 24 percent from 2012 to 2013 (Table 7.2). In 2013, about 32 percent of impaired drivers in Indiana fatal traffic collisions were between the ages of 25 to 34, while 21 percent were 21 to 24 years old (calculated from table).

Males are more likely than females to have been alcohol-impaired in Indiana collisions (Table 7.3). One-fifth of males aged 21 to 24 in fatal crashes were impaired. Per 10,000 licensed drivers in 2013, both males and females aged 21 to 24 and 25 to 34 years had the highest rates of alcohol impairment in collisions (within respective gender categories) (Table 7.4).

Impaired drivers comprised 87 (70 percent) of the 124 fatalities (Table 7.5). Among all persons killed in collisions involving alcohol-impairment in 2013, 16 percent were passengers of impaired drivers, and 10 percent were the unimpaired drivers.

In 2013, about six out of ten drivers involved in fatal crashes in Indiana were tested for alcohol consumption, a decrease from 2012 (Table 7.6). Testing rates were generally higher for younger drivers and for drivers in more severe crashes. In 2013, 75 percent of fatally injured drivers between the ages of 21 and 24 were tested, compared to about 60 percent for drivers aged 45-54, and 35 percent of drivers 75 or older (Table 7.7).

Among surviving drivers with reported results in 2013 fatal collisions, less than one out of ten drivers was legally impaired; among drivers killed with reported BAC results, about four out of ten were legally impaired (Table 7.8). Among drivers killed and tested for alcohol consumption in 2013 Indiana crashes, the likelihood of those drivers being impaired by alcohol was highest for the 25-34 age group (54 percent).

Comparing road classes, fatalities in crashes involving an impaired driver were most common on *local/city roads* and *state roads.* In 2013, 22 percent of all fatalities on *local/city roads* involved an impaired driver (Table 7.9), while about 16 percent of fatalities on *county roads* involved impaired drivers. Incapacitating injuries linked to alcohol-impaired drivers were proportionally largest on *county roads* (9 percent). In addition, alcohol-impaired fatalities were most common in *urban* areas (36 percent, or 44 of 124 persons killed in alcohol-impaired collisions), followed by *suburban* areas (31 percent) (Figure 7.1 and Table 7.10).

Alcohol-impaired fatalities and injuries in Indiana vary by month (Figure 7.2). In 2013, the month of November had the highest count of fatalities from collisions involving alcohol-impaired drivers. The highest rate of fatalities from alcohol-impaired fatal collisions was in February. The highest rate of non-fatal injuries from collisions involving alcohol-impaired drivers was also in February.

Drivers involved in single-vehicle collisions are more likely to be impaired than drivers involved in multiple-vehicle collisions (Tables 7.11). In single-vehicle collisions in 2013, about five percent of all drivers were alcohol-impaired, compared to one percent of drivers in multiple-vehicle collisions. Among drivers killed in single-vehicle collisions, about one-quarter were impaired, compared to a nine percent impairment rate among drivers killed in multiple-vehicle crashes; drivers aged 25 to 34 who were killed had the highest single-vehicle collision impairment rate (43 percent).

Impairment rates vary by vehicle type (Table 7.12). In 2013, the highest impairment rates were among drivers killed in *sport utility vehicles* (21 percent) and *pickup trucks* (21 percent), followed by *passenger cars* (18 percent) and *vans* (13 percent). Considering drivers or operators in all Indiana collisions in 2013, motorcycle operators had the highest rates of alcohol-impaired driving of any vehicle class (4 percent).

When comparing impaired and non-impaired drivers in 2013, impaired drivers were more likely to collide with something other than another vehicle (Table 7.13). For example, the most frequent object of impact for non-impaired drivers was another vehicle (80 percent), whereas only 42 percent of impaired drivers collided with another vehicle. Impaired drivers in fatal collisions crashed *off the roadway* (51 percent) or collided with *other motor vehicles* (23 percent) or *fixed objects/infrastructure* (21 percent).

In 2013, collision-involved drivers with various non-valid license statuses (i.e., suspended, habitual traffic violator, no license) were more likely to be impaired than collision-involved drivers with valid licenses (Table 7.14). While the overall alcohol-impairment rate for collision-involved drivers

with a valid license status was slightly more than one percent, the impairment rates were higher for drivers with habitual violator status (17 percent), suspended (6 percent), or no license (4 percent).

Finally, there are substantial annual differences between the counts and proportions of Indiana fatal crashes and fatalities involving impaired drivers reported by federal versus state data sources (Table 7.15). Because the National Highway Traffic Safety Administration fatality analysis reporting system (FARS) uses a statistical imputation model on state data submissions (e.g., Indiana ARIES) to correct possible undercounts of alcohol-impairment, the national FARS estimates of Indiana impairment-related crashes and fatalities are always greater than those in ARIES. On average from 2003 to 2012, FARS reports about 36 percent more fatal crashes and fatalities linked to impaired drivers than does ARIES.

Table 7.1. Indiana collisions and injuries involving alcohol-impaired drivers, 2009-2013

	Count of collisions and injuries					Annual rate of change	
Crash severity	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
Collisions involving an alcohol-impaired driver by crash severity							
Total collisions	**4,207**	**4,978**	**4,938**	**5,152**	**4,757**	**-7.7%**	**3.1%**
Fatal	120	130	133	150	114	-24.0%	-1.3%
Incapacitating	126	215	184	204	195	-4.4%	11.5%
Non-incapacitating	1,091	1,302	1,250	1,303	1,186	-9.0%	2.1%
Property damage	2,870	3,331	3,371	3,495	3,262	-6.7%	3.3%
Individuals in collisions involving an alcohol-impaired driver by injury status							
Total individuals	**6,104**	**7,315**	**7,165**	**7,321**	**6,882**	**-6.0%**	**3.0%**
Fatal	127	135	140	158	124	-21.5%	-0.6%
Incapacitating	153	264	225	246	237	-3.7%	11.6%
Non-incapacitating	1,594	1,919	1,852	1,866	1,807	-3.2%	3.2%
Not injured	4,230	4,997	4,948	5,051	4,714	-6.7%	2.7%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: For *total individuals* injured, *non-incapacitating* includes *possible, +, not reported, refused,* and *unknown* injury status categories.

Table 7.2. Alcohol-impaired drivers in Indiana fatal collisions by driver age, 2009-2013

	Count of drivers involved					Annual rate of change	
Driver age	**2009**	**2010**	**2011**	**2012**	**2013**	**2012-13**	**2009-13**
15 to 20	10	10	10	11	6	-45.5%	-12.0%
21 to 24	14	24	20	22	24	9.1%	14.4%
25 to 34	39	30	33	42	37	-11.9%	-1.3%
35 to 44	33	33	34	35	23	-34.3%	-8.6%
45 to 54	17	27	24	28	12	-57.1%	-8.3%
55 and above	10	9	14	14	13	-7.1%	6.8%
Total	**123**	**133**	**135**	**152**	**115**	**-24.3%**	**-1.7%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: Excludes ages under 15 and over 109 years and cases with unknown or non-reported age.

Table 7.3. Drivers in Indiana collisions, by age, gender, and alcohol impairment, 2013

Driver age	Females			Males			All drivers		
	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired
In fatal collisions	**19**	**268**	**7.1%**	**96**	**830**	**11.6%**	**115**	**1,098**	**10.5%**
15 to 20	2	22	9.1%	4	82	4.9%	6	104	5.8%
21 to 24	5	31	16.1%	19	95	20.0%	24	126	19.0%
25 to 34	5	54	9.3%	32	162	19.8%	37	216	17.1%
35 to 44	4	45	8.9%	19	125	15.2%	23	170	13.5%
45 to 54	1	34	2.9%	11	136	8.1%	12	170	7.1%
55 to 64	1	37	2.7%	8	134	6.0%	9	171	5.3%
65 to 74	0	16	0.0%	3	51	5.9%	3	67	4.5%
75 and older	1	29	3.4%	0	45	0.0%	1	74	1.4%
In non-fatal collisions	**1,195**	**130,773**	**0.9%**	**3,453**	**162,271**	**2.1%**	**4,648**	**293,841**	**1.6%**
15 to 20	83	18,778	0.4%	265	21,423	1.2%	348	40,493	0.9%
21 to 24	204	15,236	1.3%	660	17,654	3.7%	864	32,953	2.6%
25 to 34	373	26,628	1.4%	984	31,776	3.1%	1,357	58,447	2.3%
35 to 44	242	21,443	1.1%	653	26,971	2.4%	895	48,432	1.8%
45 to 54	190	20,104	0.9%	552	26,650	2.1%	742	46,762	1.6%
55 to 64	79	15,385	0.5%	261	20,780	1.3%	340	36,192	0.9%
65 to 74	15	8,089	0.2%	67	10,983	0.6%	82	19,077	0.4%
75 and older	9	5,109	0.2%	10	6,019	0.2%	19	11,170	0.2%
Unknown age	0	1	0.0%	1	15	6.7%	1	315	0.3%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *All drivers* includes cases where gender information was not reported.
2) Excludes ages under 15 and over 109 years.

Table 7.4. Alcohol-impaired drivers involved in Indiana collisions and rate per 10,000 licensed, by age and gender, 2013

Driver age	Females			Males			All drivers		
	Alcohol-impaired	Total licensed	Rate per 10K licensed	Alcohol-impaired	Total licensed	Rate per 10K licensed	Alcohol-impaired	Total licensed	Rate per 10K licensed
15 to 20	83	172,012	4.8	265	176,799	15.0	348	348,811	10.0
21 to 24	209	158,538	13.2	679	161,881	41.9	888	320,419	27.7
25 to 34	378	377,132	10.0	1,016	369,233	27.5	1394	746,365	18.7
35 to 44	246	370,178	6.6	672	362,536	18.5	918	732,714	12.5
45 to 54	191	414,244	4.6	563	401,488	14.0	754	815,732	9.2
55 to 64	80	393,941	2.0	269	375,628	7.2	349	769,569	4.5
65 to 74	15	251,145	0.6	70	228,887	3.1	85	480,032	1.8
75 and older	10	157,036	0.6	10	129,514	0.8	20	286,550	0.7
All ages	**1,212**	**2,294,226**	**5.3**	**3,544**	**2,205,966**	**16.1**	**4,756**	**4,500,192**	**10.6**

Sources:
Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Indiana Bureau of Motor Vehicles, as of April 2, 2014

Notes:
1) Due to changes in Indiana BMV-reported licensing counts obtained in 2013, rates should not be compared to previous years' exhibits.
2) Excludes ages under 15 and over 109 years and cases with unknown or non-reported age.
3) *All drivers* includes cases where gender information was not reported.

Table 7.5. Persons killed in Indiana collisions involving an alcohol-impaired driver, by person type, 2013

	Individuals in alcohol-impaired collisions		
Person type	**Killed**	**Total involved**	**Fatality rate**
Impaired drivers	87	4,767	1.8%
Passengers of impaired drivers	20	329	6.1%
Unimpaired drivers	12	1,532	0.8%
Passengers of unimpaired drivers	3	206	1.5%
Non-motorists	2	48	4.2%
Total	**124**	**6,882**	**1.8%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Note: *Total involved* includes 7 *animal-drawn vehicle* operators classified as 4 *impaired* and 3 *unimpaired drivers*.

Table 7.6. Drivers in Indiana collisions that were tested for alcohol or other substances, by age and injury severity, 2013

	Driver injuries											
	Fatal			Incapacitating			Non-incapacitating			Other injury		
Driver age	**Tested**	**Total**	**Tested as % total**	**Tested**	**Total**	**Tested as % total**	**Tested**	**Total**	**Tested as % total**	**Tested**	**Total**	**Tested as % total**
15 to 20	26	44	59.1%	59	258	22.9%	289	3,922	7.4%	24	298	8.1%
21 to 24	45	60	75.0%	76	281	27.0%	411	3,338	12.3%	23	228	10.1%
25 to 34	63	94	67.0%	123	444	27.7%	753	5,821	12.9%	44	413	10.7%
35 to 44	54	85	63.5%	110	388	28.4%	465	4,578	10.2%	40	331	12.1%
45 to 54	41	69	59.4%	96	450	21.3%	396	4,673	8.5%	30	304	9.9%
55 to 64	35	83	42.2%	54	318	17.0%	222	3,616	6.1%	21	241	8.7%
65 to 74	17	36	47.2%	17	147	11.6%	74	1,812	4.1%	9	132	6.8%
75 and older	18	51	35.3%	8	95	8.4%	22	1,132	1.9%	6	83	7.2%
All ages	**299**	**522**	**57.3%**	**543**	**2,381**	**22.8%**	**2,632**	**28,892**	**9.1%**	**197**	**2,030**	**9.7%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Tested* includes drivers for which ARIES reports an *alcohol, drug,* or *alcohol/drug* test was given.
2) *Non-incapacitating* includes *possible* injury status.
3) *Other injury* includes +, *not reported, refused,* and *unknown* injury status categories.
4) Excludes ages under 15 and over 109 years and cases with unknown or non-reported age.

Table 7.7. Alcohol and/or drug testing of drivers in Indiana collisions with at least one fatality, 2013

	All drivers			Surviving			Killed		
Driver age	Alcohol and/or drug test	Total	% tested	Alcohol and/or drug test	Total	Surviving % tested	Alcohol and/or drug test	Total	Killed % tested
15 to 20	73	104	70.2%	47	58	81.0%	26	46	56.5%
21 to 24	96	126	76.2%	51	66	77.3%	45	60	75.0%
25 to 34	158	216	73.1%	95	122	77.9%	63	94	67.0%
35 to 44	107	170	62.9%	53	85	62.4%	54	85	63.5%
45 to 54	112	170	65.9%	71	101	70.3%	41	69	59.4%
55 to 64	86	171	50.3%	51	88	58.0%	35	83	42.2%
65 to 74	36	67	53.7%	19	31	61.3%	17	36	47.2%
75 and older	33	74	44.6%	15	23	65.2%	18	51	35.3%
Total	**701**	**1,098**	**63.8%**	**402**	**574**	**70.0%**	**299**	**524**	**57.1%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: Excludes ages under 15 and over 109 years and cases with unknown or non-reported age.

Table 7.8. BAC results for drivers involved in Indiana fatal collisions, 2013

	Count by BAC result (g/dL)						0.08 or more as % of	
Driver Age	0.00	0.01 < 0.08	0.08 or more	Not reported	Total	Reported (%)	Reported	Total
Surviving	**293**	**12**	**28**	**241**	**574**	**58.0%**	**8.4%**	**4.9%**
15 to 20	33	2	1	22	58	62.1%	2.8%	1.7%
21 to 24	34	2	8	22	66	66.7%	18.2%	12.1%
25 to 34	63	5	11	43	122	64.8%	13.9%	9.0%
35 to 44	38	0	4	43	85	49.4%	9.5%	4.7%
45 to 54	55	1	2	43	101	57.4%	3.4%	2.0%
55 to 64	42	1	1	44	88	50.0%	2.3%	1.1%
65 to 74	17	0	1	13	31	58.1%	5.6%	3.2%
75 and older	11	1	0	11	23	52.2%	0.0%	0.0%
Killed	**116**	**17**	**87**	**304**	**524**	**42.0%**	**39.5%**	**16.6%**
15 to 20	12	3	5	26	46	43.5%	25.0%	10.9%
21 to 24	14	2	16	28	60	53.3%	50.0%	26.7%
25 to 34	17	5	26	46	94	51.1%	54.2%	27.7%
35 to 44	18	4	19	44	85	48.2%	46.3%	22.4%
45 to 54	18	0	10	41	69	40.6%	35.7%	14.5%
55 to 64	18	2	8	55	83	33.7%	28.6%	9.6%
65 to 74	11	0	2	23	36	36.1%	15.4%	5.6%
75 and older	8	1	1	41	51	19.6%	10.0%	2.0%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: Excludes ages under 15 and over 109 years and cases with unknown or non-reported age.

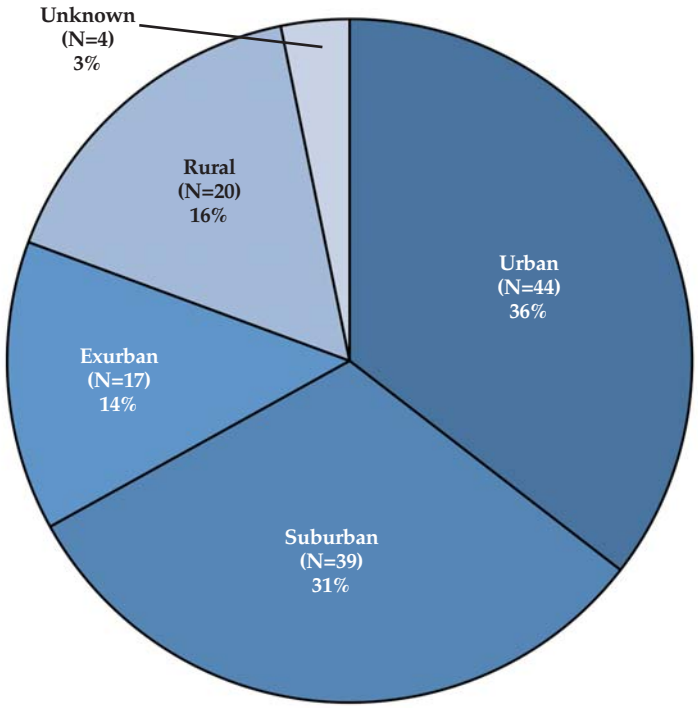
Table 7.9. Indiana collisions and individual injuries in collisions involving an alcohol-impaired driver, by road class, 2013

Road class	Collisions			Individual injuries								
				Fatal			Incapacitating			Non-incapacitating		
	Total	Impaired	Impaired as % all collisions in road class	Total	In impaired collisions	Impaired as % fatalities in road class	Total	In impaired collisions	Impaired as % incap injuries in road class	Total	In impaired collisions	Impaired as % non-incap injuries in road class
Local/city roads	86,497	2,263	2.6%	190	42	22.1%	1,244	75	6.0%	21,216	788	3.7%
State roads	26,892	595	2.2%	195	29	14.9%	756	47	6.2%	7,741	300	3.9%
County roads	21,303	879	4.1%	152	25	16.4%	621	57	9.2%	5,184	358	6.9%
US routes	18,567	357	1.9%	134	14	10.4%	479	31	6.5%	5,716	186	3.3%
Interstates	15,315	298	1.9%	97	13	13.4%	210	18	8.6%	2,766	120	4.3%
Unknown	24,439	365	1.5%	9	1	11.1%	133	9	6.8%	1,421	55	3.9%
All roads	**193,013**	**4,757**	**2.5%**	**777**	**124**	**16.0%**	**3,443**	**237**	**6.9%**	**44,044**	**1,807**	**4.1%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) ***Non-incapacitating*** **includes** ***possible, +, not reported, refused,*** **and** ***unknown*** **injury status categories.**
2) ***Unknown*** **includes not reported (Null).**

Figure 7.1. Fatalities in Indiana collisions involving an alcohol-impaired driver, by Census locality, 2013



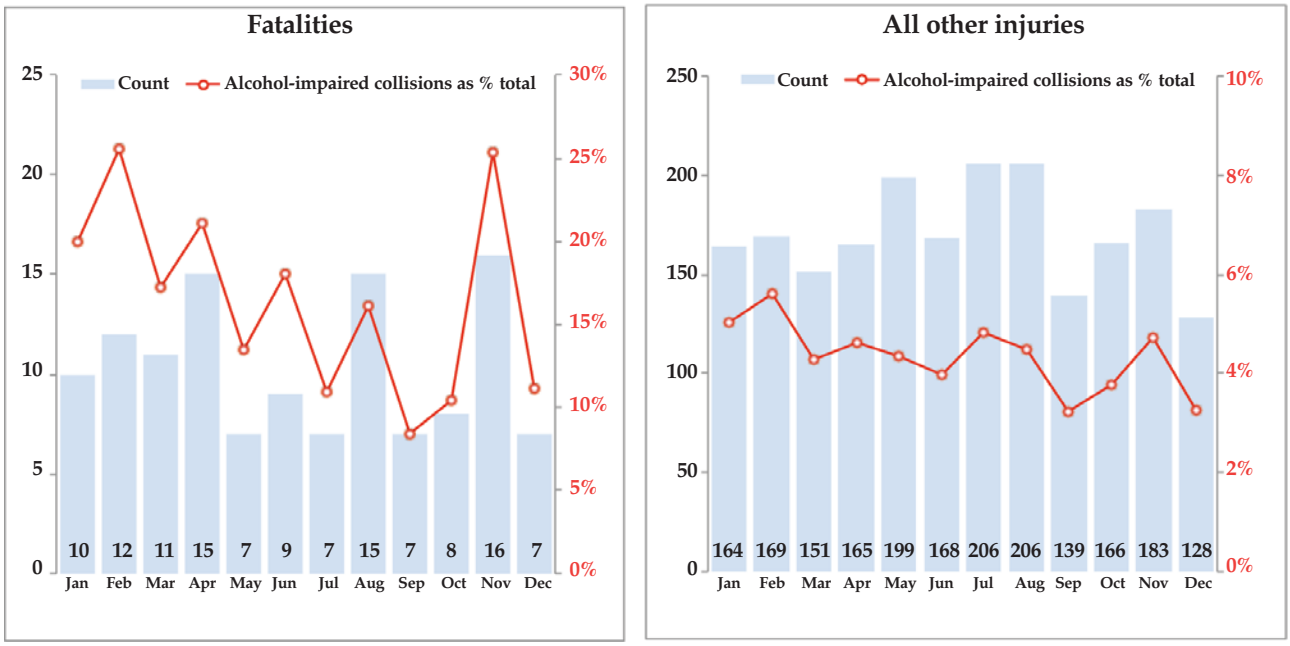
Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: See glossary for definition of Census locality.

Table 7.10. Fatality rates in Indiana collisions involving an alcohol-impaired driver, by Census locality, 2013

Locality type	All fatalities	Persons killed in impaired collisions	Inpairment rate (by locality)
Urban	275	44	16.0%
Suburban	230	39	17.0%
Exurban	115	17	14.8%
Rural	134	20	14.9%
Unknown	23	4	17.4%
Total	**777**	**124**	**16.0%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: See glossary for definition of Census locality.

Figure 7.2. Fatalities and injuries in collisions involving an alcohol-impaired driver, by month, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: *All other injuries* include *incapacitating, possible, +, not reported, refused,* and *unknown* injury status categories.

Table 7.11. Drivers in Indiana collisions, by driver age, alcohol impairment, and number of vehicles involved, 2013

	Single-vehicle			Multiple-vehicle		
Driver age	Alcohol-impaired	Total	% impaired	Alcohol-impaired	Total	% impaired
All drivers	**2,633**	**56,654**	**4.6%**	**2,124**	**237,478**	**0.9%**
15 to 20	241	8,914	2.7%	107	30,881	0.3%
21 to 24	555	7,085	7.8%	333	25,994	1.3%
25 to 34	804	11,877	6.8%	590	46,786	1.3%
35 to 44	456	9,338	4.9%	462	39,264	1.2%
45 to 54	365	8,889	4.1%	389	38,043	1.0%
55 to 64	171	6,295	2.7%	178	30,068	0.6%
65 to 74	30	2,851	1.1%	55	16,293	0.3%
75 and older	10	1,394	0.7%	10	9,850	0.1%
Unknown	1	11	9.1%	0	299	0.0%
Drivers killed	**64**	**249**	**25.7%**	**23**	**273**	**8.4%**
15 to 20	4	24	16.7%	1	20	5.0%
21 to 24	14	42	33.3%	2	18	11.1%
25 to 34	21	49	42.9%	5	45	11.1%
35 to 44	11	40	27.5%	8	45	17.8%
45 to 54	7	30	23.3%	3	39	7.7%
55 to 64	5	37	13.5%	3	46	6.5%
65 to 74	1	12	8.3%	1	24	4.2%
75 and older	1	15	6.7%	0	36	0.0%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014
Note: Excludes ages under 15 and over 109 years.

Table 7.12. Drivers involved in Indiana collisions, by vehicle type, injury severity, and alcohol impairment, 2013

Vehicle type	Fatal			Incapacitating			Non-incapacitating			Not injured			All drivers		
	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired
Passenger cars	47	262	17.9%	54	1,221	4.4%	569	19,544	2.9%	2,341	162,256	1.4%	3,011	183,283	1.6%
Sport utility vehicles	10	47	21.3%	18	228	7.9%	131	4,171	3.1%	420	35,881	1.2%	579	40,327	1.4%
Pickup trucks	15	71	21.1%	20	259	7.7%	166	3,007	5.5%	627	32,857	1.9%	828	36,194	2.3%
Vans	3	23	13.0%	3	114	2.6%	44	1,597	2.8%	111	14,710	0.8%	161	16,444	1.0%
Large trucks	0	11	0.0%	0	33	0.0%	2	598	0.3%	17	11,114	0.2%	19	11,756	0.2%
Motorcycles	12	104	11.5%	28	513	5.5%	74	1,908	3.9%	29	910	3.2%	143	3,435	4.2%
Other vehicles	0	4	0.0%	1	13	7.7%	4	97	4.1%	6	2,246	0.3%	11	2,360	0.5%
Unknown	0	2	0.0%	3	10	30.0%	6	85	7.1%	2	1,043	0.2%	11	1,140	1.0%
Total	**87**	**524**	**16.6%**	**127**	**2,391**	**5.3%**	**996**	**31,007**	**3.2%**	**3,553**	**261,017**	**1.4%**	**4,763**	**294,939**	**1.6%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21 , 2014.

Notes:
1) Excludes *non-motorists* and *drivers of animal-drawn vehicles*.
2) *Non-incapacitating* includes *possible, +, not reported, refused,* and *unknown* injury status categories.
3) *Alcohol-impaired* includes drivers with BAC of 0.08 g/dL or higher.

