INDIANA TRAFFIC SAFETY FACTS

INDIANA UNIVERSITY
PUBLIC POLICY INSTITUTE

DANGEROUS DRIVING 2016

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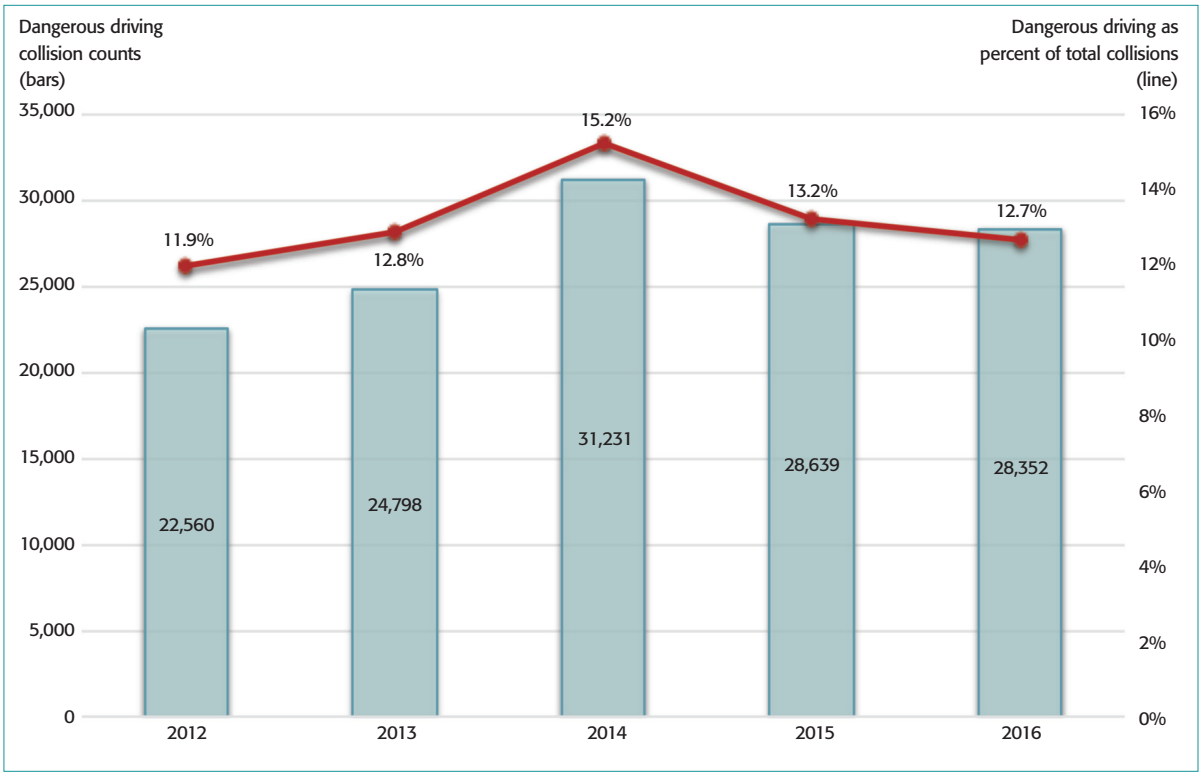
IN 2016:

- 28,352 of the 223,734 traffic collisions that occurred in Indiana involved one or more driver actions defined as *dangerous driving*, a slight decrease from 2015.
- Twenty-nine percent (241 of 821) of Indiana traffic fatalities occurred in *dangerous driving* collisions.
- Young drivers, ages 15 to 20, represented the highest percentage of drivers in crashes engaged in *dangerous driving* behaviors for both males and females.

A *dangerous driving* collision is defined as any collision where a driver takes one or more of the following actions: *aggressive driving, disregarding a signal,* or *speeding* (see last page for a full list of definitions, references, and data sources). This fact sheet summarizes Indiana *dangerous driving* data trends at state and county levels. Collision data come from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 16, 2017.

After experiencing a 5-year high in 2014 (31,231), the annual count of Indiana collisions involving dangerous driving declined for the second consecutive year (28,352 collisions in 2016) (Figure 1). Dangerous driving collisions accounted for 12.7 percent of all Indiana crashes in 2016, a slight decrease from 2015.

Figure 1. Indiana collisions that involve dangerous driving behaviors, 2012-2016



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

Note: *Dangerous driving collision* includes those with at least one driver involved in any of the following: *speeding, aggressive driving,* or *disregarding a signal.*

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GENERAL TRENDS

Nearly 30 percent (224 of 768) of all fatal collisions involved *dangerous driving* in 2016 (Table 1), but the number of fatal *dangerous driving* collisions decreased more than 6 percent. When looking closer at specific dangerous driving actions, 3 percent (6,773) of all 2016 Indiana collisions involved *aggressive driving*, and 2 percent (4,368) involved a driver *disregarding a signal.* Nine percent (21,209) of all Indiana collisions involved speeding, while 26 percent (198/768) of all fatal collisions involved speeding (calculated from Table 1).

The percent of all Indiana traffic fatalities that occurred in a *dangerous driving* collision decreased from 32.7 percent in 2015 to 29.4 percent in 2016. Individuals killed in *dangerous driving* collisions decreased nearly 10 percent from 267 in 2015 to 241 in 2016 (Figure 2). The number of individuals killed decreased in 2016 across all *dangerous driving* categories. Total injuries (fatal and non-fatal) in *dangerous driving* collisions declined slightly from 10,974 in 2015 to 10,773 in 2016 (Table 2).