Table 7.13. Drivers involved in Indiana collisions, by alcohol impairment, injury severity, and object collided with, 2013

Object collided with	Total	NON-IMPAIRED drivers					IMPAIRED drivers				
		Fatal	Incapacitating	Non-incapacitating	Not injured	Total	Fatal	Incapacitating	Non-incapacitating	Not injured	Total
Other motor vehicle	232,828	234	1,336	22,397	206,870	230,837	20	26	310	1,635	1,991
Fixed objects/ infrastructure	22,051	61	313	2,766	17,781	20,921	18	34	222	856	1,130
Other traffic units/ animals	18,958	9	41	522	18,323	18,895	1	2	14	46	63
Off the roadway	17,868	107	477	3,744	12,100	16,428	44	55	411	930	1,440
Other actions/fell from vehicle	2,716	26	96	562	1,916	2,600	4	10	39	63	116
Unknown/not reported	518	0	1	20	474	495	0	0	0	23	23
Total	**294,939**	**437**	**2,264**	**30,011**	**257,464**	**290,176**	**87**	**127**	**996**	**3,553**	**4,763**
% other motor vehicle	78.9%	53.5%	59.0%	74.6%	80.3%	79.6%	23.0%	20.5%	31.1%	46.0%	41.8%
% fixed objects/ infrastructure	7.5%	14.0%	13.8%	9.2%	6.9%	7.2%	20.7%	26.8%	22.3%	24.1%	23.7%
% other traffic units/ animals	6.4%	2.1%	1.8%	1.7%	7.1%	6.5%	1.1%	1.6%	1.4%	1.3%	1.3%
% off the roadway	6.1%	24.5%	21.1%	12.5%	4.7%	5.7%	50.6%	43.3%	41.3%	26.2%	30.2%
% other actions/fell from vehicle	0.9%	5.9%	4.2%	1.9%	0.7%	0.9%	4.6%	7.9%	3.9%	1.8%	2.4%
% unknown/not reported	0.2%	0.0%	0.0%	0.1%	0.2%	0.2%	0.0%	0.0%	0.0%	0.6%	0.5%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014.

Notes:
1) *Non-incapacitating* includes *possible, +, not reported, refused,* and *unknown* injury status categories.
2) Due to re-categorization of *object collided with*, this should not be compared to previous publications.

Table 7.14. License status of drivers in Indiana traffic collisions by impairment status , 2013

	Driver was impaired?			
License status	No	Yes	Total	% impaired
Total	**289,066**	**4,756**	**293,822**	**1.6%**
Licensed	**241,583**	**3,341**	**244,924**	**1.4%**
Valid	241,370	3,319	244,689	1.4%
Conditional	213	22	235	9.4%
Suspended	**10,220**	**660**	**10,880**	**6.1%**
Suspended - infraction	6,794	415	7,209	5.8%
Suspended - prior	3,245	233	3,478	6.7%
Suspended - misdemeanor	181	12	193	6.2%
Habitual traffic violator	**372**	**78**	**450**	**17.3%**
Habitual traffic violator	225	51	276	18.5%
Habitual traffic violator - life	147	27	174	15.5%
No license	**2,164**	**94**	**2,258**	**4.2%**
Unlicensed	1,348	66	1,414	4.7%
Invalid - revoked	173	3	176	1.7%
Cancelled	639	25	664	3.8%
Fraudulent	4		4	0.0%
Unknown/not reported	**34,727**	**583**	**35,310**	**1.7%**

Sources:
Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Indiana Bureau of Motor Vehicles, as of April 2, 2014.

Table 7.15. FARS and ARIES Indiana fatal collisions and fatalities involving an alcohol-impaired driver, 2003-2012

Year	Count of fatal collisions			Count of fatalities		
	Alcohol-impaired	Total	Impaired as % total	Alcohol-impaired	Total	Impaired as % total
FARS data, 2003-2012						
2003	181	753	24.0%	204	833	24.5%
2004	213	857	24.9%	241	947	25.4%
2005	230	855	26.9%	254	938	27.1%
2006	226	820	27.6%	245	902	27.2%
2007	204	804	25.4%	224	898	24.9%
2008	185	727	25.4%	206	820	25.1%
2009	192	632	30.4%	207	693	29.9%
2010	186	701	26.5%	194	754	25.7%
2011	195	676	28.8%	207	751	27.6%
2012	214	718	29.8%	228	779	29.3%
Annualized rates of change						
2003-12	1.9%	-0.5%	2.4%	1.2%	-0.7%	2.0%
2008-12	3.7%	-0.3%	4.0%	2.6%	-1.3%	3.9%
2011-12	9.7%	6.2%	3.3%	10.1%	3.7%	6.2%
ARIES data, 2003-2012						
2003	135	753	17.9%	154	833	18.5%
2004	146	857	17.0%	163	947	17.2%
2005	179	855	20.9%	199	938	21.2%
2006	183	817	22.4%	198	899	22.0%
2007	169	804	21.0%	186	898	20.7%
2008	156	722	21.6%	173	815	21.2%
2009	120	631	19.0%	127	692	18.4%
2010	130	701	18.5%	135	754	17.9%
2011	133	674	19.7%	140	749	18.7%
2012	150	718	20.9%	158	779	20.3%
Annualized rates of change						
2003-12	1.2%	-0.5%	1.7%	0.3%	-0.7%	1.0%
2008-12	-1.0%	-0.1%	-0.8%	-2.2%	-1.1%	-1.1%
2011-12	12.8%	6.5%	5.9%	12.9%	4.0%	8.5%

Sources:
Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014; Fatality Analysis Reporting System, http://www-fars.nhtsa.dot.gov/Trends/TrendsAlcohol.aspx, accessed September 4, 2014

Note: Latest data available for FARS are 2012.

CHAPTER 8

SPEED

SPEED, 2013

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 2013, 18,571 speed-related collisions occurred in Indiana, 12 percent more than in 2012 (Figure 8.1).

From 2009 to 2013, speed-related collisions increased less than one percent annually (Table 8.1). Speed-related fatal collisions increased 8 percent annually during the same period. In 2013, 26 percent of all fatal collisions involved speeding, the highest proportion during the five-year period; collisions involving speeding were 2.1 times more likely to result in a fatality or incapacitating injury than collisions that did not.

Ten percent of all 2013 collisions were speed-related (Table 8.2). Considering the conditions used to define speed involvement, 6 percent (11,400) of all 2013 collisions involved *speeding too fast for weather conditions* and 4 percent (6,841) involved unsafe speed. Less than 2 percent of speed-related collisions in 2013 resulted in a speed-related citation.

There were 28,168 persons involved in speed-related collisions in 2013—9 percent of all individuals in collisions (Table 8.3). Of these, 214 were killed (28 percent of all fatalities), 589 were incapacitated (17 percent of all incapacitating injuries), and 5,485 suffered non-incapacitating injuries (13 percent of all non-incapacitating injuries). The rate of fatal and incapacitating injuries per 1,000 involved in speed-related collisions rose from 23.9 in 2009 to a five-year high of 32.1 in 2012, and declined to 28.5 in 2013 (Figure 8.2)

In 2013, 6 percent of vehicles in collisions were speeding—a rate similar to 2011 and 2012 rates (Figure 8.3). Among vehicle types, motorcycles remained the most likely to have been speeding at the time of collision (11 percent in 2013). In 2013, 175 of every 1,000 occupants riding in speeding vehicles in collisions suffered an injury, compared to 100 of every 1,000 in vehicles not speeding (Figure 8.4). Relative to injury rates in vehicles not speeding, injury rates were greatest for occupants of speeding large vehicles (e.g., buses, large trucks, motor homes).

As Table 8.4 illustrates, between 2009 and 2013, 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 2013, 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 2 percent of male and female drivers in the 75 and over age group were reported to be speeding in collisions in 2013.

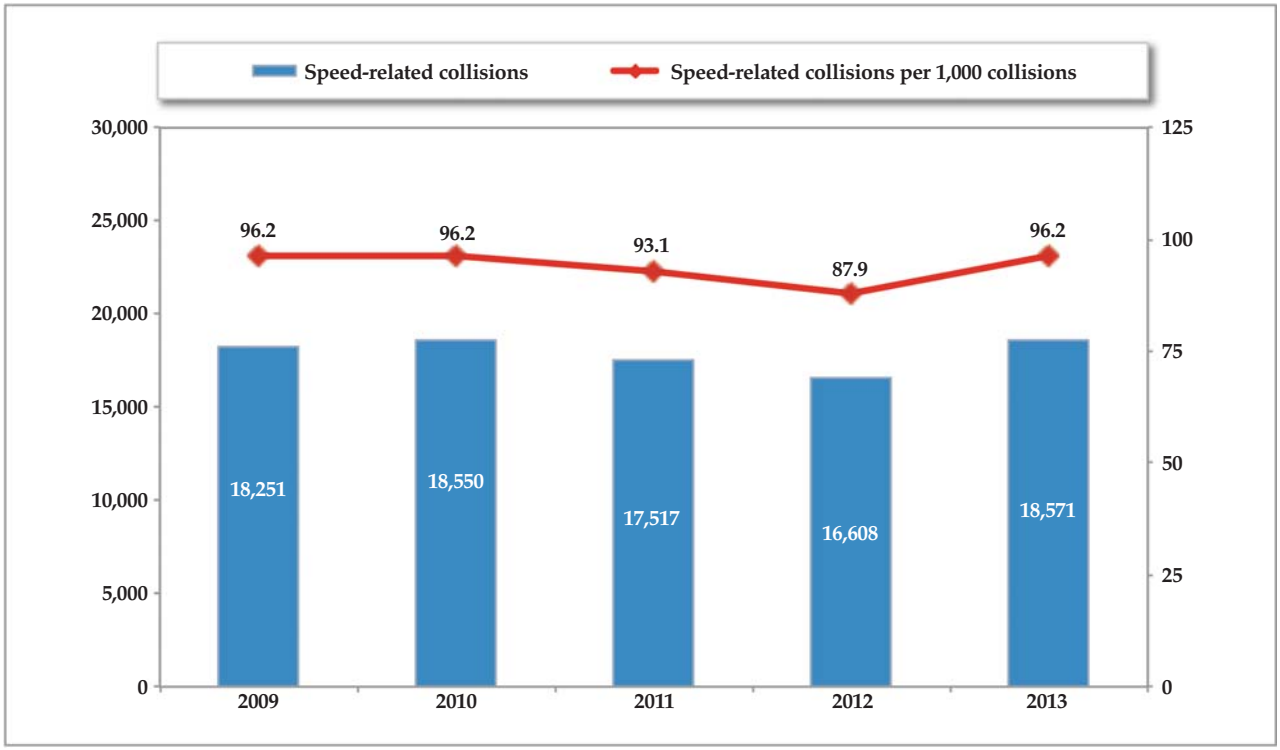
Since 2009, in Indiana, the number of legally impaired drivers (i.e., blood alcohol content of 0.08 g/dL or higher) involved in speed-related collisions has risen from 563 in 2009 to 871 in 2013 (Figure 8.5). The proportion of drivers involved in speed-related collisions that were also impaired at the time of collision has also increased, from 3.1 in 2009 to a five-year high of 5.6 in 2012, and declined to 4.8 in 2013. Seven percent of speeding drivers in the 25- to 34-year old age group were impaired in 2013. In contrast, only 2 percent of non-speeding drivers in the same age group were impaired (Table 8.5).

Restraint use rates among vehicle occupants involved in speed-related collisions decreased annually between 2009 and 2013 across all injury categories, with the exception of *not injured* (Table 8.6). Among individuals killed in speed-related collisions, the rate of restraint use declined slightly (7 percent) between 2012 and 2013. The rate of restraint use among individuals involved in speed-related collisions decreases as the severity of injury increases. Among those who sustained no injuries in speed-related collisions in 2013, the rate of restraint use was 91 percent, while only 31 percent of individuals killed in speed-related collisions were restrained.

Between 2009 and 2013, the winter months of January and December had the highest incidence of both total and speed-related collisions (Table 8.7). With regard to time of day, the likelihood of speed involvement in collisions peaks during early morning (1am-3:59am) hours, declines during late morning hours and through early afternoon (around 1pm), and then steadily increases from late afternoon through the evening and into early morning (Table 8.8). Weekends (Saturday and Sunday) carry a higher probability of speed involvement.

The distribution of speed-related collisions varies by U.S. census locale (Figure 8.6). While the majority (72 percent) of total collisions in 2013 occurred in *urban* areas, fatal speed-related crashes were more common in *rural* (29 percent) and *exurban* (28 percent) areas. Considering road classes, *county roads, state roads, US routes,* and *interstates* account for a disproportionate share of fatal collisions—relative to their share of total collisions (Figure 8.7). In 2013, 51 percent of total collisions occurred on *local/city roads* and 13 percent occurred on *county roads*. However, 24 percent of fatal collisions happened on *local/city roads* (29 percent were speed-related), compared to 20 percent on *county roads* (39 percent speed-related).

Figure 8.1. Indiana speed-related collisions, 2009-2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Table 8.1. Indiana collisions, by speed involvement and collision severity, 2009-2013

	Count of collisions					Annual rate of change	
Speed involvement/collision severity	2009	2010	2011	2012	2013	2012-13	2009-13
All collisions	**189,661**	**192,885**	**188,126**	**188,841**	**193,013**	**2.2%**	**0.4%**
Speed-related	**18,251**	**18,550**	**17,517**	**16,608**	**18,571**	**11.8%**	**0.4%**
Fatal	136	136	131	163	183	12.3%	7.7%
Incapacitating	425	461	475	508	473	-6.9%	2.7%
Non-incapacitating	3,692	3,682	3,629	3,546	3,791	6.9%	0.7%
Property damage	13,998	14,271	13,282	12,391	14,124	14.0%	0.2%
Not speed-related	**171,410**	**174,335**	**170,609**	**172,233**	**174,442**	**1.3%**	**0.4%**
Fatal	495	565	543	555	520	-6.3%	1.2%
Incapacitating	2,307	2,451	2,383	2,726	2,466	-9.5%	1.7%
Non-incapacitating	26,986	27,489	26,247	27,307	26,090	-4.5%	-0.8%
Property damage	141,622	143,830	141,436	141,645	145,366	2.6%	0.7%
% Speed-related of all	**9.6%**	**9.6%**	**9.3%**	**8.8%**	**9.6%**	**9.4%**	**0.0%**
Fatal	21.6%	19.4%	19.4%	22.7%	26.0%	14.7%	4.8%
Incapacitating	15.6%	15.8%	16.6%	15.7%	16.1%	2.5%	0.9%
Non-incapacitating	12.0%	11.8%	12.1%	11.5%	12.7%	10.4%	1.3%
Property damage	9.0%	9.0%	8.6%	8.0%	8.9%	10.1%	-0.4%
Relative risk of fatal or incapacitating collision	*1.9*	*1.9*	*2.0*	*2.1*	*2.1*		
Lower limit	1.7	1.7	1.8	1.9	1.8		
Upper limit	2.1	2.1	2.3	2.4	2.3		

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) *Non-incapacitating* collisions are those with no fatalities and at least one injury reported as *non-incapacitating* or *possible*.
2) *Relative risk* of *fatal* or *incapacitating collision* is the ratio of the percent of speed-related collisions with fatal or incapacitating injuries compared to the percent of not speed-related collisions with fatal or incapacitating injuries. Ratios greater than 1 indicate a higher risk of fatality or incapacitating injury for speed-related collisions.
3) All *relative risk* estimates are statistically significant ($p<0.01$). For example, in 99 out of 100 cases, the relative risk would fall within the lower and upper limit range presented.

Table 8.2. Indiana collisions, by speed involvement, speed-related criteria, and collision severity, 2009-2013

Speed involvement criteria/ Collision severity	Count of collisions					Annual rate of change	
	2009	2010	2011	2012	2013	2012-13	2009-13
Total collisions	**189,661**	**192,885**	**188,126**	**188,841**	**193,013**	**2.2%**	**0.4%**
Fatal	631	701	674	718	703	-2.1%	2.7%
Non-fatal injury	33,410	34,083	32,734	34,087	32,820	-3.7%	-0.4%
Property damage	155,620	158,101	154,718	154,036	159,490	3.5%	0.6%
All speed-related collisions	**18,251**	**18,550**	**17,517**	**16,608**	**18,571**	**11.8%**	**0.4%**
Fatal	136	136	131	163	183	12.3%	7.7%
Non-fatal injury	4,117	4,143	4,104	4,054	4,264	5.2%	0.9%
Property damage	13,998	14,271	13,282	12,391	14,124	14.0%	0.2%
Speed-related as % of total	**9.6%**	**9.6%**	**9.3%**	**8.8%**	**9.6%**	**9.4%**	**0.0%**
Fatal	21.6%	19.4%	19.4%	22.7%	26.0%	14.7%	4.8%
Non-fatal injury	12.3%	12.2%	12.5%	11.9%	13.0%	9.2%	1.3%
Property damage	9.0%	9.0%	8.6%	8.0%	8.9%	10.1%	-0.4%
Speed too fast for weather conditions	**12,163**	**12,103**	**11,125**	**9,417**	**11,400**	**21.1%**	**-1.6%**
Fatal	26	26	24	27	38	40.7%	10.0%
Non-fatal injury	2,082	2,024	1,918	1,638	1,916	17.0%	-2.1%
Property damage	10,055	10,053	9,183	7,752	9,446	21.9%	-1.5%
Unsafe speed	**5,653**	**6,142**	**6,108**	**6,749**	**6,841**	**1.4%**	**4.9%**
Fatal	106	110	106	137	151	10.2%	9.2%
Non-fatal injury	1,841	1,983	2,071	2,270	2,212	-2.6%	4.7%
Property damage	3,706	4,049	3,931	4,342	4,478	3.1%	4.8%
Speed-related citation	**2,361**	**2,399**	**2,425**	**2,300**	**2,442**	**6.2%**	**0.8%**
Fatal	10	12	7	9	11	22.2%	2.4%
Non-fatal injury	749	745	785	752	777	3.3%	0.9%
Property damage	1,602	1,642	1,633	1,539	1,654	7.5%	0.8%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) ***Non-fatal injury*** **collisions are those with no fatalities and at least one injury reported as** ***incapacitating, non-incapacitating,*** **or** ***possible.***
2) ***Speed-related criteria*** **categories are not mutually exclusive. All** ***speed-related*** **collisions may not equal total of individual categories.**

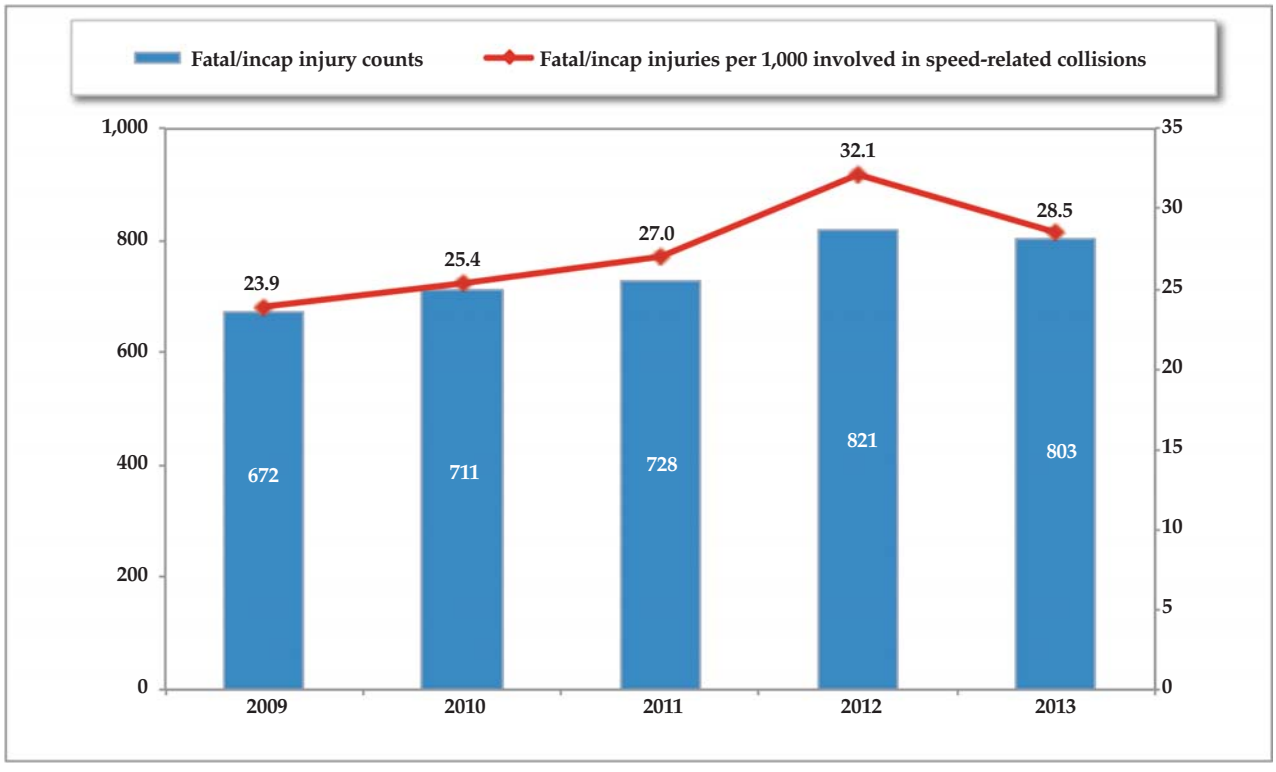
Table 8.3. Individuals involved in Indiana collisions, by speed involvement and injury status, 2009-2013

Speed involvement/injury severity	Count of individuals					Annual rate of change	
	2009	2010	2011	2012	2013	2012-13	2009-13
All individuals	**304,389**	**311,230**	**303,516**	**305,893**	**309,975**	**1.3%**	**0.5%**
Speed-related	**28,127**	**28,009**	**26,968**	**25,546**	**28,168**	**10.3%**	**0.2%**
Fatal	158	145	150	175	214	22.3%	8.5%
Incapacitating	514	566	578	646	589	-8.8%	3.8%
Non-incapacitating	5,433	5,415	5,272	5,141	5,485	6.7%	0.3%
Other injury	385	226	209	229	215	-6.1%	-11.3%
Not injured	21,637	21,657	20,759	19,355	21,665	11.9%	0.3%
Not speed-related	**276,262**	**283,221**	**276,548**	**280,347**	**281,807**	**0.5%**	**0.5%**
Fatal	534	609	599	604	563	-6.8%	1.6%
Incapacitating	2,665	2,877	2,827	3,164	2,854	-9.8%	2.1%
Non-incapacitating	37,977	38,753	36,567	38,207	36,372	-4.8%	-1.0%
Other injury	3,768	2,279	1,688	1,693	1,972	16.5%	-12.2%
Not injured	231,318	238,703	234,867	236,679	240,046	1.4%	0.9%
% Speed-related	**9.2%**	**9.0%**	**8.9%**	**8.4%**	**9.1%**	**8.8%**	**-0.3%**
Fatal	22.8%	19.2%	20.0%	22.5%	27.5%	22.6%	5.8%
Incapacitating	16.2%	16.4%	17.0%	17.0%	17.1%	0.9%	1.4%
Non-incapacitating	12.5%	12.3%	12.6%	11.9%	13.1%	10.5%	1.3%
Other injury	9.3%	9.0%	11.0%	11.9%	9.8%	-17.5%	2.5%
Not injured	8.6%	8.3%	8.1%	7.6%	8.3%	9.5%	-0.6%

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

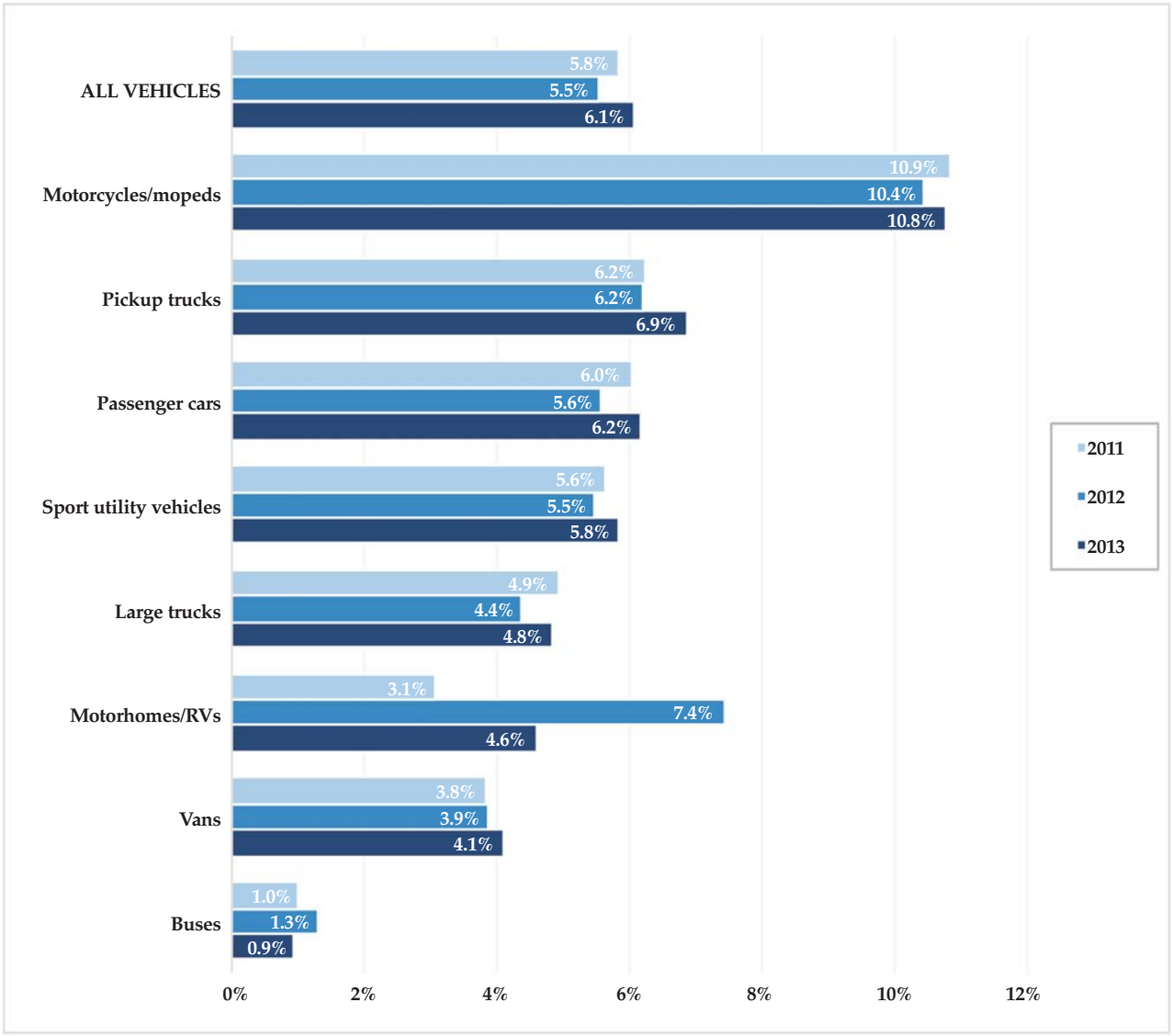
Notes:
1) Includes individuals identified as *drivers, injured occupants, pedestrians,* and *pedalcyclists. Animal-drawn vehicle* occupants are excluded.
2) *Non-incapacitating* includes *non-incapacitating* and *possible* injuries.
3) *Other injury* includes injuries reported as *refused, unknown,* and *not reported.*
4) *Not injured* is defined as individuals with no injury status reported.

Figure 8.2. Fatal and incapacitating injuries per 1,000 individuals involved in Indiana speed-related collisions, 2009-2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

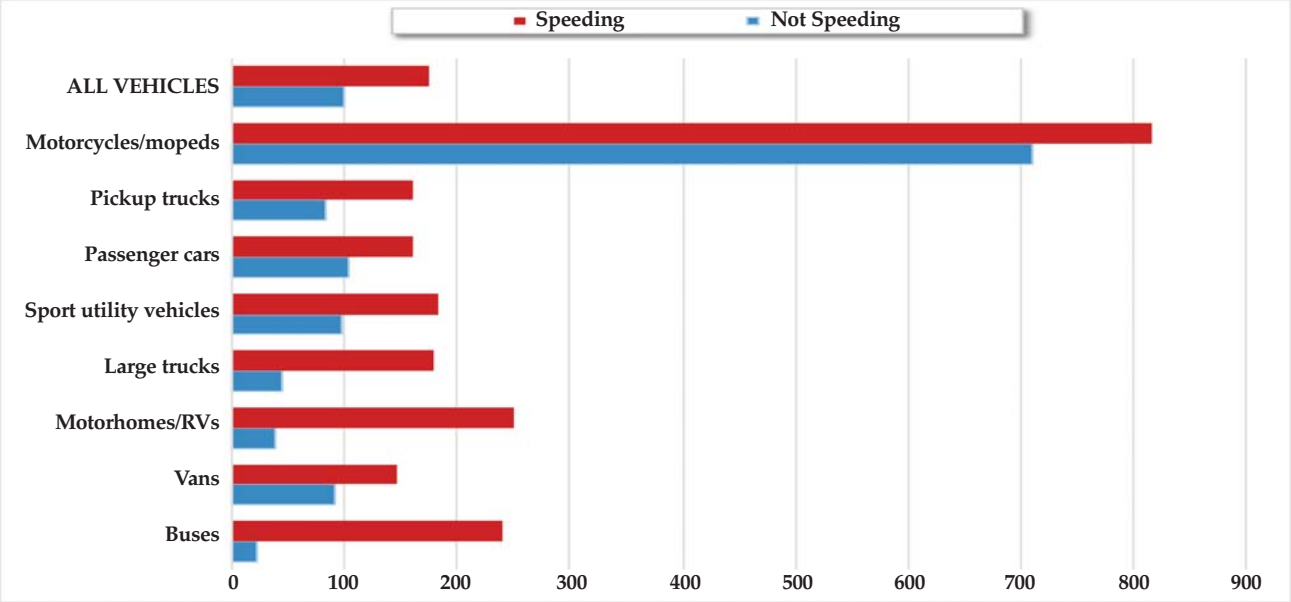
Figure 8.3. Vehicles speeding as a percent of all vehicles involved in Indiana collisions, by vehicle type, 2011-2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

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 unit type and speed involvement, 2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

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.*

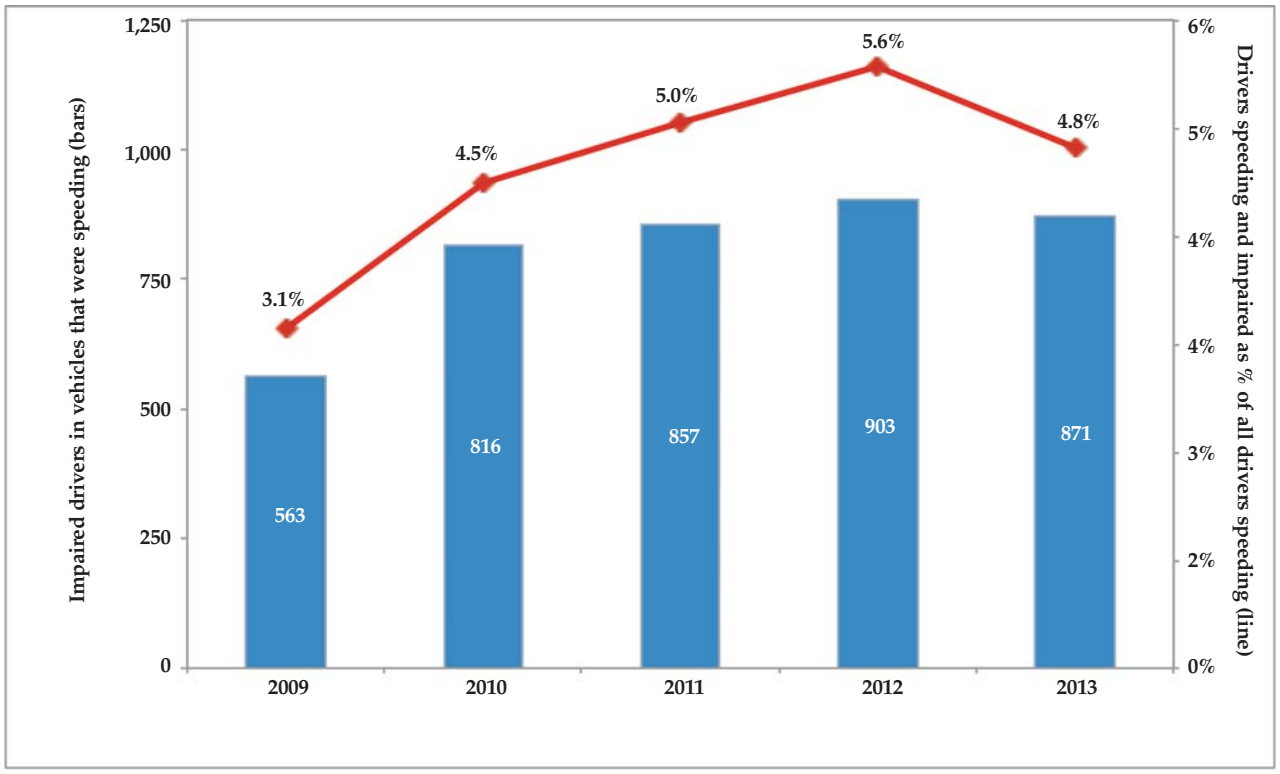
Table 8.4. Drivers speeding as a percent of all drivers involved in Indiana collisions, by age group and gender, 2009-2013

Age group	2009		2010		2011		2012		2013		Annual rate of change, 2009-13	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
15-20	7.9%	12.2%	8.2%	12.2%	8.1%	11.9%	7.3%	12.2%	8.9%	12.4%	2.9%	0.4%
21-24	7.4%	10.1%	6.7%	9.9%	6.9%	10.2%	5.9%	9.4%	7.6%	10.4%	0.8%	0.6%
25-34	5.7%	7.8%	5.5%	8.0%	5.6%	7.5%	4.7%	7.5%	5.5%	8.5%	-1.0%	2.3%
35-44	4.4%	5.8%	4.6%	5.7%	4.5%	5.6%	3.9%	5.4%	4.5%	5.7%	0.7%	-0.2%
45-54	3.7%	4.5%	3.3%	4.8%	3.5%	4.7%	3.4%	4.3%	3.3%	4.5%	-2.4%	0.0%
55-64	3.0%	3.6%	2.7%	3.8%	2.5%	3.5%	2.5%	3.5%	2.6%	3.7%	-3.7%	0.8%
65-74	1.9%	2.6%	1.9%	2.9%	1.9%	2.7%	2.0%	2.8%	2.1%	2.8%	2.8%	1.3%
75 +	1.7%	2.3%	1.8%	2.9%	1.7%	2.2%	1.7%	2.2%	1.6%	2.2%	-1.5%	-1.0%
All ages	5.1%	6.9%	4.9%	6.9%	4.9%	6.6%	4.3%	6.4%	5.0%	6.9%	-0.4%	0.0%

Low High

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Figure 8.5. Drivers in vehicles that were speeding in Indiana collisions, by alcohol impairment, 2009-2013



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Note: *Alcohol-impaired* includes drivers with blood alcohol count (BAC) of 0.08 g/dL or higher.

Table 8.5. Drivers involved in Indiana collisions, by age, speed involvement, and alcohol impairment, 2013

	Not speeding			Speeding		
Age group	Non-impaired	Impaired	% Impaired	Non-impaired	Impaired	% Impaired
15-20	35,265	260	0.7%	4,182	88	2.1%
21-24	29,364	707	2.4%	2,827	181	6.0%
25-34	53,381	1,108	2.0%	3,888	286	6.9%
35-44	45,300	781	1.7%	2,384	137	5.4%
45-54	44,407	642	1.4%	1,771	112	5.9%
55-64	34,881	302	0.9%	1,133	47	4.0%
65-74	18,582	79	0.4%	477	6	1.2%
75 +	11,001	20	0.2%	223	0	0.0%
Total	**272,181**	**3,899**	**1.4%**	**16,885**	**857**	**4.8%**

Low High

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

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.

Table 8.6. Individuals in vehicles where driver was reported to be speeding, by restraint use and injury status, 2009-2013

Vehicle occupant injuries in speed-related collisions	Count of collisions					Annual rate of change	
	2009	2010	2011	2012	2013	2012-13	2009-13
All occupants	**18,827**	**18,975**	**17,942**	**17,178**	**19,091**	**11.1%**	**0.3%**
Properly restrained	16,269	16,417	15,434	14,544	16,422	12.9%	0.2%
Restraint use rate	*86.4%*	*86.5%*	*86.0%*	*84.7%*	*86.0%*	*1.6%*	*-0.1%*
Fatalities	**134**	**118**	**123**	**143**	**189**	**32.2%**	**9.0%**
Properly restrained	43	36	40	47	58	23.4%	7.8%
Restraint use rate	*32.1%*	*30.5%*	*32.5%*	*32.9%*	*30.7%*	*-6.6%*	*-1.1%*
Incapacitating injuries	**395**	**432**	**448**	**485**	**466**	**-3.9%**	**4.2%**
Properly restrained	197	222	223	224	214	-4.5%	2.1%
Restraint use rate	*49.9%*	*51.4%*	*49.8%*	*46.2%*	*45.9%*	*-0.6%*	*-2.0%*
Non-incapacitating injuries	**3,589**	**3,607**	**3,472**	**3,433**	**3,675**	**7.0%**	**0.6%**
Properly restrained	2,743	2,822	2,636	2,539	2,792	10.0%	0.4%
Restraint use rate	*76.4%*	*78.2%*	*75.9%*	*74.0%*	*76.0%*	*2.7%*	*-0.1%*
Other injuries	**235**	**120**	**119**	**135**	**128**	**-5.2%**	**-14.1%**
Properly restrained	204	96	99	107	100	-6.5%	-16.3%
Restraint use rate	*86.8%*	*80.0%*	*83.2%*	*79.3%*	*78.1%*	*-1.4%*	*-2.6%*
Not injured	**14,474**	**14,698**	**13,780**	**12,982**	**14,633**	**12.7%**	**0.3%**
Properly restrained	13,082	13,241	12,436	11,627	13,258	14.0%	0.3%
Restraint use rate	*90.4%*	*90.1%*	*90.2%*	*89.6%*	*90.6%*	*1.2%*	*0.1%*

Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Counts are limited to *drivers* and *injured vehicle occupants* in vehicles where driver was reported to be speeding.
2) *Non-incapacitating* includes *non-incapacitating* and *possible* injuries.
3) *Other injury* includes injuries reported as *refused, unknown,* and *not reported.*

Table 8.7. Total and speed-related traffic collisions, by month and respective collision category, 2009-2013

Month	Total collisions					Speed-related collisions				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Jan	20,219	17,060	18,825	17,434	15,481	4,764	3,142	4,434	3,617	2,233
Feb	15,255	17,381	16,247	14,169	14,242	2,253	3,716	3,079	1,811	2,289
Mar	12,753	13,377	12,742	14,581	15,935	703	692	817	1,063	2,408
Apr	14,055	14,166	13,698	13,881	14,030	880	727	841	776	891
May	15,402	15,396	15,126	15,976	16,317	820	893	921	896	934
Jun	14,887	15,432	14,829	15,120	15,256	832	848	833	756	918
Jul	14,118	15,040	14,206	14,422	15,010	762	838	726	819	883
Aug	14,468	14,918	14,992	15,490	15,493	832	716	785	910	821
Sep	14,615	14,905	15,139	14,860	15,743	831	738	1,038	933	890
Oct	17,576	16,992	17,281	17,608	17,622	1,179	834	959	1,241	1,202
Nov	16,924	17,223	18,401	16,565	18,418	805	1,072	1,508	724	1,419
Dec	19,389	20,995	16,640	18,735	19,466	3,590	4,334	1,576	3,062	3,683
Total	**189,661**	**192,885**	**188,126**	**188,841**	**193,013**	**18,251**	**18,550**	**17,517**	**16,608**	**18,571**
High	*Jan*	*Dec*	*Jan*	*Dec*	*Dec*	*Jan*	*Dec*	*Jan*	*Jan*	*Dec*
Low	*Mar*	*Mar*	*Mar*	*Apr*	*Apr*	*Mar*	*Mar*	*Jul*	*Nov*	*Aug*

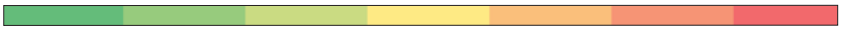
Low High

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Note: Color-scales are illustrated to show months from low to high for the entire 5-year period, 2009-2013.

Table 8.8. Speed-related collisions as a percent of all Indiana collisions, by time of day and day of week, 2013

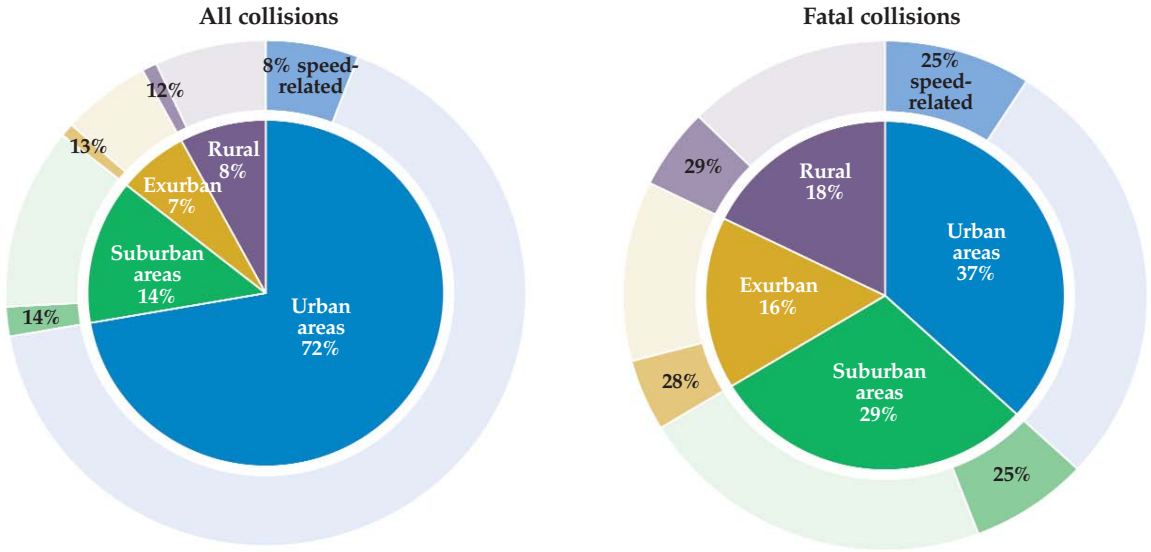
Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	% Speed-related by hour
12am-	12.4%	18.0%	9.2%	13.6%	14.4%	16.6%	11.6%	13.4%
1am-	14.9%	16.7%	16.4%	13.2%	14.2%	15.3%	15.4%	15.2%
2am-	15.1%	18.3%	16.8%	13.4%	19.2%	14.9%	15.9%	16.0%
3am-	14.2%	17.4%	14.9%	16.1%	13.9%	14.0%	16.4%	15.2%
4am-	12.1%	19.0%	10.4%	15.5%	16.3%	14.4%	18.2%	15.1%
5am-	10.1%	15.5%	9.9%	19.1%	11.1%	16.0%	13.7%	13.9%
6am-	12.9%	15.2%	8.9%	13.3%	9.2%	13.2%	15.9%	12.4%
7am-	14.8%	13.6%	8.7%	12.2%	9.8%	13.8%	18.4%	12.2%
8am-	12.6%	15.3%	7.6%	11.0%	10.3%	15.0%	17.5%	12.4%
9am-	11.3%	14.6%	8.0%	14.1%	9.6%	14.1%	14.2%	12.4%
10am-	9.8%	9.5%	6.9%	10.9%	7.9%	11.3%	12.1%	9.9%
11am-	9.4%	7.6%	5.8%	8.5%	7.9%	8.8%	11.1%	8.5%
12pm-	8.7%	6.9%	5.5%	5.6%	7.0%	6.5%	8.1%	6.9%
1pm-	7.0%	6.2%	6.7%	7.3%	7.6%	6.2%	7.3%	6.9%
2pm-	10.2%	5.7%	7.2%	6.5%	7.4%	5.9%	7.3%	7.0%
3pm-	10.1%	5.1%	8.3%	6.5%	6.8%	6.0%	8.4%	7.0%
4pm-	11.2%	5.0%	9.4%	7.1%	6.5%	6.1%	9.2%	7.5%
5pm-	11.6%	6.2%	11.0%	6.8%	7.7%	5.8%	9.0%	8.0%
6pm-	12.5%	8.2%	10.6%	7.1%	7.1%	5.8%	7.9%	8.3%
7pm-	13.9%	7.9%	11.8%	6.6%	10.2%	7.0%	8.4%	9.3%
8pm-	13.8%	8.9%	11.0%	9.4%	11.5%	7.8%	8.7%	10.1%
9pm-	13.6%	9.0%	11.8%	10.9%	13.4%	10.1%	8.9%	11.0%
10pm-	15.5%	9.9%	15.4%	11.6%	14.9%	8.7%	10.1%	12.0%
11pm-	17.8%	13.3%	17.6%	14.2%	13.9%	11.4%	11.5%	13.8%
% Speed-related by day	**11.8%**	**9.3%**	**9.3%**	**9.3%**	**9.1%**	**8.9%**	**10.6%**	**9.6%**



Source: Indiana State Police Automated Reporting and Information Exchange System (ARIES), as of March 21, 2014

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

Figure 8.6. Distribution of total and fatal crashes and rates of speed involvement, by Census locale, 2013



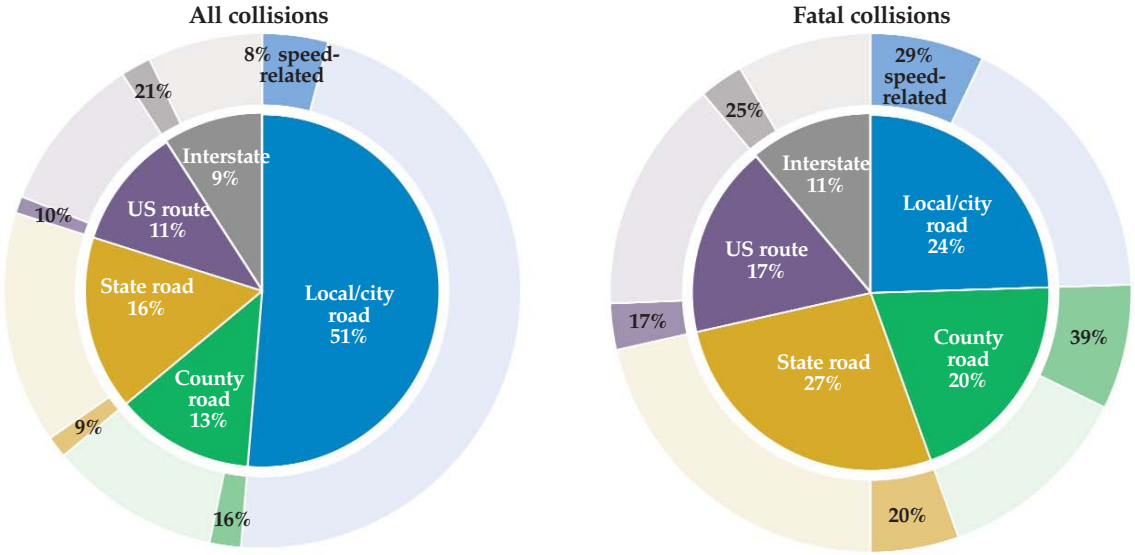
Inner pie: Geographic distribution of collisions

Outer ring: Speed involvement rates, by Census locality

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

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

Figure 8.7. Distribution of total and fatal crashes and rates of speed involvement, by road type, 2013



Inner pie: Geographic distribution of collisions

Outer ring: Speed involvement rates, by road type

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Note: Includes collisions where valid road class was reported.

CHAPTER 9

COUNTIES

COUNTIES, 2013

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, figures, and *choropleth* maps show various collision and injury rates in Indiana counties in 2013. The economic costs associated with 2013 collisions are also reported for each county.

Note: Choropleth maps show counties grouped by quartiles.

Collision severity and injuries

In 2013, 193,013 collisions occurred in Indiana, 703 of which were fatal. The mean number of collisions per county was 2,098, and the mean number of fatal collisions per county was 8 (Table 9.1). Marion County ranked highest in the total number of collisions (28,732), and Daviess and Union counties ranked highest in the percentage of all collisions that were fatal (1.6). The mean county rate of collisions per 100 million (100m) VMT was 222, and the median rate was 215 (Map 9.1). Tippecanoe (432.3), Monroe (424.2), and Brown (421.6) counties had the highest rates of collisions per 100m VMT (Map 9.1).

The total number of individuals involved in 2013 Indiana collisions was 309,975, and the mean number of individuals involved in collisions per county was 3,369 (Table 9.2). Marion County had the largest number of individuals involved (50,673) and the largest number of traffic fatalities (77), but ranked 7th out of 92 counties in the lowest percentage of all traffic injuries that were fatal (Figure 9.1). Counties with the highest traffic fatalities as percent of total persons involved included Carroll (13 percent), Washington (12.3 percent), and Union (12.1 percent). The median county traffic fatality rate per 100,000 population was 15 (Map 9.2), with Jasper County having the highest rate per 100,000 (53.9) and Rush County having the lowest (0.0).

Speed-related collisions

Speed-related collisions accounted for 9.6 percent of all Indiana collisions in 2013, and 26 percent of all fatal collisions (Table 9.3). The mean number of speed-related collisions per county was 202. Vanderburgh, Union, and Fayette counties had the lowest percentage of speed-related collisions (4.1 percent), and Martin (21.7 percent), Pike (21.1 percent), and LaGrange (20.2 percent) counties had the highest percentages of all collisions that were speed-related (Figure 9.2). Many counties with the highest percentages of speed-related collisions were clustered in northern half of the state (Map 9.3).

Alcohol collisions

Indiana collisions that involved an alcohol-impaired driver accounted for 2.5 percent of all Indiana collisions in 2013, and 16.2 percent of all fatal collisions (Table 9.4). 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 2.7 percent. Daviess County had the highest percentage of alcohol-impaired collisions at 7.9 percent of all collisions in that county. Vermillion had the next highest percentage of alcohol-impaired collisions with approximately 5.2 percent of total collisions (Figure 9.3 and Map 9.4).

Deer collisions

Figure 9.4 shows that Pulaski County had the highest percentage of deer-involved collisions (47.8 percent), while the urban counties of Marion (0.5 percent) and Lake (1.6 percent) had the lowest percentage of collisions that involved deer. A large percentage of 2013 collisions that occurred in predominantly Indiana rural counties involved deer (Map 9.5). Even among all counties, the mean percentage of deer-related collisions was 16 percent. Counties with the highest percentage of deer-involved collisions were clustered in the northeastern, northwestern, and southern regions of the state.

Work zone collisions

There were 2,874 work zone collisions in Indiana in 2013 (Figure 9.5 and Map 9.6). The mean county rate of work zone collisions per 1,000 total collisions was 11.9. Boone County (68.9), located just northwest of Indianapolis, and Porter County (72.6), located in the far northwestern region of the state, had the highest rates of work zone collisions per 1,000 collisions. Counties located in Indiana metropolitan areas and along interstate routes had some of the highest work zone collision rates in 2013. It is worth noting that work zone locations are constantly changing throughout the state, a fact that affects which counties have the highest work zone collision rates from year to year.

Restraint use

Nearly 56 percent of vehicle occupants killed in Indiana collisions were unrestrained in 2013, while only 15.4 percent of individuals suffering non-incapacitating injuries were unrestrained (Table 9.5). The median county percent of unrestrained individuals involved in collisions was 3.0 percent. Pike, Switzerland, and Daviess counties had the highest rates of unrestrained vehicle occupants at 8.9, 7.3, and 7.0 percent, respectively (Figure 9.6 and Map 9.7). Urban counties had the lowest rates of unrestrained injuries. More generally, counties located in southern Indiana have higher rates of unrestrained injuries than counties located in northern portions of the state.

Young drivers

In 2013, 39,795 young drivers (ages 15 to 20) were involved in collisions (13.5 percent of all drivers involved). Forty-four young drivers were killed in 2013 collisions (Table 9.6). On average, 15 percent of drivers involved in collisions in Indiana counties were young drivers; the smallest proportion of young drivers was reported in Marion County (10.1 percent) and the largest in Franklin County (20.3 percent) (Figure 9.7). The mean county rate of young driver involvement in collisions was 101.7 per 1,000 licensed young drivers, while the median county rate was 97.5. Counties that are the locations of large universities (Vanderburgh, Tippecanoe, Monroe, and Delaware) had high rates of young driver involvement in collisions (Map 9.8).

Motorcycle collisions

Of the 193,013 collisions occurring in Indiana in 2013, 3,522 (1.8 percent) involved motorcycles, 113 of which were fatal, representing 16 percent of all fatal collisions (Table 9.7). On average, 2.1 percent of collisions in Indiana counties involved a motorcycle. The highest percentage of collisions involving motorcycles (4.9 percent) occurred in Brown County (Figure 9.8 and Map 9.9).

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). Hit-and-run collisions accounted for 12.1 percent of all 193,013 collisions in Indiana during 2013. The county mean percentage of collisions involving a hit-and-run driver was 7.8 percent, and the county median was 6.9 percent. Allen County (18.7 percent) and Monroe County (17.8 percent) had the highest hit-and-run collision rates in the state in 2013 (Figure 9.9 and Map 9.10).

Economic Costs

Map 9.11 shows the economic costs associated with collisions by county. Because costs are based on the number of collisions and injuries that occur and because more heavily populated areas tend to record higher numbers of collisions and injuries, counties with larger populations had the highest total economic costs of collisions in 2013. Marion County recorded the highest estimated economic costs with $509 million, followed by Lake County ($275 million), and Allen County ($197 million). The median county economic cost of collisions was $20 million, and the mean county economic cost of collisions was $39 million. Map 9.12 shows the economic costs per capita associated with collisions by county in 2013. While Jasper County ($1,060), in northwestern Indiana, had the highest per capita cost of collisions, many of the counties with the highest per capita costs are clustered in southern Indiana. The median county per capita cost of collisions was $541, and the mean county per capita cost of collisions was $543.

Table 9.1. Indiana collisions, by severity and county, 2013

	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	**193,013**	**na**	**703**	**0.4**	**na**	**32,820**	**17.0**	**159,490**	**82.6**
Mean	2,098	na	8	0.6	na	357	16.7	1,734	82.7
Median	945	na	6	0	na	159	16	800	83.0
Minimum	122	na	1	0.0	na	16	10.2	104	65.2
Maximum	28,732	na	69	1.6	na	5,169	33.2	23,494	89.5
Adams	636	63	2	0.3	68	81	12.7	553	86.9
Allen	11,426	3	26	0.2	85	2,193	19.2	9,207	80.6
Bartholomew	2,065	23	5	0.2	81	515	24.9	1,545	74.8
Benton	143	90	1	0.7	29	31	21.7	111	77.6
Blackford	309	83	1	0.3	66	47	15.2	261	84.5
Boone	1,842	24	7	0.4	60	216	11.7	1,619	87.9
Brown	574	68	4	0.7	30	97	16.9	473	82.4
Carroll	523	71	8	1.5	3	74	14.1	441	84.3
Cass	1,124	39	5	0.4	51	169	15.0	950	84.5
Clark	4,304	10	8	0.2	88	690	16.0	3,606	83.8
Clay	790	55	6	0.8	23	116	14.7	668	84.6
Clinton	1,058	42	6	0.6	39	156	14.7	896	84.7
Crawford	267	85	4	1.5	4	51	19.1	212	79.4
Daviess	382	79	6	1.6	2	127	33.2	249	65.2
Dearborn	1,801	25	8	0.4	52	261	14.5	1,532	85.1
Decatur	847	52	6	0.7	28	132	15.6	709	83.7
DeKalb	1,293	33	6	0.5	49	171	13.2	1,116	86.3
Delaware	3,966	12	9	0.2	86	648	16.3	3,309	83.4
Dubois	1,463	30	8	0.5	40	230	15.7	1,225	83.7
Elkhart	6,952	7	20	0.3	74	978	14.1	5,954	85.6
Fayette	482	74	2	0.4	53	78	16.2	402	83.4
Floyd	2,453	19	4	0.2	90	429	17.5	2,020	82.3
Fountain	479	75	4	0.8	18	53	11.1	422	88.1
Franklin	489	73	4	0.8	20	82	16.8	403	82.4
Fulton	610	65	2	0.3	64	62	10.2	546	89.5
Gibson	1,128	38	3	0.3	76	178	15.8	947	84.0
Grant	2,232	22	9	0.4	57	329	14.7	1,894	84.9
Greene	864	50	5	0.6	38	110	12.7	749	86.7
Hamilton	7,021	5	13	0.2	89	1,029	14.7	5,979	85.2
Hancock	1,475	28	4	0.3	75	269	18.2	1,202	81.5
Harrison	1,209	37	14	1.2	7	196	16.2	999	82.6
Hendricks	3,692	14	9	0.2	78	601	16.3	3,082	83.5
Henry	1,039	43	8	0.8	22	213	20.5	818	78.7
Howard	2,258	20	8	0.4	61	440	19.5	1,810	80.2
Huntington	1,088	40	5	0.5	50	177	16.3	906	83.3
Jackson	1,711	26	7	0.4	55	277	16.2	1,427	83.4
Jasper	1,259	36	12	1.0	11	222	17.6	1,025	81.4
Jay	718	57	5	0.7	31	105	14.6	608	84.7
Jefferson	934	48	5	0.5	42	161	17.2	768	82.2
Jennings	810	54	9	1.1	9	161	19.9	640	79.0
Johnson	2,950	17	12	0.4	56	570	19.3	2,368	80.3
Knox	897	49	7	0.8	21	191	21.3	699	77.9
Kosciusko	2,466	18	6	0.2	79	349	14.2	2,111	85.6
LaGrange	945	46	8	0.8	16	100	10.6	837	88.6
Lake	16,012	2	40	0.2	77	2,686	16.8	13,286	83.0
LaPorte	3,341	15	16	0.5	47	633	18.9	2,692	80.6
Lawrence	1,407	31	7	0.5	45	250	17.8	1,150	81.7
Madison	3,702	13	9	0.2	80	571	15.4	3,122	84.3

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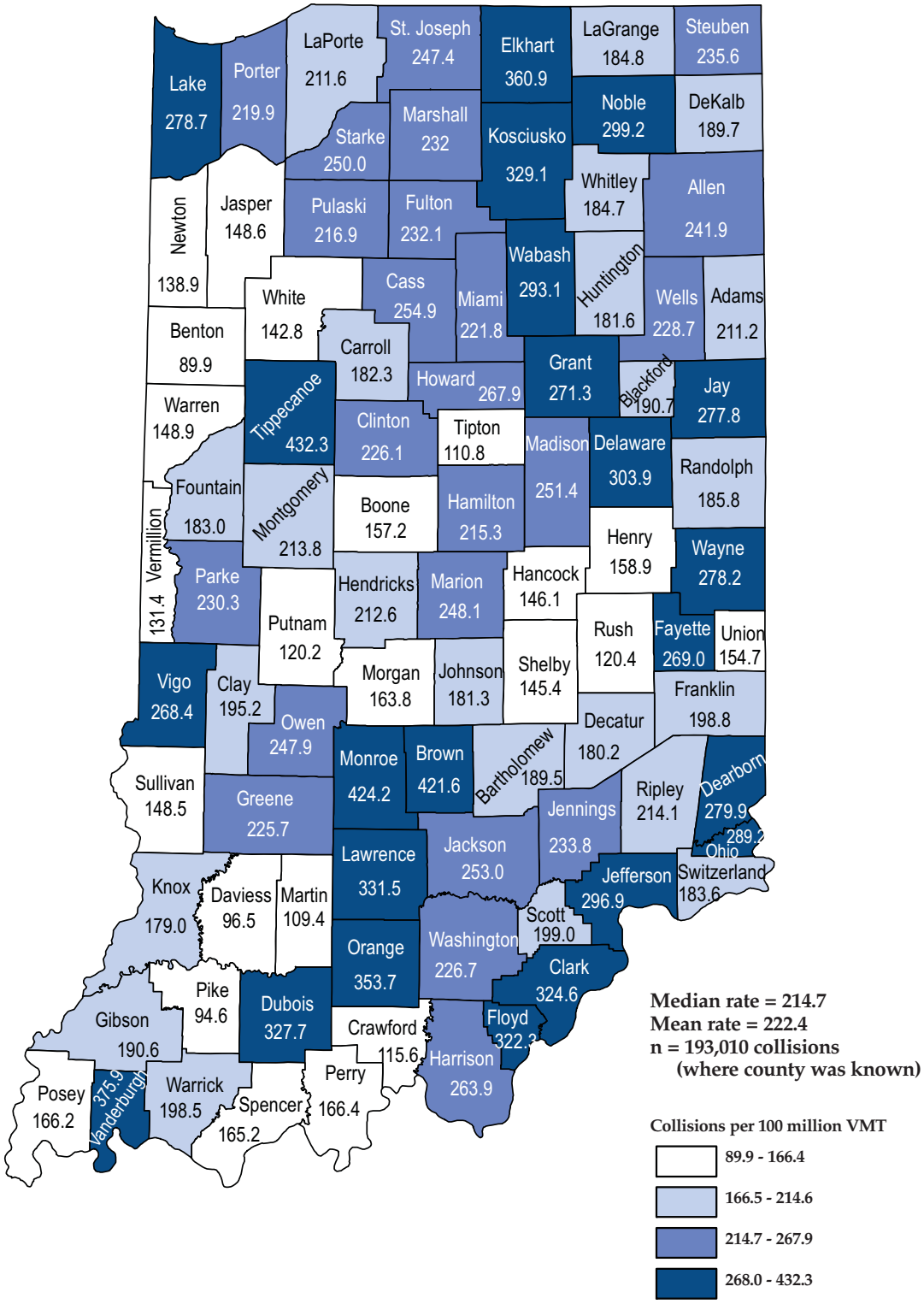
Table 9.1. *(continued)*

	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	28,732	1	69	0.2	82	5,169	18.0	23,494	81.8
Marshall	1,338	32	12	0.9	15	171	12.8	1,155	86.3
Martin	157	89	1	0.6	33	29	18.5	127	80.9
Miami	944	47	7	0.7	26	135	14.3	802	85.0
Monroe	4,064	11	5	0.1	91	783	19.3	3,276	80.6
Montgomery	1,005	44	3	0.3	72	178	17.7	824	82.0
Morgan	1,472	29	8	0.5	41	288	19.6	1,176	79.9
Newton	363	80	3	0.8	19	71	19.6	289	79.6
Noble	1,281	34	8	0.6	36	192	15.0	1,081	84.4
Ohio	133	91	1	0.8	25	19	14.3	113	85.0
Orange	661	60	5	0.8	24	103	15.6	553	83.7
Owen	551	69	5	0.9	13	101	18.3	445	80.8
Parke	533	70	5	0.9	12	70	13.1	458	85.9
Perry	410	78	3	0.7	27	79	19.3	328	80.0
Pike	190	88	1	0.5	43	59	31.1	130	68.4
Porter	4,815	9	14	0.3	73	949	19.7	3,852	80.0
Posey	578	67	6	1.0	10	74	12.8	498	86.2
Pulaski	429	77	2	0.5	48	57	13.3	370	86.2
Putnam	662	59	6	0.9	14	106	16.0	550	83.1
Randolph	512	72	2	0.4	59	77	15.0	433	84.6
Ripley	748	56	3	0.4	58	109	14.6	636	85.0
Rush	290	84		0.0	92	66	22.8	224	77.2
St. Joseph	7,359	4	17	0.2	84	1,405	19.1	5,937	80.7
Scott	658	61	9	1.4	6	146	22.2	503	76.4
Shelby	1,068	41	9	0.8	17	261	24.4	798	74.7
Spencer	597	66	4	0.7	32	100	16.8	493	82.6
Starke	614	64	2	0.3	65	76	12.4	536	87.3
Steuben	1,558	27	3	0.2	87	168	10.8	1,387	89.0
Sullivan	446	76	5	1.1	8	67	15.0	374	83.9
Switzerland	193	87	1	0.5	44	48	24.9	144	74.6
Tippecanoe	6,997	6	22	0.3	69	1,056	15.1	5,919	84.6
Tipton	318	82	2	0.6	35	77	24.2	239	75.2
Union	122	92	2	1.6	1	16	13.1	104	85.2
Vanderburgh	6,496	8	21	0.3	67	1,232	19.0	5,243	80.7
Vermillion	329	81	1	0.3	71	57	17.3	271	82.4
Vigo	3,231	16	11	0.3	63	597	18.5	2,623	81.2
Wabash	951	45	6	0.6	34	124	13.0	821	86.3
Warren	244	86	1	0.4	54	25	10.2	218	89.3
Warrick	1,268	35	3	0.2	83	170	13.4	1,095	86.4
Washington	690	58	10	1.4	5	111	16.1	569	82.5
Wayne	2,238	21	13	0.6	37	375	16.8	1,850	82.7
Wells	642	62	2	0.3	70	91	14.2	549	85.5
White	835	53	4	0.5	46	97	11.6	734	87.9
Whitley	852	51	3	0.4	62	131	15.4	718	84.3
Unknown	3	na	0	0.0	na	0	0.0	3	100.0

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

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

Map 9.1. Traffic collisions per 100M vehicle miles traveled (VMT) by county, 2013



Sources:
Collisions: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014
VMT: Indiana Department of Transportation, as of April 11, 2014

Table 9.2. Individuals involved in Indiana collisions, by injury status and county, 2013

	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	**309,975**	**na**	**777**	**0.3**	**na**	**3,443**	**1.1**	**41,857**	**13.5**	**263,898**	**85.1**
Mean	3,369	na	8	0.4	na	37	1.6	455	14.1	2,868	83.9
Median	1,362	na	6	0	na	21	1	197	14	1,143	84
Minimum	160	na	0	0.0	na	1	0.4	14	8.5	134	68.7
Maximum	50,673	na	77	1.3	na	378	4.2	6,578	28.3	43,640	90.3
Adams	894	62	2	0.2	68	13	1.5	114	12.8	765	85.6
Allen	18,509	3	30	0.2	83	145	0.8	2,824	15.3	15,510	83.8
Bartholomew	3,519	21	6	0.2	81	32	0.9	684	19.4	2,797	79.5
Benton	187	90	1	0.5	29	3	1.6	43	23.0	140	74.9
Blackford	421	83	1	0.2	66	8	1.9	56	13.3	356	84.6
Boone	2,863	24	7	0.2	64	24	0.8	266	9.3	2,566	89.6
Brown	738	70	4	0.5	28	16	2.2	100	13.6	618	83.7
Carroll	693	72	9	1.3	1	4	0.6	91	13.1	589	85.0
Cass	1,649	39	5	0.3	55	13	0.8	219	13.3	1,412	85.6
Clark	7,092	10	8	0.1	88	59	0.8	948	13.4	6,077	85.7
Clay	1,189	53	9	0.8	11	13	1.1	154	13.0	1,013	85.2
Clinton	1,516	43	7	0.5	37	26	1.7	205	13.5	1,278	84.3
Crawford	340	85	4	1.2	4	12	3.5	64	18.8	260	76.5
Daviess	607	77	6	1.0	6	12	2.0	172	28.3	417	68.7
Dearborn	2,647	25	8	0.3	56	42	1.6	318	12.0	2,279	86.1
Decatur	1,246	51	6	0.5	35	24	1.9	160	12.8	1,056	84.8
DeKalb	1,840	34	7	0.4	45	25	1.4	214	11.6	1,594	86.6
Delaware	6,373	12	12	0.2	75	85	1.3	819	12.9	5,457	85.6
Dubois	2,132	29	10	0.5	36	33	1.5	304	14.3	1,785	83.7
Elkhart	10,935	8	21	0.2	74	114	1.0	1,225	11.2	9,575	87.6
Fayette	730	71	2	0.3	58	6	0.8	95	13.0	627	85.9
Floyd	4,047	18	4	0.1	90	36	0.9	532	13.1	3,475	85.9
Fountain	618	76	4	0.6	16	12	1.9	64	10.4	538	87.1
Franklin	670	74	4	0.6	26	16	2.4	88	13.1	562	83.9
Fulton	815	66	2	0.2	63	5	0.6	72	8.8	736	90.3
Gibson	1,673	38	3	0.2	78	32	1.9	213	12.7	1,425	85.2
Grant	3,442	22	9	0.3	60	42	1.2	427	12.4	2,964	86.1
Greene	1,148	55	5	0.4	41	15	1.3	129	11.2	999	87.0
Hamilton	12,574	4	13	0.1	89	117	0.9	1,266	10.1	11,178	88.9
Hancock	2,467	27	5	0.2	73	40	1.6	338	13.7	2,084	84.5
Harrison	1,730	37	16	0.9	7	35	2.0	254	14.7	1,425	82.4
Hendricks	6,309	13	10	0.2	85	81	1.3	741	11.7	5,477	86.8
Henry	1,599	41	10	0.6	20	43	2.7	292	18.3	1,254	78.4
Howard	3,932	19	8	0.2	72	47	1.2	547	13.9	3,330	84.7
Huntington	1,557	42	5	0.3	54	20	1.3	243	15.6	1,289	82.8
Jackson	2,514	26	7	0.3	57	31	1.2	341	13.6	2,135	84.9
Jasper	1,744	36	18	1.0	5	26	1.5	287	16.5	1,413	81.0
Jay	959	60	5	0.5	30	15	1.6	134	14.0	805	83.9
Jefferson	1,445	45	5	0.3	50	15	1.0	216	14.9	1,209	83.7
Jennings	1,262	50	9	0.7	14	24	1.9	201	15.9	1,028	81.5
Johnson	5,236	15	12	0.2	67	63	1.2	740	14.1	4,421	84.4
Knox	1,370	46	7	0.5	32	19	1.4	235	17.2	1,109	80.9
Kosciusko	3,742	20	7	0.2	76	28	0.7	510	13.6	3,197	85.4
LaGrange	1,264	49	10	0.8	10	13	1.0	125	9.9	1,116	88.3
Lake	26,793	2	46	0.2	80	207	0.8	3,548	13.2	22,992	85.8
LaPorte	5,145	17	18	0.3	48	71	1.4	830	16.1	4,226	82.1
Lawrence	2,058	30	9	0.4	40	29	1.4	311	15.1	1,709	83.0
Madison	5,776	14	10	0.2	79	93	1.6	711	12.3	4,962	85.9

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Table 9.2. *(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	50,673	1	77	0.2	86	378	0.7	6,578	13.0	43,640	86.1
Marshall	1,886	32	12	0.6	18	16	0.8	238	12.6	1,620	85.9
Martin	237	89	1	0.4	43	1	0.4	36	15.2	199	84.0
Miami	1,297	48	8	0.6	22	16	1.2	172	13.3	1,101	84.9
Monroe	6,466	11	5	0.1	91	89	1.4	932	14.4	5,440	84.1
Montgomery	1,482	44	5	0.3	52	23	1.6	219	14.8	1,235	83.3
Morgan	2,419	28	8	0.3	53	36	1.5	403	16.7	1,972	81.5
Newton	462	81	3	0.6	15	11	2.4	78	16.9	370	80.1
Noble	1,759	35	9	0.5	31	38	2.2	230	13.1	1,482	84.3
Ohio	160	92	1	0.6	21	2	1.3	23	14.4	134	83.8
Orange	882	63	5	0.6	27	22	2.5	116	13.2	739	83.8
Owen	793	68	5	0.6	19	14	1.8	128	16.1	646	81.5
Parke	686	73	5	0.7	13	26	3.8	73	10.6	582	84.8
Perry	607	77	3	0.5	33	11	1.8	92	15.2	501	82.5
Pike	277	87	1	0.4	47	9	3.2	67	24.2	200	72.2
Porter	7,845	9	16	0.2	71	96	1.2	1,247	15.9	6,486	82.7
Posey	795	67	6	0.8	12	16	2.0	87	10.9	686	86.3
Pulaski	530	79	2	0.4	46	16	3.0	58	10.9	454	85.7
Putnam	975	59	6	0.6	24	11	1.1	139	14.3	819	84.0
Randolph	746	69	2	0.3	59	16	2.1	102	13.7	626	83.9
Ripley	1,016	57	5	0.5	34	17	1.7	137	13.5	857	84.4
Rush	414	84	0	0.0	92	17	4.1	75	18.1	322	77.8
St. Joseph	12,050	5	20	0.2	82	116	1.0	1,771	14.7	10,143	84.2
Scott	1,132	56	9	0.8	9	32	2.8	196	17.3	895	79.1
Shelby	1,624	40	10	0.6	23	32	2.0	327	20.1	1,255	77.3
Spencer	828	64	5	0.6	25	10	1.2	145	17.5	668	80.7
Starke	819	65	2	0.2	65	6	0.7	101	12.3	710	86.7
Steuben	2,055	31	3	0.1	87	18	0.9	198	9.6	1,836	89.3
Sullivan	622	75	5	0.8	8	11	1.8	92	14.8	514	82.6
Switzerland	260	88	1	0.4	44	11	4.2	48	18.5	200	76.9
Tippecanoe	10,992	7	24	0.2	69	71	0.6	1,343	12.2	9,554	86.9
Tipton	468	80	3	0.6	17	8	1.7	92	19.7	365	78.0
Union	165	91	2	1.2	3	5	3.0	14	8.5	144	87.3
Vanderburgh	11,808	6	22	0.2	77	95	0.8	1,646	13.9	10,045	85.1
Vermillion	445	82	2	0.4	38	13	2.9	70	15.7	360	80.9
Vigo	5,166	16	13	0.3	61	70	1.4	754	14.6	4,329	83.8
Wabash	1,353	47	6	0.4	39	32	2.4	145	10.7	1,170	86.5
Warren	288	86	1	0.3	49	4	1.4	26	9.0	257	89.2
Warrick	1,880	33	3	0.2	84	58	3.1	177	9.4	1,642	87.3
Washington	977	58	12	1.2	2	12	1.2	142	14.5	811	83.0
Wayne	3,300	23	14	0.4	42	37	1.1	482	14.6	2,767	83.8
Wells	924	61	2	0.2	70	6	0.6	120	13.0	796	86.1
White	1,185	54	4	0.3	51	14	1.2	117	9.9	1,050	88.6
Whitley	1,218	52	3	0.2	62	17	1.4	151	12.4	1,047	86.0

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

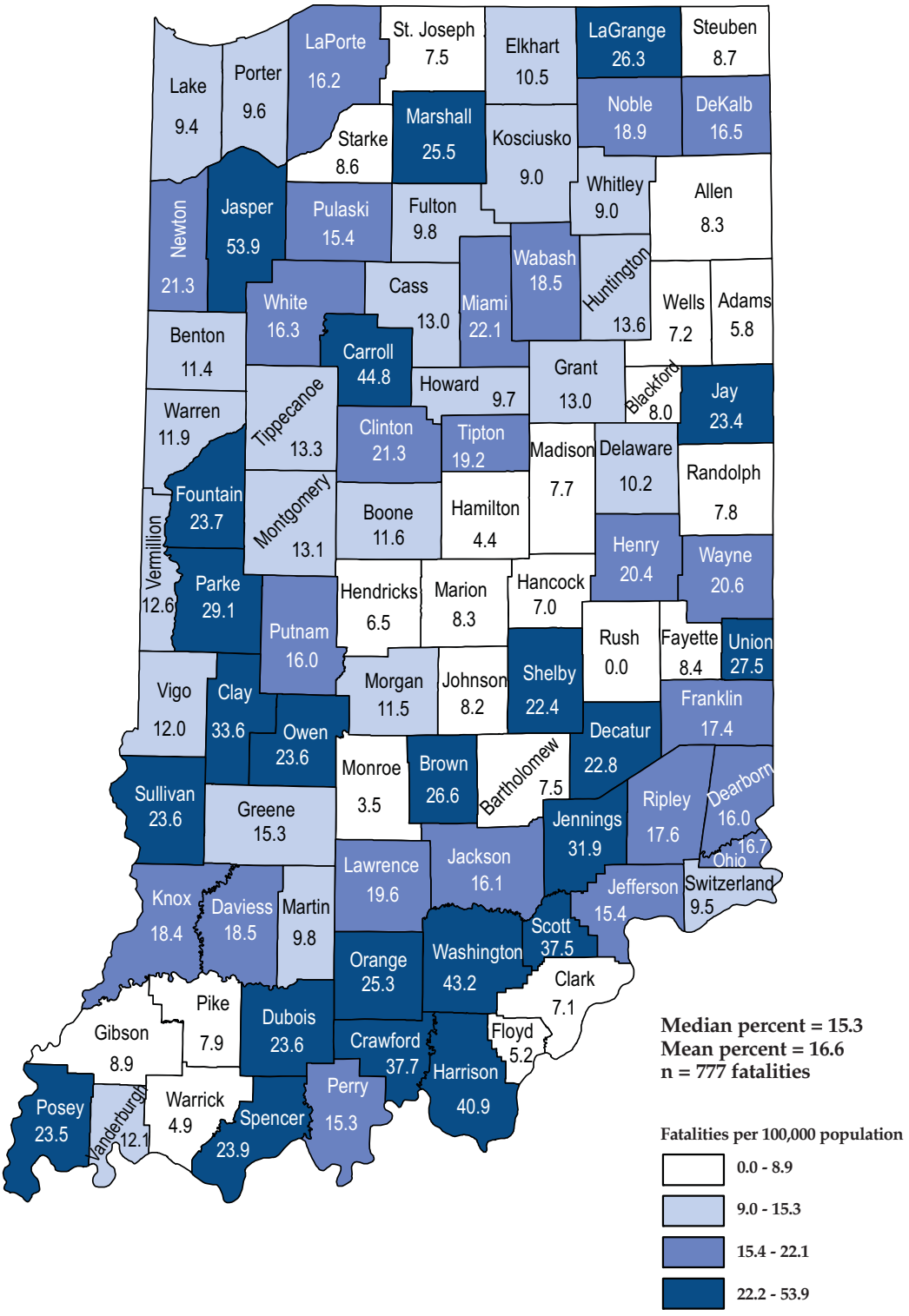
Notes:
1) ***Non-incapacitating*** **injuries include those reported as** ***non-incapacitating*** **and** ***possible*** **injuries.**
2) ***Other/no injury*** **counts include injury type values identified as** ***not reported, refused, unknown,*** **invalid and missing codes.**

Figure 9.1. County ranks (ascending order), by fatality rate per 1,000 involved in collisions, 2013

n = 777 fatalities **Median fatality county rate per 1,000 = 3.7** **Mean county fatality rate per 1,000 = 4.4**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Map 9.2. Traffic fatalities per 100k population by county, 2013



Sources:
Fatalities: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014
Population 2013 estimates: U.S. Census Bureau

Table 9.3. Indiana speed-related collisions, by severity and county, 2013

	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	**18,571**	**9.6**	**n/a**	**183**	**26.0**	**4,264**	**13.0**	**14,124**	**8.9**
Mean	202	9.7	n/a	2	23.7	46	14.9	154	8.6
Median	97	9	n/a	1	22	26	14	70	8
Minimum	5	4.1	n/a	0	0.0	0	0.0	3	2.7
Maximum	2,295	21.7	n/a	20	100.0	544	36.5	1,751	20.5
Adams	55	8.6	54	0	0.0	14	17.3	41	7.4
Allen	1,159	10.1	35	7	26.9	254	11.6	898	9.8
Bartholomew	129	6.2	76	0	0.0	36	7.0	93	6.0
Benton	13	9.1	50	0	0.0	4	12.9	9	8.1
Blackford	16	5.2	85	0	0.0	4	8.5	12	4.6
Boone	176	9.6	43	0	0.0	22	10.2	154	9.5
Brown	55	9.6	41	3	75.0	18	18.6	34	7.2
Carroll	75	14.3	10	3	37.5	19	25.7	53	12.0
Cass	133	11.8	22	1	20.0	28	16.6	104	10.9
Clark	325	7.6	65	3	37.5	85	12.3	237	6.6
Clay	52	6.6	72	3	50.0	16	13.8	33	4.9
Clinton	137	12.9	17	2	33.3	36	23.1	99	11.0
Crawford	30	11.2	27	2	50.0	8	15.7	20	9.4
Daviess	31	8.1	58	2	33.3	14	11.0	15	6.0
Dearborn	177	9.8	36	3	37.5	37	14.2	137	8.9
Decatur	100	11.8	23	2	33.3	19	14.4	79	11.1
DeKalb	168	13.0	16	2	33.3	35	20.5	131	11.7
Delaware	292	7.4	66	3	33.3	59	9.1	230	7.0
Dubois	119	8.1	57	2	25.0	38	16.5	79	6.4
Elkhart	1,056	15.2	8	10	50.0	178	18.2	868	14.6
Fayette	20	4.1	90	0	0.0	3	3.8	17	4.2
Floyd	156	6.4	75	3	75.0	38	8.9	115	5.7
Fountain	37	7.7	61	1	25.0	7	13.2	29	6.9
Franklin	71	14.5	9	3	75.0	16	19.5	52	12.9
Fulton	68	11.1	29	0	0.0	10	16.1	58	10.6
Gibson	101	9.0	52	0	0.0	26	14.6	75	7.9
Grant	241	10.8	31	3	33.3	38	11.6	200	10.6
Greene	80	9.3	45	1	20.0	22	20.0	57	7.6
Hamilton	373	5.3	84	2	15.4	74	7.2	297	5.0
Hancock	113	7.7	62	1	25.0	32	11.9	80	6.7
Harrison	113	9.3	44	3	21.4	30	15.3	80	8.0
Hendricks	359	9.7	37	1	11.1	73	12.1	285	9.2
Henry	93	9.0	53	1	12.5	26	12.2	66	8.1
Howard	172	7.6	63	3	37.5	46	10.5	123	6.8
Huntington	122	11.2	28	2	40.0	25	14.1	95	10.5
Jackson	123	7.2	68	0	0.0	41	14.8	82	5.7
Jasper	161	12.8	18	4	33.3	34	15.3	123	12.0
Jay	32	4.5	89	0	0.0	8	7.6	24	3.9
Jefferson	53	5.7	80	1	20.0	18	11.2	34	4.4
Jennings	59	7.3	67	0	0.0	16	9.9	43	6.7
Johnson	173	5.9	79	0	0.0	38	6.7	135	5.7
Knox	82	9.1	47	2	28.6	26	13.6	54	7.7
Kosciusko	202	8.2	56	1	16.7	45	12.9	156	7.4
LaGrange	191	20.2	3	2	25.0	27	27.0	162	19.4
Lake	2,295	14.3	11	20	50.0	524	19.5	1,751	13.2
LaPorte	427	12.8	19	4	25.0	88	13.9	335	12.4
Lawrence	75	5.3	83	0	0.0	29	11.6	46	4.0
Madison	228	6.2	77	1	11.1	47	8.2	180	5.8

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Table 9.3. *(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	2,226	7.7	60	13	18.8	544	10.5	1,669	7.1
Marshall	122	9.1	49	1	8.3	32	18.7	89	7.7
Martin	34	21.7	1	1	0.0	7	24.1	26	20.5
Miami	97	10.3	34	4	57.1	21	15.6	72	9.0
Monroe	392	9.6	39	0	0.0	90	11.5	302	9.2
Montgomery	91	9.1	51	0	0.0	26	14.6	65	7.9
Morgan	143	9.7	38	3	37.5	38	13.2	102	8.7
Newton	59	16.3	7	0	0.0	16	22.5	43	14.9
Noble	175	13.7	13	2	25.0	43	22.4	130	12.0
Ohio	8	6.0	78	1	0.0	4	21.1	3	2.7
Orange	50	7.6	64	2	0.0	15	14.6	33	6.0
Owen	53	9.6	40	1	20.0	10	9.9	42	9.4
Parke	72	13.5	14	0	0.0	17	24.3	55	12.0
Perry	35	8.5	55	1	33.3	13	16.5	21	6.4
Pike	40	21.1	2	0	0.0	18	30.5	22	16.9
Porter	669	13.9	12	4	28.6	155	16.3	510	13.2
Posey	103	17.8	5	3	50.0	27	36.5	73	14.7
Pulaski	41	9.6	42	1	50.0	12	21.1	28	7.6
Putnam	77	11.6	24	0	0.0	17	16.0	60	10.9
Randolph	23	4.5	88	0	0.0	6	7.8	17	3.9
Ripley	38	5.1	86	1	33.3	13	11.9	24	3.8
Rush	30	10.3	33	0	0.0	6	9.1	24	10.7
St. Joseph	875	11.9	21	6	35.3	181	12.9	688	11.6
Scott	37	5.6	81	1	11.1	9	6.2	27	5.4
Shelby	183	17.1	6	3	33.3	41	15.7	139	17.4
Spencer	40	6.7	71	0	0.0	16	16.0	24	4.9
Starke	34	5.5	82	1	50.0	9	11.8	24	4.5
Steuben	186	11.9	20	1	33.3	31	18.5	154	11.1
Sullivan	29	6.5	74	4	80.0	5	7.5	20	5.3
Switzerland	9	4.7	87	0	0.0	4	8.3	5	3.5
Tippecanoe	776	11.1	30	6	27.3	167	15.8	603	10.2
Tipton	58	18.2	4	1	50.0	15	19.5	42	17.6
Union	5	4.1	91	0	0.0	0	0.0	5	4.8
Vanderburgh	264	4.1	92	3	14.3	83	6.7	178	3.4
Vermillion	30	9.1	48	1	100.0	11	19.3	18	6.6
Vigo	212	6.6	73	3	27.3	52	8.7	157	6.0
Wabash	99	10.4	32	1	16.7	30	24.2	68	8.3
Warren	19	7.8	59	0	0.0	9	36.0	10	4.6
Warrick	85	6.7	70	0	0.0	23	13.5	62	5.7
Washington	49	7.1	69	1	10.0	18	16.2	30	5.3
Wayne	205	9.2	46	3	23.1	40	10.7	162	8.8
Wells	73	11.4	26	2	100.0	15	16.5	56	10.2
White	96	11.5	25	0	0.0	16	16.5	80	10.9
Whitley	111	13.0	15	1	33.3	28	21.4	82	11.4

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

Notes:
1) Percent calculations represent the percent of total county collisions (presented in Table 9.1) in each injury category that are *speed-related*.
2) *Non-fatal injury* collisions include collisions with *incapacitating, non-incapacitating,* and *possible* injuries.
3) Fatal *speed-related* county rank values may result in a tie due to the fact that a number of counties have the same value for *speed-related* fatal collisions as a percentage of total county fatal collisions.
4) See glossary for definition of *speed-related*.

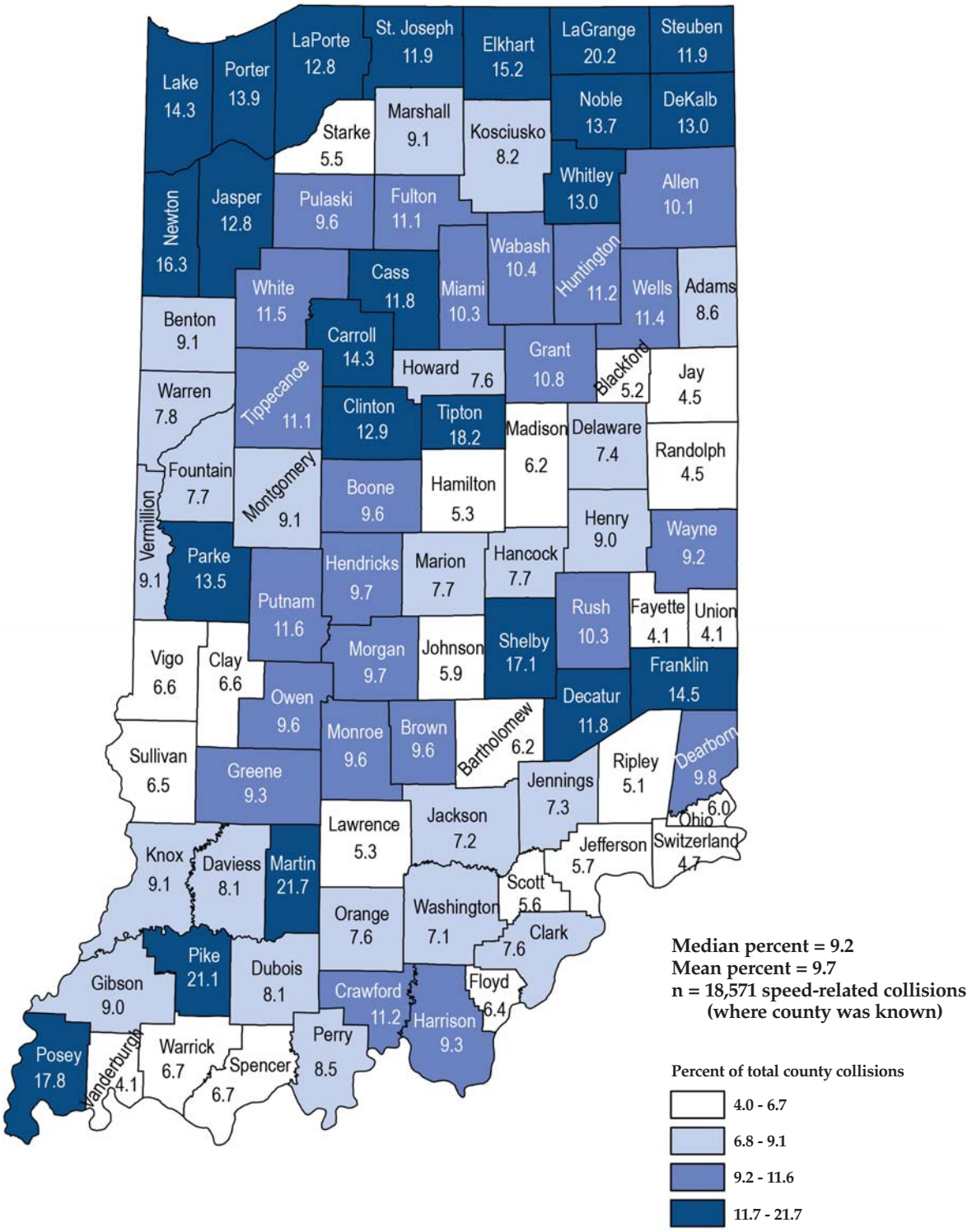
Figure 9.2. County ranks (ascending order), by percentage of speed-related collisions, 2013

n = 18,571 speed-related collisions Median county % speed-related collisions = 9.2% Mean county % speed-related collisions = 9.7%

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Note: See glossary for definition of *speed-related*.

Map 9.3. Percentage of county collisions that were speed-related, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Table 9.4. Indiana collisions involving an alcohol-impaired driver, by severity and county, 2013

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	**4,757**	**2.5**	**114**	**16.2**	**1,381**	**4.2**	**3,262**	**2.0**
Mean	52	2.7	1	15.3	15	4.8	35	2.2
Median	25	2.6	1	10	6	4	17	2
Minimum	3	1.0	0	0.0	0	0.0	2	0.6
Maximum	532	7.9	10	100.0	156	11.5	400	6.8
Adams	15	2.4	0	0.0	3	3.7	12	2.2
Allen	353	3.1	5	19.2	124	5.7	224	2.4
Bartholomew	43	2.1	1	20.0	15	2.9	27	1.7
Benton	5	3.5	0	0.0	2	6.5	3	2.7
Blackford	3	1.0	0	0.0	1	2.1	2	0.8
Boone	38	2.1	0	0.0	6	2.8	32	2.0
Brown	20	3.5	2	50.0	6	6.2	12	2.5
Carroll	8	1.5	1	12.5	2	2.7	5	1.1
Cass	22	2.0	0	0.0	5	3.0	17	1.8
Clark	94	2.2	4	50.0	24	3.5	66	1.8
Clay	23	2.9	1	16.7	4	3.4	18	2.7
Clinton	32	3.0	1	16.7	6	3.8	25	2.8
Crawford	9	3.4	1	25.0	4	7.8	4	1.9
Daviess	30	7.9	0	0.0	13	10.2	17	6.8
Dearborn	61	3.4	0	0.0	14	5.4	47	3.1
Decatur	22	2.6	0	0.0	6	4.5	16	2.3
DeKalb	34	2.6	1	16.7	13	7.6	20	1.8
Delaware	74	1.9	1	11.1	19	2.9	54	1.6
Dubois	35	2.4	2	25.0	13	5.7	20	1.6
Elkhart	162	2.3	2	10.0	53	5.4	107	1.8
Fayette	19	3.9	0	0.0	4	5.1	15	3.7
Floyd	51	2.1	2	50.0	13	3.0	36	1.8
Fountain	12	2.5	0	0.0	3	5.7	9	2.1
Franklin	21	4.3	2	50.0	5	6.1	14	3.5
Fulton	6	1.0	0	0.0	1	1.6	5	0.9
Gibson	31	2.7	0	0.0	11	6.2	20	2.1
Grant	29	1.3	0	0.0	9	2.7	20	1.1
Greene	20	2.3	2	40.0	6	5.5	12	1.6
Hamilton	180	2.6	3	23.1	44	4.3	133	2.2
Hancock	54	3.7	0	0.0	12	4.5	42	3.5
Harrison	24	2.0	1	7.1	6	3.1	17	1.7
Hendricks	86	2.3	3	33.3	30	5.0	53	1.7
Henry	30	2.9	0	0.0	13	6.1	17	2.1
Howard	79	3.5	2	25.0	25	5.7	52	2.9
Huntington	26	2.4	0	0.0	7	4.0	19	2.1
Jackson	30	1.8	2	28.6	4	1.4	24	1.7
Jasper	36	2.9	4	33.3	17	7.7	15	1.5
Jay	21	2.9	1	20.0	2	1.9	18	3.0
Jefferson	28	3.0	0	0.0	5	3.1	23	3.0
Jennings	12	1.5	1	11.1	7	4.3	4	0.6
Johnson	79	2.7	4	33.3	23	4.0	52	2.2
Knox	40	4.5	1	14.3	22	11.5	17	2.4
Kosciusko	55	2.2	1	16.7	16	4.6	38	1.8
LaGrange	20	2.1	0	0.0	3	3.0	17	2.0
Lake	435	2.7	10	25.0	156	5.8	269	2.0
LaPorte	117	3.5	6	37.5	24	3.8	87	3.2
Lawrence	27	1.9	0	0.0	11	4.4	16	1.4
Madison	81	2.2	0	0.0	17	3.0	64	2.0

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Table 9.4. *(continued)*

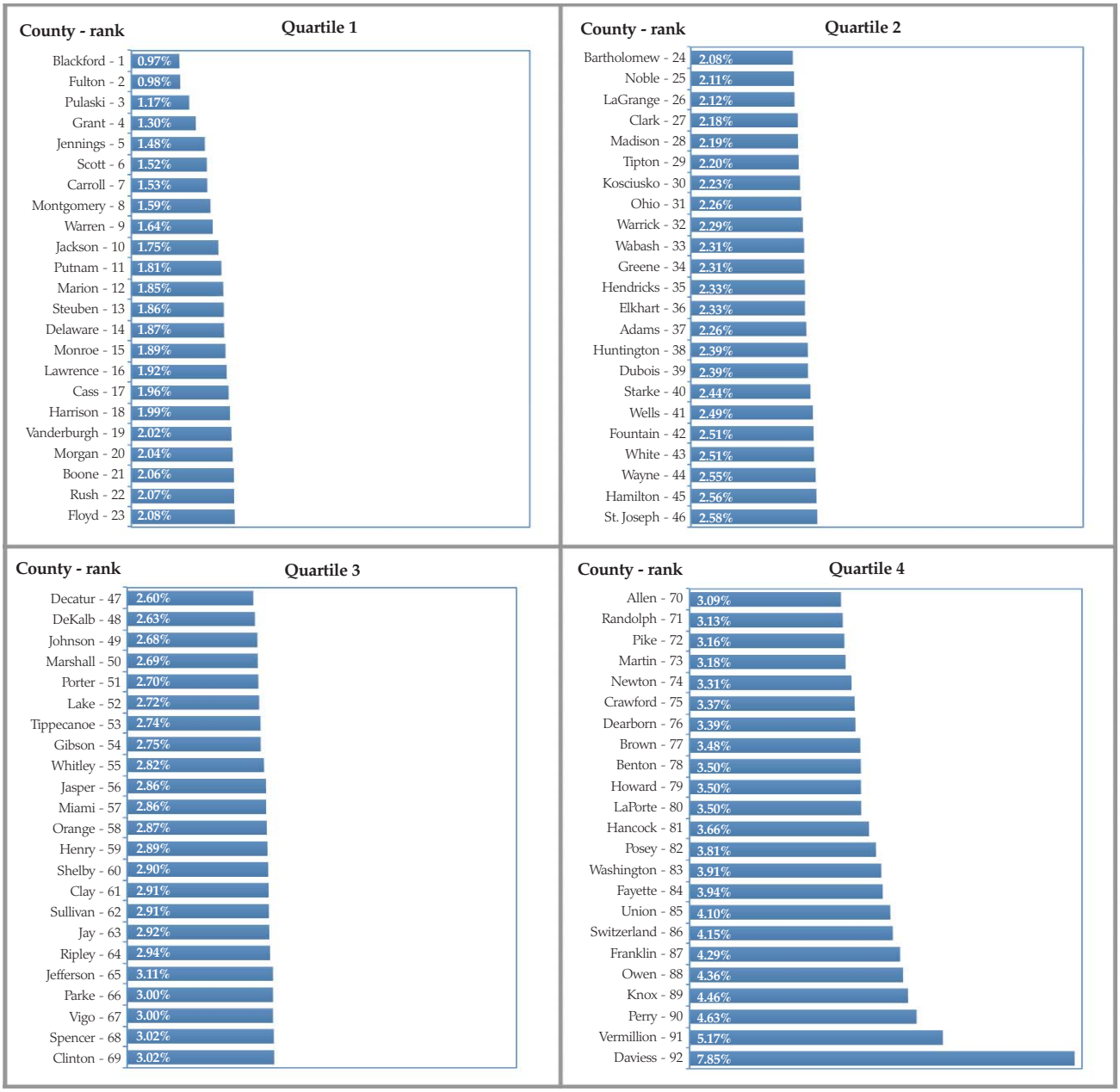
County	Total		Fatal		Non-fatal injury		Property damage	
	Count	Alcohol-impaired as % of total collisions	Count	Alcohol-impaired as % of total fatal collisions	Count	Alcohol-impaired as % of total non-fatal injury collisions	Count	Alcohol-impaired as % of total property damage collisions
Marion	532	1.9	10	14.5	122	2.4	400	1.7
Marshall	36	2.7	0	0.0	17	9.9	19	1.6
Martin	5	3.2	0	0.0	2	6.9	3	2.4
Miami	27	2.9	0	0.0	5	3.7	22	2.7
Monroe	77	1.9	2	40.0	16	2.0	59	1.8
Montgomery	16	1.6	0	0.0	5	2.8	11	1.3
Morgan	30	2.0	2	25.0	8	2.8	20	1.7
Newton	12	3.3	0	0.0	5	7.0	7	2.4
Noble	27	2.1	0	0.0	5	2.6	22	2.0
Ohio	3	2.3	0	0.0	0	0.0	3	2.7
Orange	19	2.9	3	60.0	6	5.8	10	1.8
Owen	24	4.4	1	20.0	8	7.9	15	3.4
Parke	16	3.0	1	20.0	4	5.7	11	2.4
Perry	19	4.6	0	0.0	7	8.9	12	3.7
Pike	6	3.2	0	0.0	4	6.8	2	1.5
Porter	130	2.7	3	21.4	41	4.3	86	2.2
Posey	22	3.8	2	33.3	2	2.7	18	3.6
Pulaski	5	1.2	0	0.0	2	3.5	3	0.8
Putnam	12	1.8	0	0.0	4	3.8	8	1.5
Randolph	16	3.1	0	0.0	6	7.8	10	2.3
Ripley	22	2.9	0	0.0	4	3.7	18	2.8
Rush	6	2.1	0	0.0	4	6.1	2	0.9
St. Joseph	190	2.6	6	35.3	52	3.7	132	2.2
Scott	10	1.5	1	11.1	4	2.7	5	1.0
Shelby	31	2.9	0	0.0	12	4.6	19	2.4
Spencer	18	3.0	0	0.0	6	6.0	12	2.4
Starke	15	2.4	1	50.0	2	2.6	12	2.2
Steuben	29	1.9	0	0.0	16	9.5	13	0.9
Sullivan	13	2.9	2	40.0	4	6.0	7	1.9
Switzerland	8	4.1	0	0.0	2	4.2	6	4.2
Tippecanoe	192	2.7	2	9.1	49	4.6	141	2.4
Tipton	7	2.2	1	50.0	2	2.6	4	1.7
Union	5	4.1	0	0.0	1	6.3	4	3.8
Vanderburgh	131	2.0	3	14.3	34	2.8	94	1.8
Vermillion	17	5.2	1	100.0	6	10.5	10	3.7
Vigo	97	3.0	3	27.3	27	4.5	67	2.6
Wabash	22	2.3	0	0.0	4	3.2	18	2.2
Warren	4	1.6	0	0.0	1	4.0	3	1.4
Warrick	29	2.3	1	33.3	6	3.5	22	2.0
Washington	27	3.9	0	0.0	10	9.0	17	3.0
Wayne	57	2.5	0	0.0	16	4.3	41	2.2
Wells	16	2.5	1	50.0	7	7.7	8	1.5
White	21	2.5	0	0.0	4	4.1	17	2.3
Whitley	24	2.8	1	33.3	10	7.6	13	1.8

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Notes:
1) Percent calculations represent the percent of total county collisions (presented in Table 9.1) 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) See glossary for definition of *alcohol-impaired*.

Figure 9.3. County ranks (ascending order), by percentage of alcohol-impaired collisions, 2013

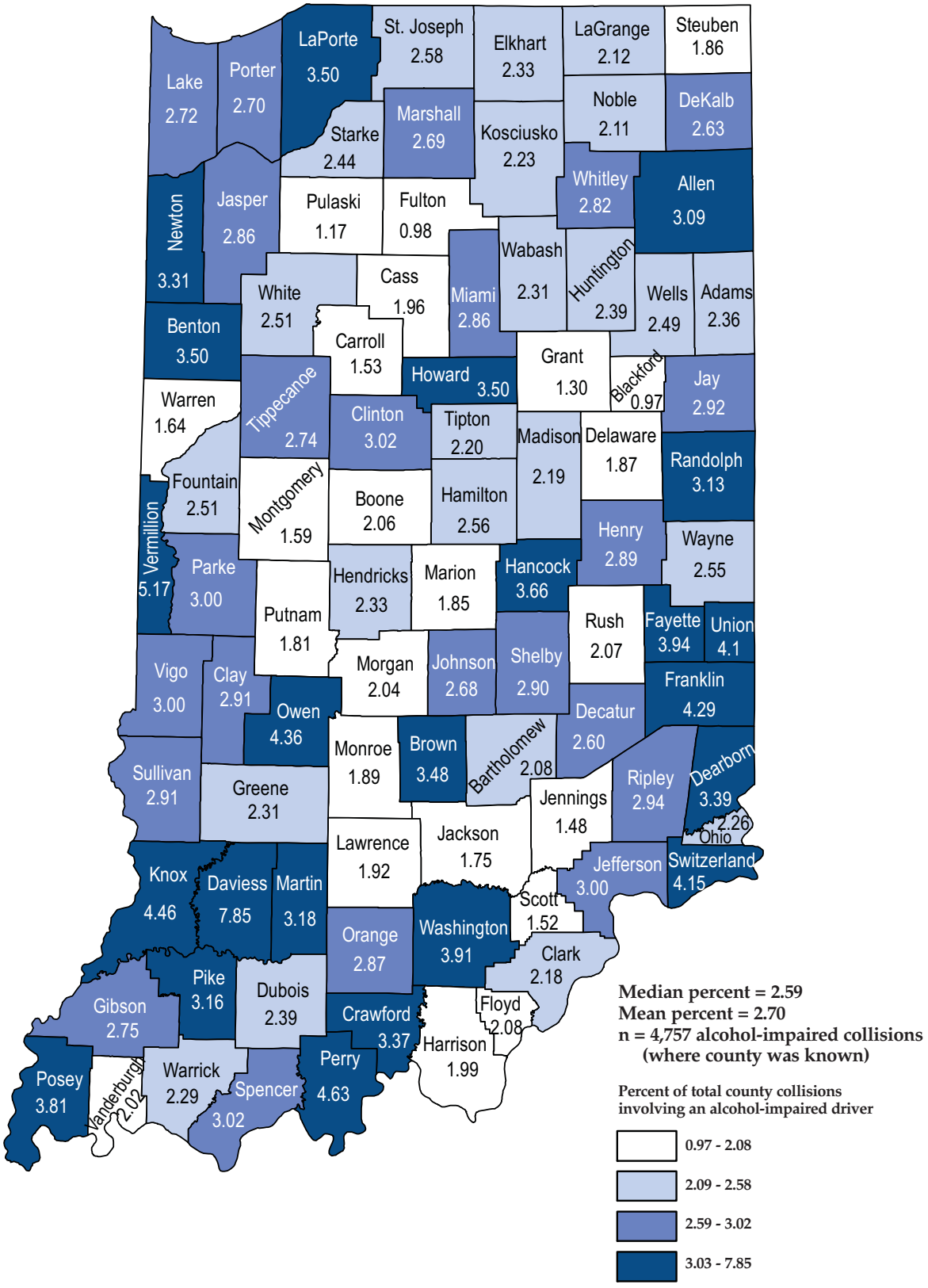
n = 4,757 Alcohol-impaired collisions **Median county % speed-related collisions = 2.6%** **Mean county % alcohol-impaired collisions = 2.7%**



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Note: See glossary for definition of *alcohol-impaired*.

Map 9.4. Percentage of county collisions that involved an alcohol-impaired driver, 2013



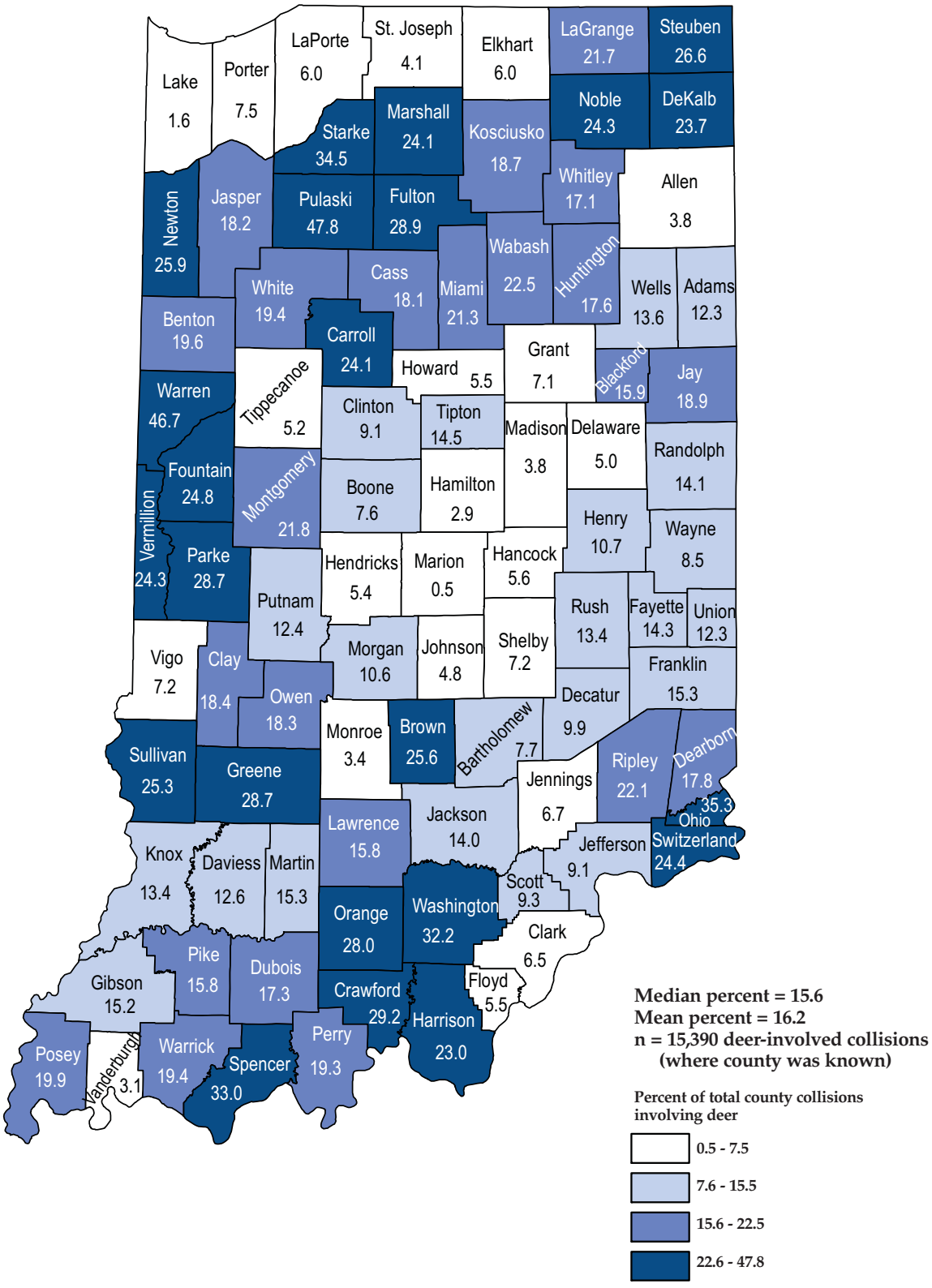
Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Figure 9.4. County ranks (ascending order), by percentage of collisions that involved a deer, 2013

n = 15,390 collisions that involved a deer **Median county % deer-involved collisions = 15.6%** **Mean county % deer-involved collisions = 16.2%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

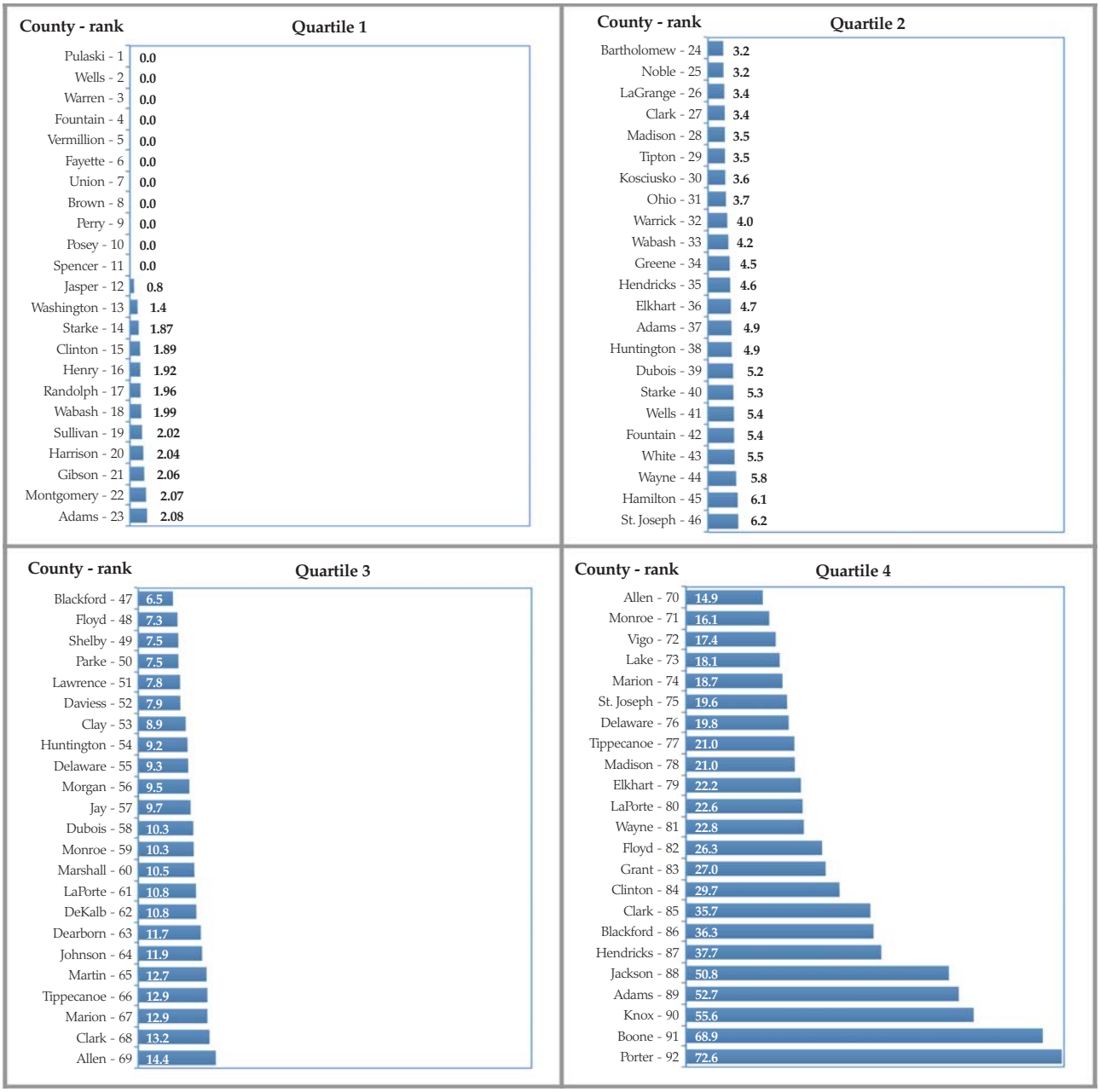
Map 9.5. Percentage of county collisions that involved deer, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

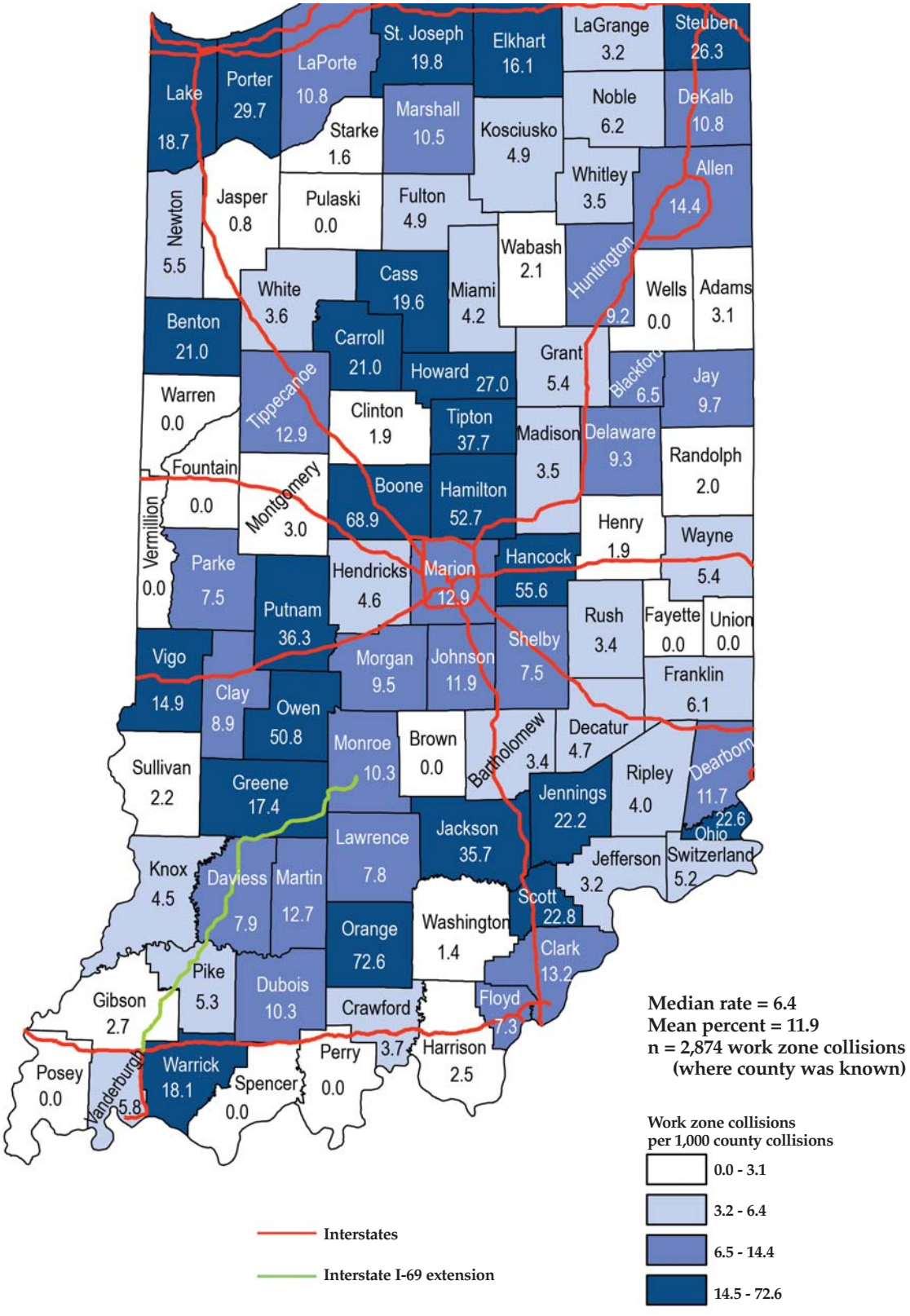
Figure 9.5. County ranks (ascending order), by work zone collision rate per 1,000 total collisions, 2013

n = 2,874 work zone collisions **Median county rate per 1,000 = 6.4** **Mean county rate per 1,000 = 11.9**



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Map 9.6. Work zone collisions per 1,000 total county collisions, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Table 9.5. Vehicle occupants injured in Indiana collisions, by injury status, restraint use, and county, 2013

	Fatal			Incapacitating			Non-incapacitating		
	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained
All counties	**691**	**384**	**55.6**	**3,154**	**1,157**	**36.7**	**39,914**	**6,166**	**15.4**
Mean	8	4	54.6	34	13	42.1	434	67	20.5
Median	6	3	54	19	8	40	190	40	19
Minimum	0	0	na	1	1	12.3	14	2	7.6
Maximum	55	43	100.0	318	121	100.0	6,157	971	41.2
Adams	1	1	100.0	11	4	36.4	109	34	31.2
Allen	24	12	50.0	123	45	36.6	2,689	379	14.1
Bartholomew	6	4	66.7	31	14	45.2	657	73	11.1
Benton	1	0	0.0	3	3	100.0	41	11	26.8
Blackford	1	1	100.0	8	3	37.5	53	10	18.9
Boone	6	2	33.3	22	11	50.0	254	30	11.8
Brown	4	3	75.0	15	7	46.7	99	22	22.2
Carroll	9	7	77.8	3	1	33.3	88	19	21.6
Cass	5	2	40.0	13	8	61.5	208	37	17.8
Clark	8	5	62.5	58	25	43.1	915	125	13.7
Clay	9	7	77.8	13	6	46.2	149	46	30.9
Clinton	7	6	85.7	24	13	54.2	197	37	18.8
Crawford	4	2	50.0	12	8	66.7	64	25	39.1
Daviess	6	2	33.3	12	6	50.0	166	41	24.7
Dearborn	8	4	50.0	39	12	30.8	315	67	21.3
Decatur	6	4	66.7	24	8	33.3	158	25	15.8
DeKalb	7	4	57.1	23	10	43.5	206	31	15.0
Delaware	11	7	63.6	77	29	37.7	783	81	10.3
Dubois	10	6	60.0	30	9	30.0	298	45	15.1
Elkhart	16	8	50.0	104	33	31.7	1,151	134	11.6
Fayette	2	1	0.0	4	1	25.0	92	14	15.2
Floyd	4	2	50.0	33	6	18.2	513	58	11.3
Fountain	3	2	66.7	12	8	66.7	64	20	31.3
Franklin	4	4	100.0	15	8	53.3	88	29	33.0
Fulton	2	2	100.0	4	1	25.0	69	21	30.4
Gibson	2	1	50.0	30	11	36.7	202	46	22.8
Grant	6	2	33.3	42	17	40.5	406	105	25.9
Greene	5	3	60.0	15	10	66.7	127	34	26.8
Hamilton	13	8	61.5	110	29	26.4	1,226	93	7.6
Hancock	5	2	40.0	40	10	25.0	327	51	15.6
Harrison	16	7	43.8	35	12	34.3	252	41	16.3
Hendricks	10	3	30.0	75	32	42.7	719	136	18.9
Henry	9	2	22.2	42	12	28.6	290	45	15.5
Howard	7	5	71.4	41	12	29.3	523	106	20.3
Huntington	4	0	0.0	18	5	27.8	232	32	13.8
Jackson	6	4	66.7	29	14	48.3	328	75	22.9
Jasper	18	14	77.8	23	14	60.9	285	51	17.9
Jay	5	2	40.0	15	9	60.0	130	30	23.1
Jefferson	5	4	80.0	15	9	60.0	208	60	28.8
Jennings	7	4	57.1	23	9	39.1	199	41	20.6
Johnson	7	6	85.7	59	17	28.8	714	95	13.3
Knox	6	4	66.7	18	6	33.3	222	63	28.4
Kosciusko	7	4	57.1	26	11	42.3	495	115	23.2
LaGrange	9	3	33.3	11	6	54.5	104	24	23.1
Lake	39	19	48.7	190	68	35.8	3,334	346	10.4
LaPorte	18	7	38.9	67	21	31.3	785	92	11.7
Lawrence	9	4	44.4	28	9	32.1	309	63	20.4
Madison	9	4	44.4	85	24	28.2	673	119	17.7

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Table 9.5. *(continued)*

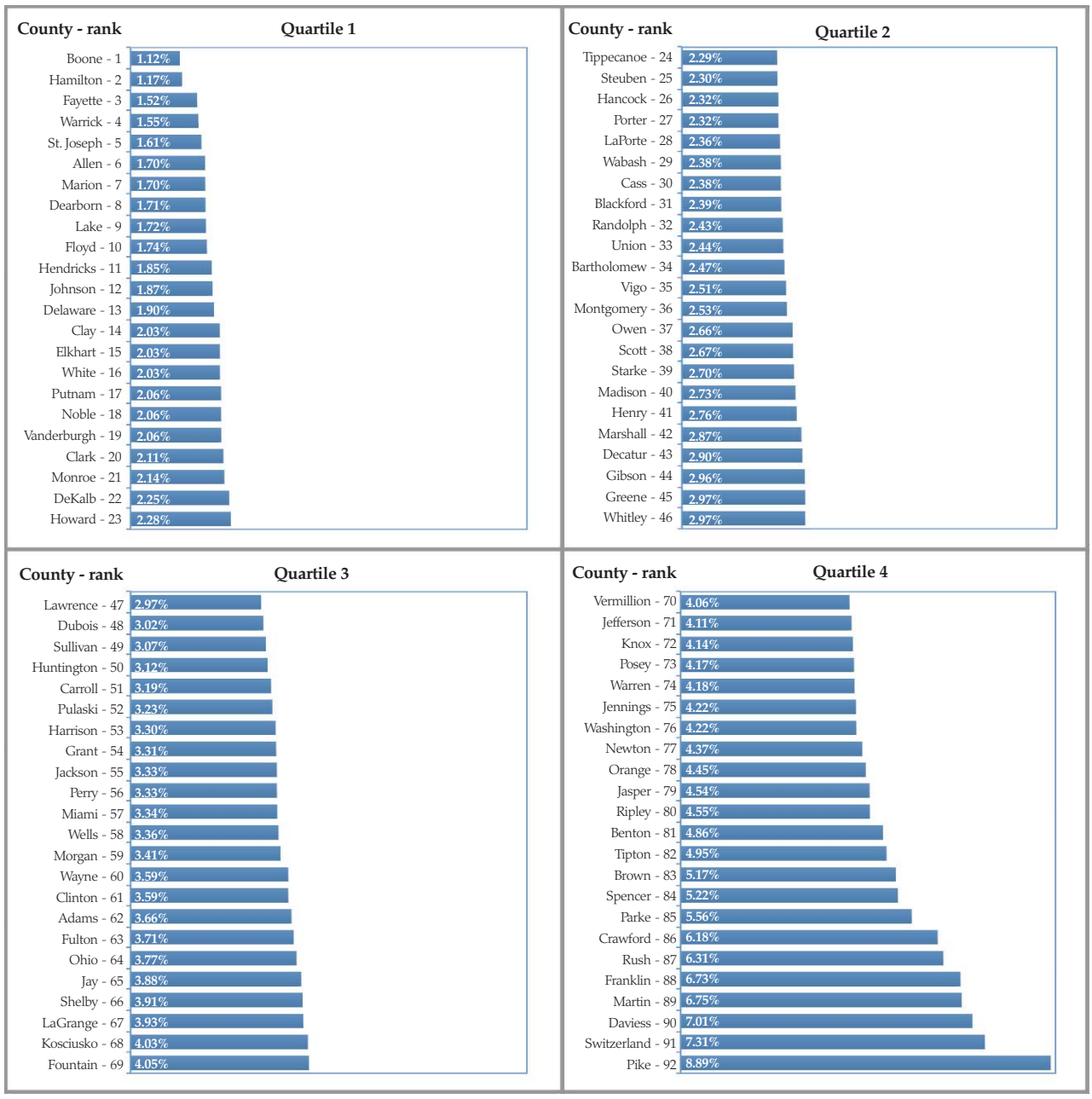
	Fatal			Incapacitating			Non-incapacitating		
	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained
Marion	55	43	78.2	318	121	38.1	6,157	971	15.8
Marshall	11	5	45.5	15	9	60.0	235	58	24.7
Martin	1	1	n/a	1	1	100.0	36	12	33.3
Miami	8	4	50.0	14	7	50.0	169	30	17.8
Monroe	4	1	25.0	82	22	26.8	853	135	15.8
Montgomery	5	2	40.0	21	4	19.0	208	40	19.2
Morgan	7	4	57.1	35	14	40.0	394	73	18.5
Newton	3	1	33.3	11	3	27.3	75	17	22.7
Noble	9	6	66.7	36	16	44.4	223	40	17.9
Ohio	1	1	100.0	2	1	50.0	23	4	17.4
Orange	5	4	n/a	20	12	60.0	114	47	41.2
Owen	5	3	60.0	12	6	50.0	127	51	40.2
Parke	5	3	60.0	26	15	57.7	73	28	38.4
Perry	2	2	100.0	11	3	27.3	88	17	19.3
Pike	1	0	0.0	7	4	57.1	63	19	30.2
Porter	14	8	57.1	86	19	22.1	1,209	144	11.9
Posey	6	5	83.3	16	10	62.5	84	20	23.8
Pulaski	2	1	50.0	15	6	40.0	57	11	19.3
Putnam	6	2	33.3	10	5	50.0	137	37	27.0
Randolph	2	1	50.0	15	4	26.7	102	13	12.7
Ripley	4	0	0.0	17	4	23.5	134	50	37.3
Rush	0	0	na	17	7	41.2	75	15	20.0
St. Joseph	17	9	52.9	97	25	25.8	1,663	162	9.7
Scott	7	4	57.1	32	9	28.1	189	42	22.2
Shelby	10	4	40.0	28	8	28.6	320	57	17.8
Spencer	5	4	80.0	10	4	40.0	142	43	30.3
Starke	2	1	50.0	5	3	60.0	99	11	11.1
Steuben	3	1	33.3	18	6	33.3	190	35	18.4
Sullivan	5	3	60.0	10	3	30.0	89	20	22.5
Switzerland	1	1	100.0	11	3	27.3	48	16	33.3
Tippecanoe	18	10	55.6	61	20	32.8	1,233	180	14.6
Tipton	3	2	66.7	8	4	50.0	89	11	12.4
Union	1	1	100.0	5	2	40.0	14	2	14.3
Vanderburgh	19	10	52.6	84	41	48.8	1,587	163	10.3
Vermillion	2	0	0.0	12	6	50.0	69	17	24.6
Vigo	13	9	69.2	66	28	42.4	710	77	10.8
Wabash	6	0	0.0	31	8	25.8	139	36	25.9
Warren	1	1	100.0	3	2	66.7	26	8	30.8
Warrick	3	0	0.0	57	7	12.3	173	19	11.0
Washington	12	5	41.7	10	3	30.0	140	26	18.6
Wayne	13	7	53.8	34	19	55.9	457	61	13.3
Wells	2	1	50.0	6	4	66.7	119	28	23.5
White	3	1	33.3	13	8	61.5	116	21	18.1
Whitley	3	3	100.0	16	5	31.3	150	22	14.7

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

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

Figure 9.6. County ranks (ascending order), by percentage of unrestrained vehicle occupants in collisions, 2013

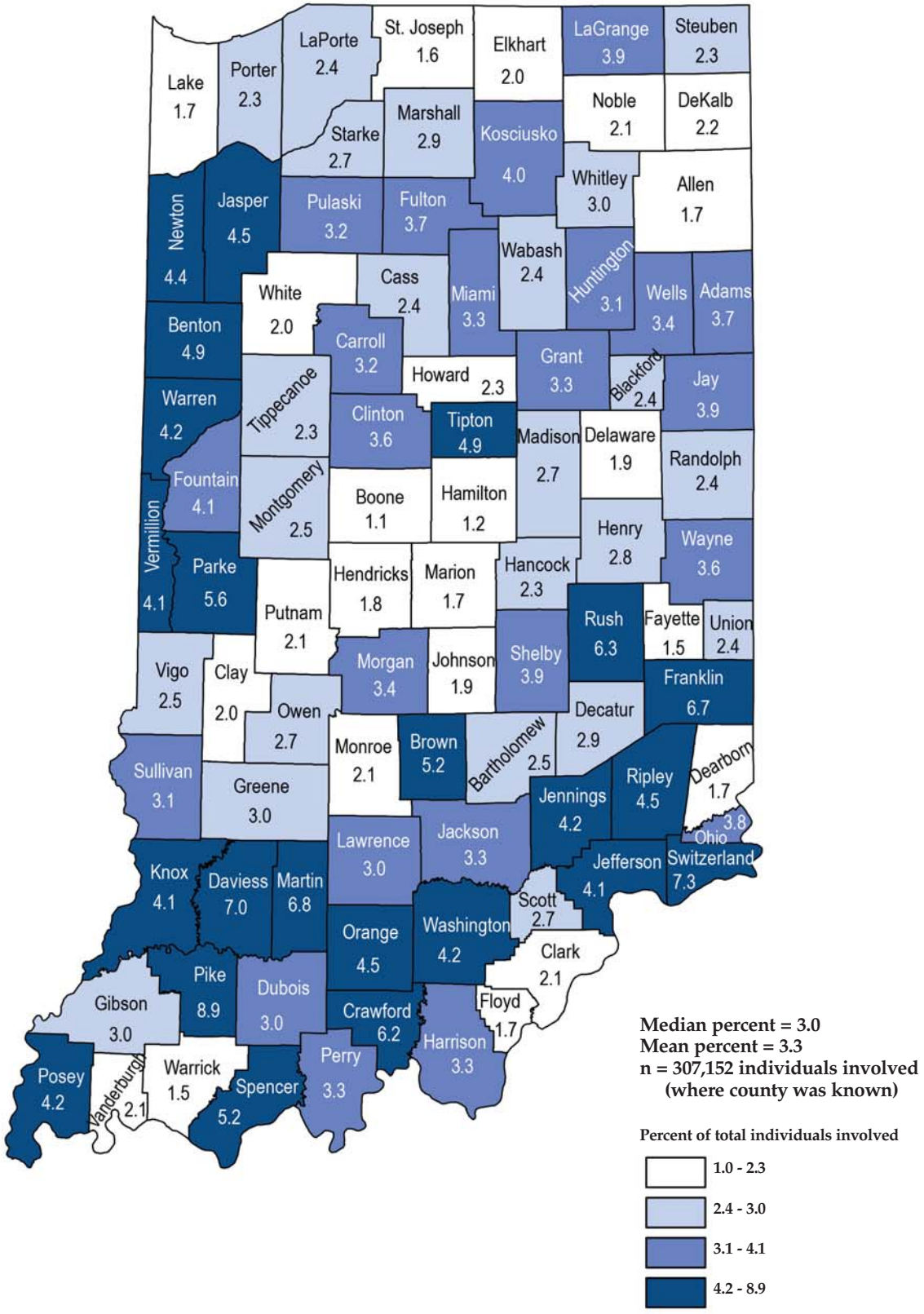
n = 307,152 vehicle occupants in collisions Median county % unrestrained vehicle occupants = 3.0% Mean county % unrestrained vehicle occupants = 3.3%



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Note: Includes only vehicle occupants (*drivers* and *injured passengers*). *Pedestrians, pedalcyclists,* and *animal-drawn vehicle operators* are excluded.

Map 9.7. Percentage of individuals involved in collisions, by county where victim was not properly restrained, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Table 9.6. Young drivers (ages 15-20) involved in Indiana collisions, by injury severity and county, 2013

County	All drivers in collsions	Young drivers in collisions		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	**294,939**	**39,795**	**13.5**	**44**	**0.1**	**258**	**0.6**	**3,922**	**9.9**	**35,571**	**89.4**
Mean	3,206	433	15.1	0	0.2	3	1.0	43	12.0	387	86.9
Median	1,287	206	14.8	0	0.0	2	0.7	23	11.4	178	87.4
Minimum	155	25	10.1	0	0.0	0	0.0	2	4.3	13	52.0
Maximum	48,274	4,893	20.3	5	2.6	21	3.5	439	48.0	4,431	95.7
Adams	832	135	16.2	0	0.0	0	0.0	18	13.3	117	86.7
Allen	17,599	2,602	14.8	0	0.0	7	0.3	267	10.3	2,328	89.5
Bartholomew	3,292	481	14.6	0	0.0	2	0.4	63	13.1	416	86.5
Benton	169	34	20.1	0	0.0	0	0.0	4	11.8	30	88.2
Blackford	399	58	14.5	0	0.0	1	1.7	12	20.7	45	77.6
Boone	2,778	382	13.8	1	0.3	3	0.8	27	7.1	351	91.9
Brown	712	97	13.6	0	0.0	3	3.1	13	13.4	81	83.5
Carroll	666	105	15.8	1	1.0	0	0.0	14	13.3	90	85.7
Cass	1,569	212	13.5	0	0.0	1	0.5	30	14.2	181	85.4
Clark	6,751	801	11.9	0	0.0	3	0.4	83	10.4	715	89.3
Clay	1,121	140	12.5	0	0.0	0	0.0	18	12.9	122	87.1
Clinton	1,438	211	14.7	0	0.0	4	1.9	23	10.9	184	87.2
Crawford	313	57	18.2	0	0.0	2	3.5	8	14.0	47	82.5
Daviess	536	108	20.1	2	1.9	2	1.9	27	25.0	77	71.3
Dearborn	2,538	373	14.7	0	0.0	4	1.1	43	11.5	326	87.4
Decatur	1,200	186	15.5	1	0.5	1	0.5	18	9.7	166	89.2
DeKalb	1,755	257	14.6	0	0.0	3	1.2	17	6.6	237	92.2
Delaware	6,066	887	14.6	0	0.0	4	0.5	84	9.5	799	90.1
Dubois	2,028	338	16.7	2	0.6	4	1.2	41	12.1	291	86.1
Elkhart	10,390	1,445	13.9	1	0.1	5	0.3	107	7.4	1,332	92.2
Fayette	705	94	13.3	1	1.1	0	0.0	8	8.5	85	90.4
Floyd	3,893	578	14.8	0	0.0	2	0.3	55	9.5	521	90.1
Fountain	589	87	14.8	0	0.0	1	1.1	7	8.0	79	90.8
Franklin	642	130	20.3	0	0.0	2	1.5	16	12.3	112	86.2
Fulton	795	94	11.8	0	0.0	0	0.0	4	4.3	90	95.7
Gibson	1,603	232	14.5	0	0.0	2	0.9	25	10.8	205	88.4
Grant	3,277	444	13.5	1	0.2	4	0.9	35	7.9	404	91.0
Greene	1,115	165	14.8	1	0.6	2	1.2	21	12.7	141	85.5
Hamilton	12,196	1,672	13.7	0	0.0	8	0.5	114	6.8	1,550	92.7
Hancock	2,357	348	14.8	0	0.0	3	0.9	36	10.3	309	88.8
Harrison	1,637	270	16.5	1	0.4	3	1.1	34	12.6	232	85.9
Hendricks	6,053	941	15.5	0	0.0	6	0.6	70	7.4	865	91.9
Henry	1,476	216	14.6	0	0.0	2	0.9	38	17.6	176	81.5
Howard	3,770	513	13.6	1	0.2	5	1.0	63	12.3	444	86.5
Huntington	1,455	218	15.0	0	0.0	1	0.5	37	17.0	180	82.6
Jackson	2,384	335	14.1	0	0.0	2	0.6	36	10.7	297	88.7
Jasper	1,653	232	14.0	0	0.0	1	0.4	40	17.2	191	82.3
Jay	911	149	16.4	1	0.7	3	2.0	12	8.1	133	89.3
Jefferson	1,370	194	14.2	1	0.5	3	1.5	24	12.4	166	85.6
Jennings	1,192	230	19.3	0	0.0	3	1.3	26	11.3	201	87.4
Johnson	4,983	774	15.5	1	0.1	5	0.6	71	9.2	697	90.1
Knox	1,276	231	18.1	0	0.0	1	0.4	26	11.3	204	88.3
Kosciusko	3,525	546	15.5	0	0.0	2	0.4	45	8.2	499	91.4
LaGrange	1,186	206	17.4	0	0.0	3	1.5	12	5.8	191	92.7
Lake	25,458	2,840	11.2	5	0.2	13	0.5	232	8.2	2,590	91.2
LaPorte	4,829	601	12.4	2	0.3	4	0.7	69	11.5	526	87.5
Lawrence	1,965	307	15.6	0	0.0	5	1.6	33	10.7	269	87.6
Madison	5,515	729	13.2	1	0.1	4	0.5	79	10.8	645	88.5

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Table 9.6. *(continued)*

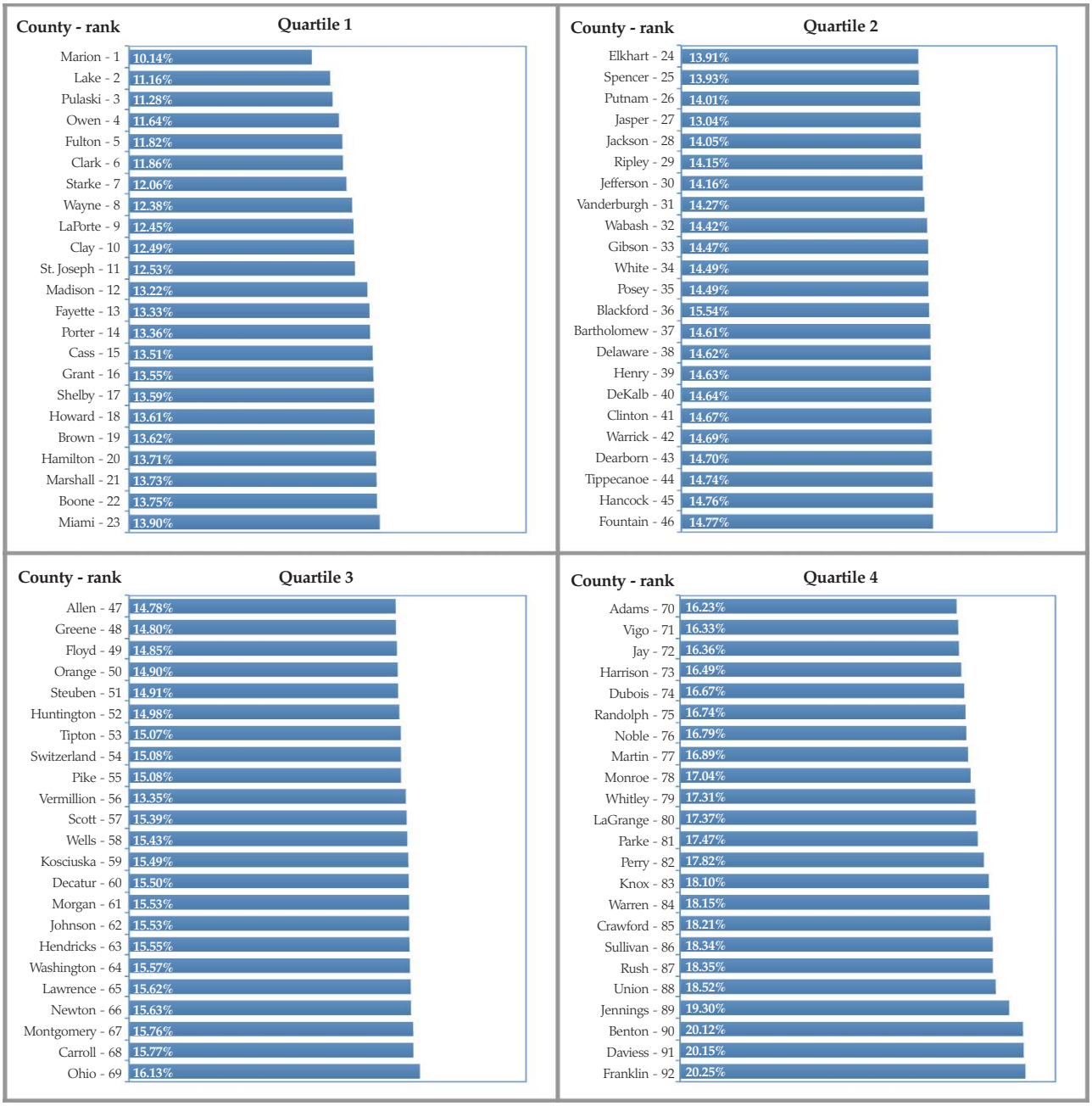
County	All drivers in collsions	Young drivers in collisions		Fatal		Incapacitating		Non-incapacitating		Other/no injury	
		Count	As % of total drivers in collisions	Count	As % of all young drivers in collisions	Count	As % of all young drivers in collisions	Count	As % of all young drivers in collisions	Count	As % of all young drivers in collisions
Marion	48,274	4,893	10.1	2	0.0	21	0.4	439	9.0	4,431	90.6
Marshall	1,806	248	13.7	0	0.0	1	0.4	22	8.9	225	90.7
Martin	225	38	16.9	1	2.6	0	0.0	9	23.7	28	73.7
Miami	1,237	172	13.9	0	0.0	3	1.7	21	12.2	148	86.0
Monroe	6,138	1,046	17.0	0	0.0	8	0.8	102	9.8	936	89.5
Montgomery	1,383	218	15.8	0	0.0	3	1.4	22	10.1	193	88.5
Morgan	2,267	352	15.5	0	0.0	3	0.9	37	10.5	312	88.6
Newton	435	68	15.6	0	0.0	2	2.9	8	11.8	58	85.3
Noble	1,668	280	16.8	1	0.4	6	2.1	29	10.4	244	87.1
Ohio	155	25	16.1	0	0.0	0	0.0	12	48.0	13	52.0
Orange	832	124	14.9	0	0.0	3	2.4	17	13.7	104	83.9
Owen	756	88	11.6	0	0.0	0	0.0	11	12.5	77	87.5
Parke	647	113	17.5	1	0.9	3	2.7	13	11.5	96	85.0
Perry	578	103	17.8	1	1.0	1	1.0	14	13.6	87	84.5
Pike	252	38	15.1	0	0.0	1	2.6	5	13.2	32	84.2
Porter	7,457	996	13.4	1	0.1	4	0.4	130	13.1	861	86.4
Posey	766	111	14.5	1	0.9	3	2.7	8	7.2	99	89.2
Pulaski	514	58	11.3	1	1.7	2	3.4	9	15.5	46	79.3
Putnam	935	131	14.0	0	0.0	1	0.8	16	12.2	114	87.0
Randolph	699	117	16.7	0	0.0	3	2.6	16	13.7	98	83.8
Ripley	961	136	14.2	1	0.7	1	0.7	17	12.5	117	86.0
Rush	387	71	18.3	0	0.0	0	0.0	9	12.7	62	87.3
St. Joseph	11,401	1,428	12.5	0	0.0	5	0.4	127	8.9	1,294	90.6
Scott	1,046	161	15.4	0	0.0	0	0.0	23	14.3	138	85.7
Shelby	1,509	205	13.6	0	0.0	1	0.5	34	16.6	170	82.9
Spencer	768	107	13.9	1	0.9	1	0.9	23	21.5	82	76.6
Starke	788	95	12.1	2	2.1	0	0.0	10	10.5	85	89.5
Steuben	1,978	295	14.9	0	0.0	1	0.3	19	6.4	275	93.2
Sullivan	589	108	18.3	0	0.0	0	0.0	14	13.0	94	87.0
Switzerland	252	38	15.1	0	0.0	1	2.6	6	15.8	31	81.6
Tippecanoe	10,478	1,544	14.7	1	0.1	10	0.6	119	7.7	1,414	91.6
Tipton	438	66	15.1	0	0.0	0	0.0	11	16.7	55	83.3
Union	162	30	18.5	0	0.0	0	0.0	2	6.7	28	93.3
Vanderburgh	11,243	1,604	14.3	3	0.2	7	0.4	147	9.2	1,447	90.2
Vermillion	417	64	15.3	0	0.0	0	0.0	9	14.1	55	85.9
Vigo	4,894	799	16.3	1	0.1	3	0.4	59	7.4	736	92.1
Wabash	1,297	187	14.4	1	0.5	5	2.7	13	7.0	168	89.8
Warren	281	51	18.1	0	0.0	0	0.0	5	9.8	46	90.2
Warrick	1,818	267	14.7	0	0.0	7	2.6	25	9.4	235	88.0
Washington	925	144	15.6	1	0.7	0	0.0	21	14.6	122	84.7
Wayne	3,127	387	12.4	0	0.0	2	0.5	55	14.2	330	85.3
Wells	888	137	15.4	0	0.0	2	1.5	19	13.9	116	84.7
White	1,139	165	14.5	0	0.0	3	1.8	10	6.1	152	92.1
Whitley	1,167	202	17.3	0	0.0	2	1.0	20	9.9	180	89.1

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Notes:
1) ***Non-fatal*** **injury includes** ***incapacitating, non-incapacitating*** **and** ***possible*** **injuries.**
2) ***Other injury*** **includes** ***refused, unknown*****, invalid, and** ***uninjured*** **injury statuses.**

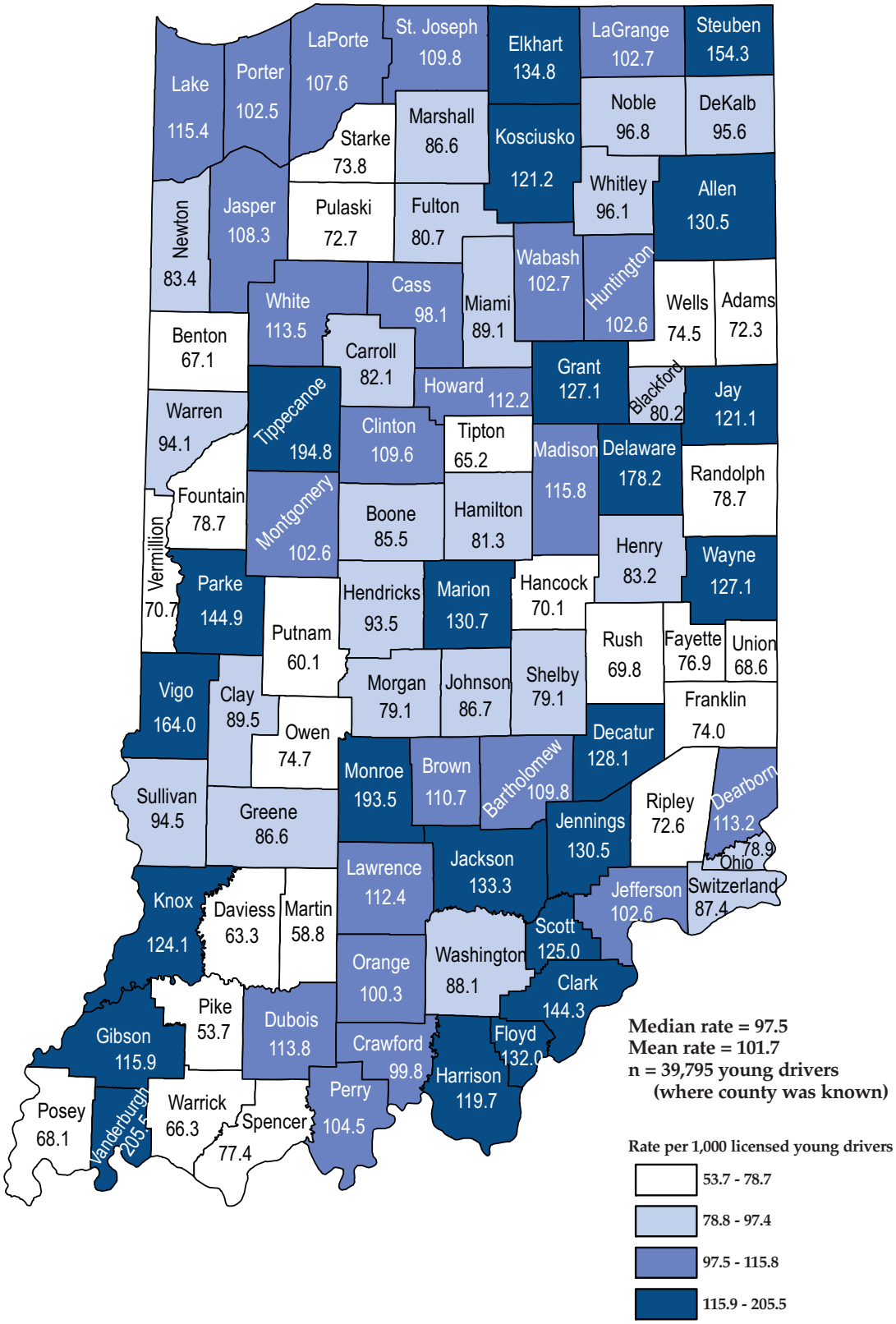
Figure 9.7. County ranks (ascending order), by young drivers as percentage of all drivers in collisions, 2013

n = 39,795 young drivers in collisions **Median county % young drivers in collisions = 14.8%** **Mean county % young drivers in collisions = 15.1%**



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Map 9.8. Young drivers (ages 15-20) involved in collisions per 1,000 licensed young drivers, 2013



Sources: Drivers in collisions - Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014
Licensed drivers: Indiana Bureau of Motor Vehicles, as of April 2, 2014

Table 9.7. Indiana collisions involving motorcycles, by severity and county, 2013

County	Total		Fatal		Non-fatal injury		Property damage only	
	Count	As % of all county collisions	Count	As % of all county collisions	Count	As % of all county collisions	Count	As % of all county collisions
All counties	**3,522**	**1.8**	**113**	**16.1**	**2,441**	**7.4**	**968**	**0.6**
Mean	38	2.1	1	14.5	27	9.1	11	0.6
Median	20	2.0	1	9.2	13	8.6	5	0.6
Minimum	0	0.0	0	0.0	0	0.0	0	0.0
Maximum	418	4.9	17	100.0	266	22.7	135	2.1
Adams	9	1.4	0	0.0	6	7.4	3	0.5
Allen	207	1.8	4	15.4	152	6.9	51	0.6
Bartholomew	56	2.7	1	20.0	47	9.1	8	0.5
Benton	0	0.0	0	0.0	0	0.0	0	0.0
Blackford	9	2.9	0	0.0	7	14.9	2	0.8
Boone	17	0.9	0	0.0	13	6.0	4	0.2
Brown	28	4.9	1	25.0	22	22.7	5	1.1
Carroll	10	1.9	1	12.5	6	8.1	3	0.7
Cass	23	2.0	1	20.0	13	7.7	9	0.9
Clark	50	1.2	0	0.0	29	4.2	21	0.6
Clay	11	1.4	0	0.0	7	6.0	4	0.6
Clinton	23	2.2	3	50.0	18	11.5	2	0.2
Crawford	11	4.1	2	50.0	7	13.7	2	0.9
Daviess	7	1.8	1	16.7	6	4.7	0	0.0
Dearborn	28	1.6	0	0.0	22	8.4	6	0.4
Decatur	13	1.5	1	16.7	8	6.1	4	0.6
DeKalb	24	1.9	3	50.0	13	7.6	8	0.7
Delaware	63	1.6	2	22.2	37	5.7	24	0.7
Dubois	32	2.2	3	37.5	23	10.0	6	0.5
Elkhart	144	2.1	2	10.0	89	9.1	53	0.9
Fayette	10	2.1	0	0.0	8	10.3	2	0.5
Floyd	30	1.2	1	25.0	21	4.9	8	0.4
Fountain	13	2.7	0	0.0	4	7.5	9	2.1
Franklin	20	4.1	2	50.0	10	12.2	8	2.0
Fulton	17	2.8	1	50.0	9	14.5	7	1.3
Gibson	20	1.8	0	0.0	18	10.1	2	0.2
Grant	64	2.9	0	0.0	40	12.2	24	1.3
Greene	12	1.4	0	0.0	9	8.2	3	0.4
Hamilton	90	1.3	4	30.8	62	6.0	24	0.4
Hancock	20	1.4	0	0.0	16	5.9	4	0.3
Harrison	30	2.5	0	0.0	24	12.2	6	0.6
Hendricks	57	1.5	1	11.1	38	6.3	18	0.6
Henry	19	1.8	0	0.0	17	8.0	2	0.2
Howard	55	2.4	3	37.5	42	9.5	10	0.6
Huntington	27	2.5	1	20.0	19	10.7	7	0.8
Jackson	44	2.6	1	14.3	34	12.3	9	0.6
Jasper	16	1.3	1	8.3	15	6.8	0	0.0
Jay	17	2.4	0	0.0	13	12.4	4	0.7
Jefferson	29	3.1	2	40.0	18	11.2	9	1.2
Jennings	7	0.9	0	0.0	4	2.5	3	0.5
Johnson	65	2.2	2	16.7	48	8.4	15	0.6
Knox	27	3.0	1	14.3	23	12.0	3	0.4
Kosciusko	43	1.7	3	50.0	25	7.2	15	0.7
LaGrange	14	1.5	0	0.0	8	8.0	6	0.7
Lake	174	1.1	7	17.5	113	4.2	54	0.4
LaPorte	75	2.2	3	18.8	51	8.1	21	0.8
Lawrence	40	2.8	3	42.9	24	9.6	13	1.1
Madison	99	2.7	2	22.2	64	11.2	33	1.1

continued on next page

Table 9.7. *(continued)*

County	Total		Fatal		Non-fatal injury		Property damage only	
	Count	As % of all county collisions	Count	As % of all county collisions	Count	As % of all county collisions	Count	As % of all county collisions
Marion	418	1.5	17	24.6	266	5.1	135	0.6
Marshall	27	2.0	2	16.7	17	9.9	8	0.7
Martin	4	2.5	0	0.0	3	10.3	1	0.8
Miami	20	2.1	1	14.3	10	7.4	9	1.1
Monroe	78	1.9	1	20.0	59	7.5	18	0.5
Montgomery	20	2.0	0	0.0	16	9.0	4	0.5
Morgan	37	2.5	0	0.0	32	11.1	5	0.4
Newton	6	1.7	1	33.3	5	7.0	0	0.0
Noble	28	2.2	2	25.0	20	10.4	6	0.6
Ohio	2	1.5	0	0.0	2	10.5	0	0.0
Orange	12	1.8	0	0.0	7	6.8	5	0.9
Owen	13	2.4	0	0.0	11	10.9	2	0.4
Parke	10	1.9	0	0.0	5	7.1	5	1.1
Perry	13	3.2	0	0.0	12	15.2	1	0.3
Pike	4	2.1	0	0.0	4	6.8	0	0.0
Porter	74	1.5	1	7.1	51	5.4	22	0.6
Posey	12	2.1	0	0.0	8	10.8	4	0.8
Pulaski	7	1.6	0	0.0	6	10.5	1	0.3
Putnam	9	1.4	1	16.7	7	6.6	1	0.2
Randolph	6	1.2	1	50.0	4	5.2	1	0.2
Ripley	8	1.1	0	0.0	5	4.6	3	0.5
Rush	9	3.1	0	0.0	9	13.6	0	0.0
St. Joseph	88	1.2	1	5.9	62	4.4	25	0.4
Scott	22	3.3	1	11.1	11	7.5	10	2.0
Shelby	37	3.5	2	22.2	32	12.3	3	0.4
Spencer	12	2.0	0	0.0	11	11.0	1	0.2
Starke	11	1.8	0	0.0	5	6.6	6	1.1
Steuben	24	1.5	0	0.0	15	8.9	9	0.6
Sullivan	5	1.1	1	20.0	4	6.0	0	0.0
Switzerland	9	4.7	0	0.0	8	16.7	1	0.7
Tippecanoe	159	2.3	4	18.2	118	11.2	37	0.6
Tipton	13	4.1	0	0.0	11	14.3	2	0.8
Union	3	2.5	1	50.0	2	12.5	0	0.0
Vanderburgh	175	2.7	6	28.6	123	10.0	46	0.9
Vermillion	12	3.6	0	0.0	10	17.5	2	0.7
Vigo	76	2.4	2	18.2	62	10.4	12	0.5
Wabash	23	2.4	0	0.0	13	10.5	10	1.2
Warren	7	2.9	1	100.0	2	8.0	4	1.8
Warrick	16	1.3	0	0.0	11	6.5	5	0.5
Washington	15	2.2	3	30.0	8	7.2	4	0.7
Wayne	63	2.8	1	7.7	45	12.0	17	0.9
Wells	10	1.6	0	0.0	8	8.8	2	0.4
White	11	1.3	0	0.0	9	9.3	2	0.3
Whitley	15	1.8	0	0.0	10	7.6	5	0.7

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014

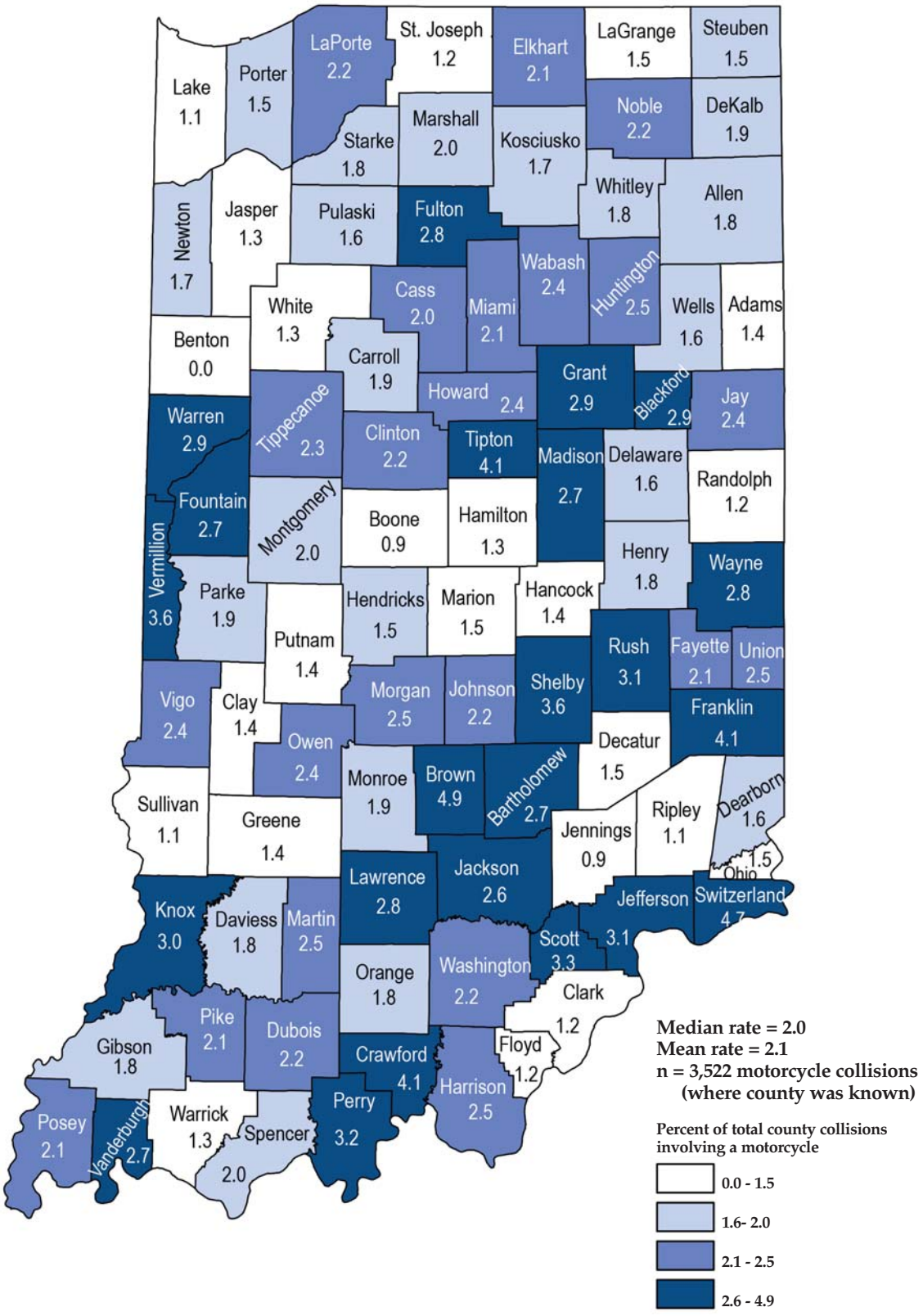
Notes:
1) Percent calculations represent the percent of total county collisions (presented in Table 9.1) in each injury category that involved a *motorcycle* or *moped*.
2) *Non-fatal* injury collisions include collisions with *incapacitating*, *non-incapacitating* and *possible* injuries.

Figure 9.8. County ranks (ascending order), by percentage of motorcycle collisions, 2013

n = 3,522 motorcycle collisions **Median county % motorcycle collisions = 2.0%** **Mean county % motorcycle collisions = 2.1%**

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

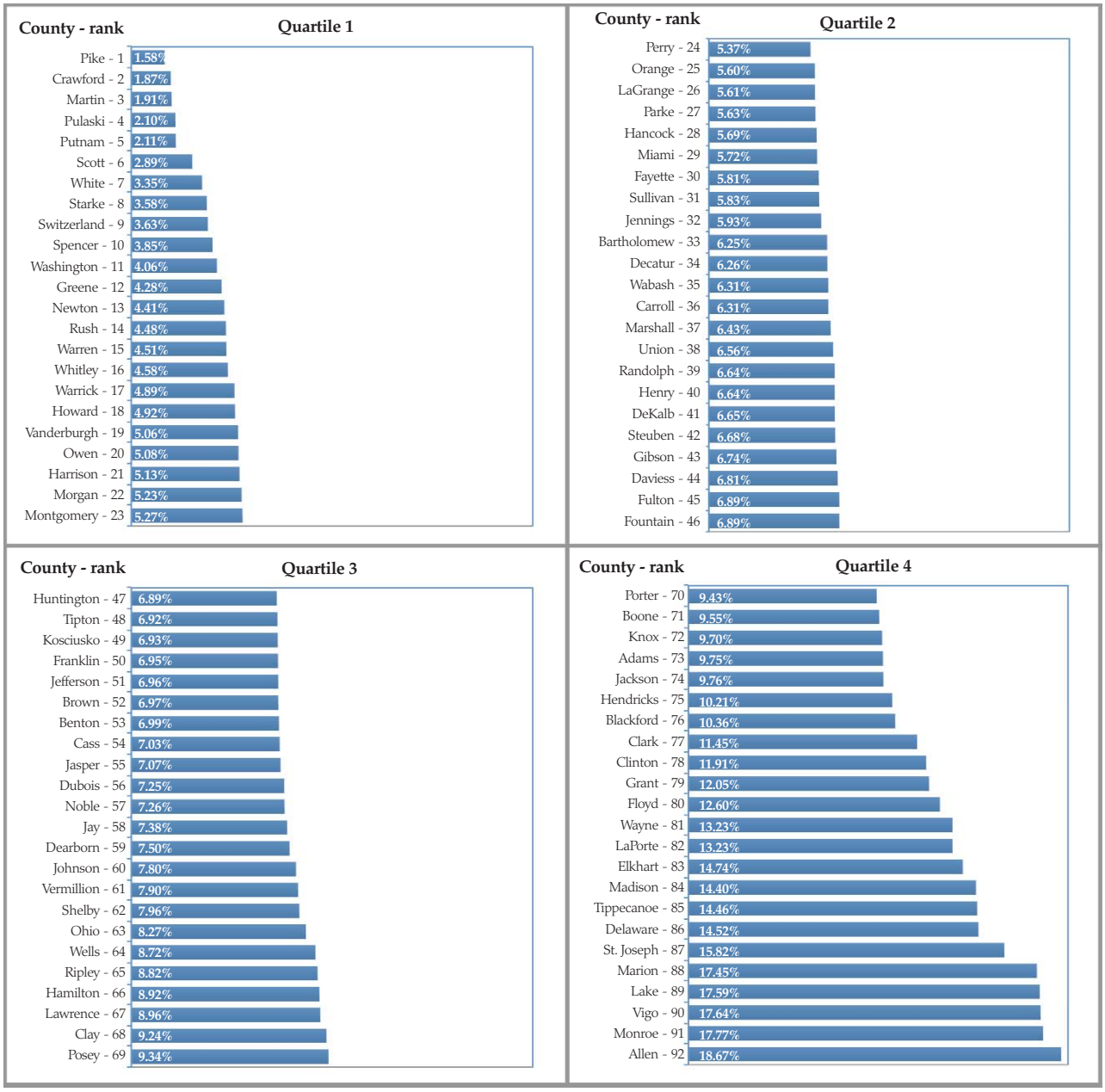
Map 9.9. Percentage of county collisions that involved a motorcycle, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

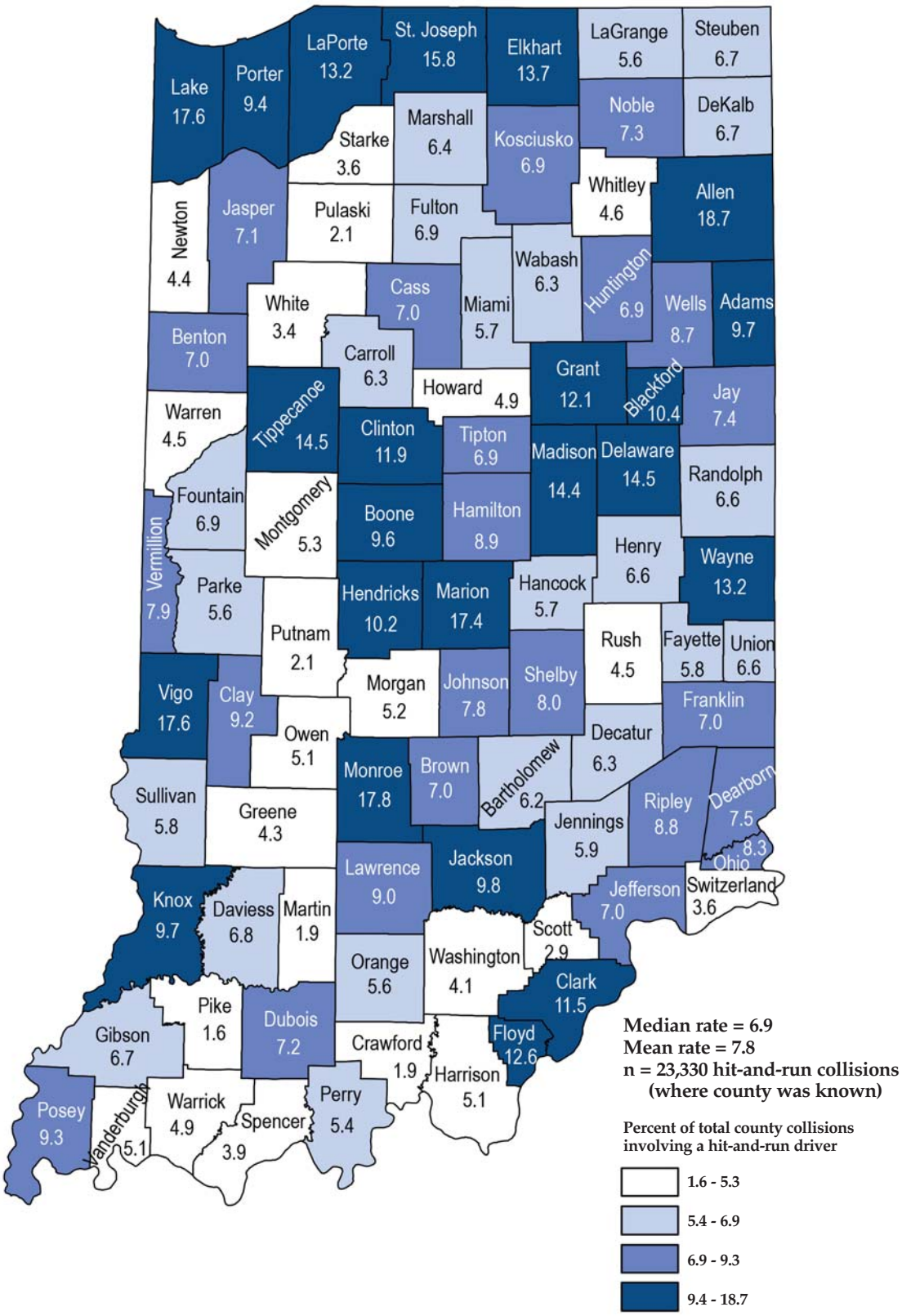
Figure 9.9. County ranks (ascending order), by percentage of hit-and-run collisions, 2013

n = 23,330 hit-and-run collisions **Median county % hit-and-run collisions = 6.9%** **Mean county % hit-and-run collisions = 7.8%**



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

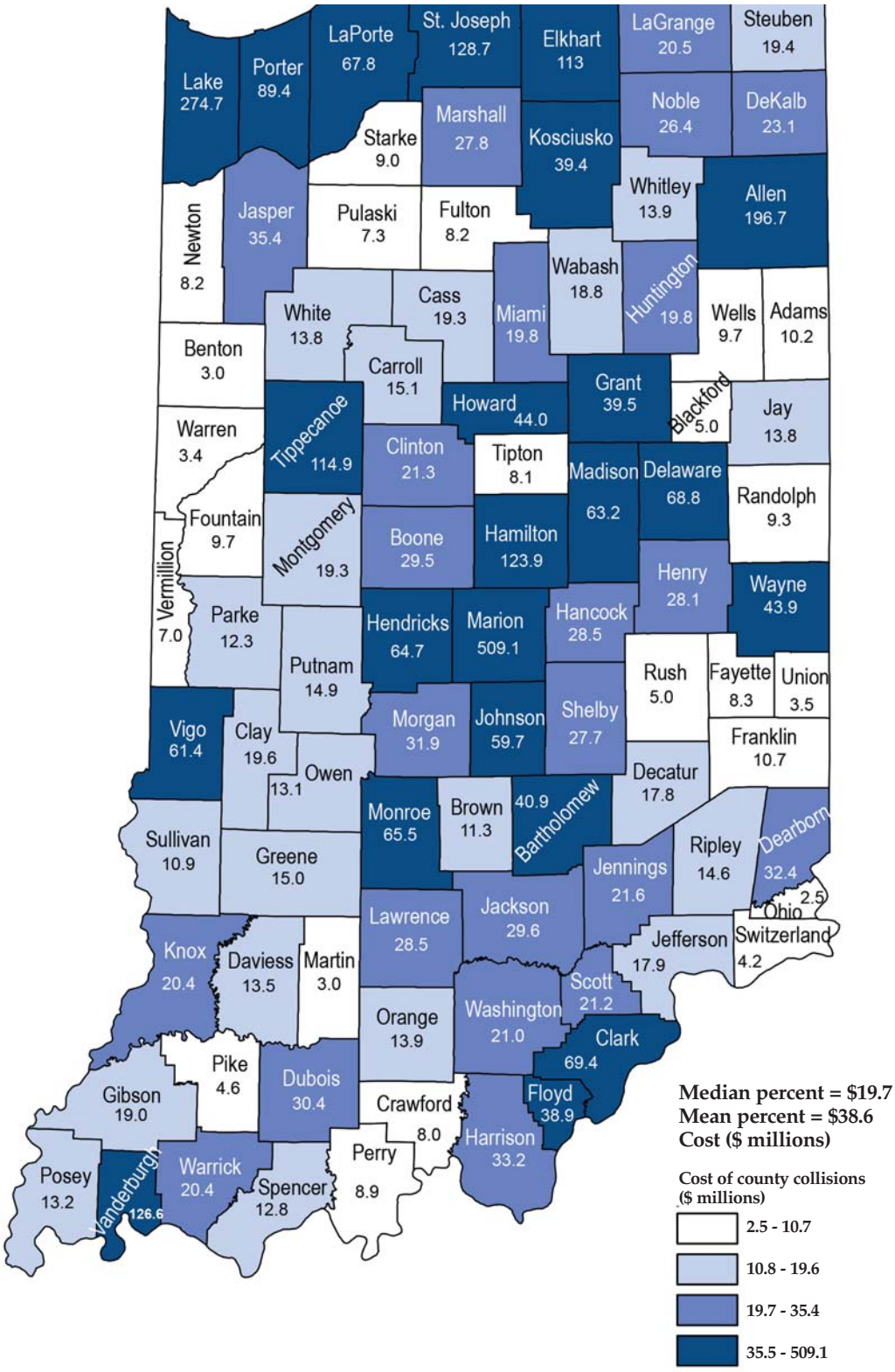
Map 9.10. Percentage of county collisions that involved a hit-and-run driver, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

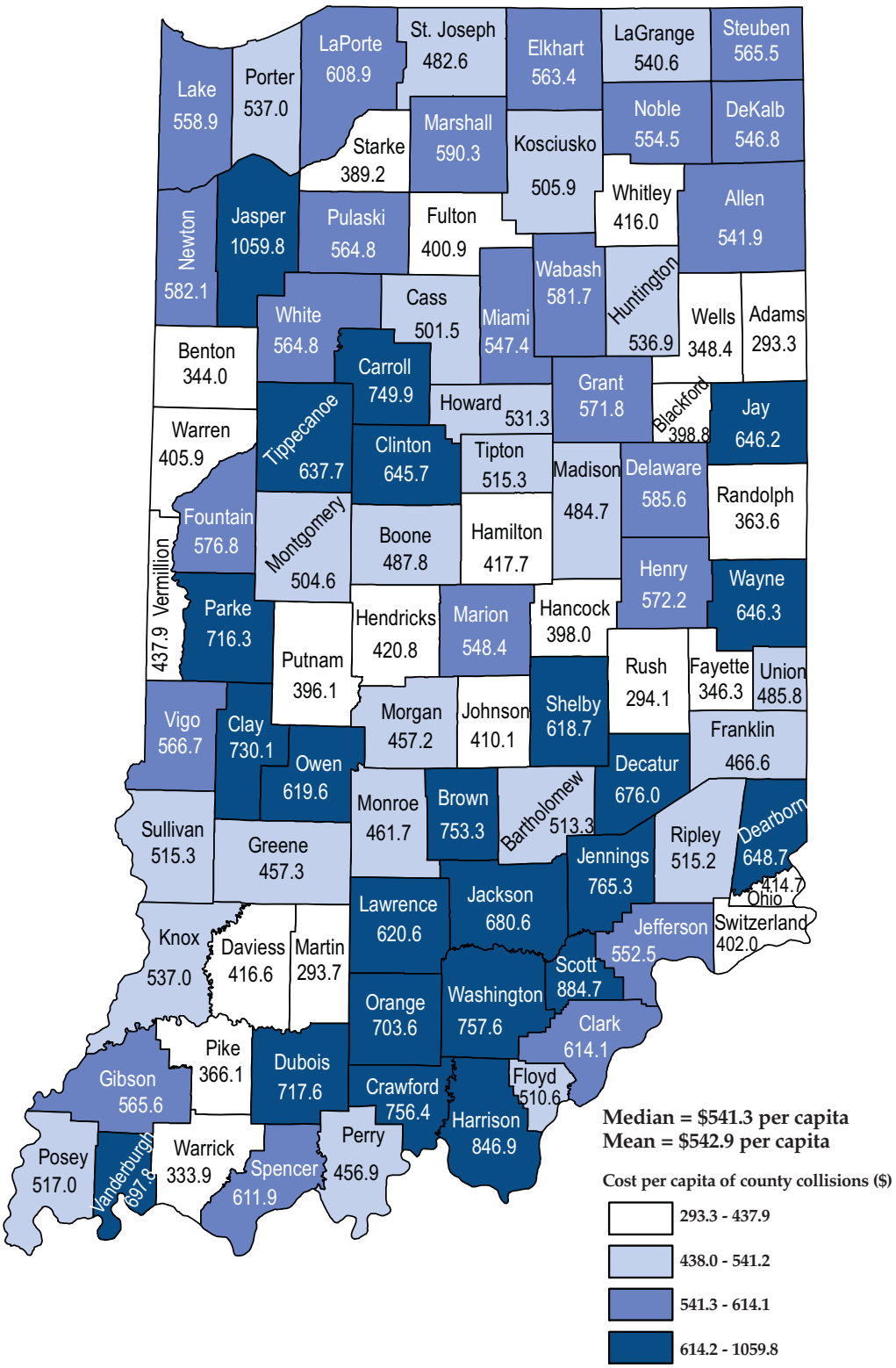
Note: Percent values are rounded to one decimal point. Due to the fact that counties are divided into quartiles and the minimal variation that exists between county percent values, *ArcGIS* placed some median values into two separate quartiles.

Map 9.11. Estimated costs of Indiana collisions ($ millions), by county, 2013



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014

Map 9.12. Estimated costs per capita of Indiana collisions, by county, 2013



Sources:
Collisions: Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 21, 2014
Population (2013 estimates): U.S. Census Bureau

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 21, 2014
- Indiana Bureau of Motor Vehicles, current as of April 9, 2013
- Indiana Department of Transportation, county level VMT (2013), as of April 11, 2014
- Bureau of Transportation Statistics, State Transportation Statistics, state level VMT, accessed March 24, 2014 at http://www.bts.gov/publications/state_transportation_statistics/
- Fatality Analysis Reporting System, National Highway Traffic Safety Administration. http://www-fars.nhtsa.dot.gov/Main/index.aspx
- U.S. Census Bureau, Population Division, Table 2. Intercensal Estimates of the Resident Population by Sex and Age: April 1, 2000 to July 1, 2010 (ST-EST00INT-02-18), accessed at http://www.census.gov/popest/data/intercensal/state/state2010.html
- U.S. Census Bureau, Population Division, Table 1. Annual Estimates of the Resident Population by Sex and Age: April 1, 2010 to July 1, 2013 (NST-EST2012-01), accessed at http://www.census.gov/popest/data/state/asrh/2013/index.html
- U.S. Census Bureau, Annual Estimates of the Resident Population by Single-Year of Age and Sex for the United States and States (2012), provided by the Indiana Business Research Center, Indiana University.

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	Primary Cause	Vehicle 1	Vehicle 2	Vehicle 3	Vehicle 4
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.

Automated Reporting Information Exchange System (ARIES)
The computer data information system in which all local and state law enforcement officers enter the information from the *Indiana Officer's Standard Crash Report*. This data system provides the data found in this report as well as the *Indiana Traffic Fact Sheets.*

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.

Glossary, continued

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.

Incorporated Limits Locale
Urban is defined as any area inside the incorporated limits of a city. *Rural* is defined as any area outside the incorporated limits of a city.

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.http://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
A two- or three-wheeled motor vehicle designed to transport one or two people. This category can include motor scooters, minibikes, and mopeds, etc.; however, the Indiana reporting system separates the two categories.

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; (3) occupants of parked motor vehicles; (4) others such as joggers, skateboard riders, people riding on animals, and persons riding in animal-drawn conveyances.

Not Injured
Any blank value in the injury status code field of the Indiana Crash Report. These are generally drivers of vehicles involved in property damage only collisions.

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 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 not in or upon a motor vehicle or other vehicle.

Pedestrian Collision
A collision in which a pedestrian was involved or *pedestrian action* was listed as a contributing factor to the collision.

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.

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.*

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

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

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

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.*

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

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.

Cognitive impairment include primary factors of *driver asleep* or *fatigued, driver illness, alcoholic beverages, prescription drugs* and *illegal drugs.*

Glossary, continued

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

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

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

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.*

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.*

Unknown include primary factors of *unknown* and invalid.

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.*

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.

Serious Injury
An injury reported as *fatal* or *incapacitating*.

Serious Injury Collision
A collision with at least one *fatal* or *incapacitating* injury.

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.

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 r*epresent 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 contains 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* do 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.[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., & Spicer, R. (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. http://www.carcrash.org

[3] http://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). http://www.bls.gov/cpi/#tables

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An electronic copy of this document can be accessed via the PPI website (www.policyinstitute.iu.edu), the ICJI traffic safety website (http://www.in.gov/cji/), or you may contact the Center for Criminal Justice Research at 317-261-3000.

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