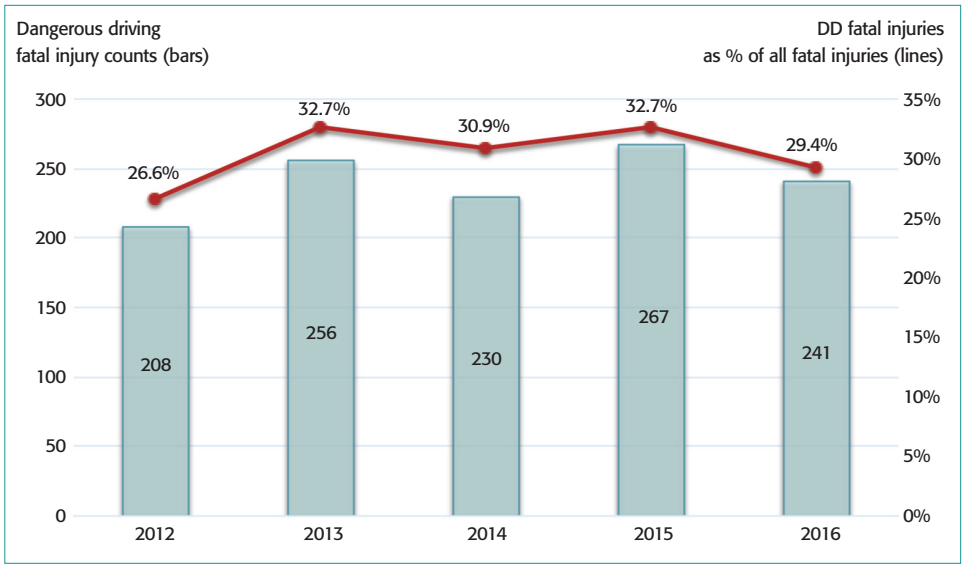
Table 1. Indiana collisions, by dangerous driving involvement and collision severity, 2012-2016

Dangerous driving type/Collision severity	Count of collisions					Annual rate of change	
	2012	2013	2014	2015	2016	2015-16	2012-16
Total collisions	**189,183**	**193,236**	**205,769**	**216,483**	**223,734**	**3.3%**	**4.3%**
Fatal	720	710	704	752	768	2.1%	1.6%
Non-fatal injury	34,138	32,852	33,860	34,466	35,323	2.5%	0.9%
Property damage	154,325	159,674	171,205	181,265	187,643	3.5%	5.0%
All dangerous driving collisions	**22,560**	**24,798**	**31,231**	**28,639**	**28,352**	**-1.0%**	**5.9%**
Fatal	193	222	209	239	224	-6.3%	3.8%
Non-fatal injury	6,044	6,245	7,116	6,708	6,720	0.2%	2.7%
Property damage	16,323	18,331	23,906	21,692	21,408	-1.3%	7.0%
Dangerous driving as % of total	**11.9%**	**12.8%**	**15.2%**	**13.2%**	**12.7%**	**-4.2%**	**1.5%**
Fatal	26.8%	31.3%	29.7%	31.8%	29.2%	-8.2%	2.1%
Non-fatal injury	17.7%	19.0%	21.0%	19.5%	19.0%	-2.3%	1.8%
Property damage	10.6%	11.5%	14.0%	12.0%	11.4%	-4.7%	1.9%
Aggressive	**4,500**	**5,043**	**6,215**	**6,355**	**6,773**	**6.6%**	**10.8%**
Fatal	33	55	47	61	41	-32.8%	5.6%
Non-fatal injury	1,216	1,342	1,581	1,568	1,668	6.4%	8.2%
Property damage	3,251	3,646	4,587	4,726	5,064	7.2%	11.7%
Disregard signal	**4,013**	**4,172**	**4,200**	**4,319**	**4,437**	**1.9%**	**2.1%**
Fatal	22	19	17	20	19	-5.0%	-3.6%
Non-fatal injury	1,578	1,523	1,541	1,557	1,610	1.2%	-0.6%
Property damage	2,413	2,630	2,642	2,742	2,808	2.4%	3.9%
Speed	**16,633**	**18,598**	**24,822**	**22,012**	**21,209**	**-3.6%**	**6.3%**
Fatal	163	185	184	204	198	-2.9%	5.0%
Non-fatal injury	4,061	4,263	5,126	4,710	4,588	-2.6%	3.1%
Property damage	12,409	14,150	19,512	17,098	16,423	-3.9%	7.3%

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

Note: *Dangerous driving* categories are not mutually exclusive. *All dangerous driving* may not equal total of individual categories.

Figure 2. Fatal injuries in Indiana dangerous driving collisions, 2012-2016



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

DRIVER AGE AND GENDER

Dangerous driving behavior can be linked to both age and gender of vehicle operators. Table 3 illustrates that the likelihood of drivers engaging in *dangerous driving* behavior decreases with age, and young drivers consistently account for a disproportionately high share of risky driving behaviors in collisions. Between 2012 and 2016, male drivers under the age of 25 consistently represented the highest proportion of drivers in *dangerous driving* collisions. In 2016, 14.4 percent of male drivers and 10.5 percent of female drivers in the 15- to 20-year-old age group engaged in *dangerous driving* behavior in collisions. In 2016, the proportion of all drivers reported to be *driving dangerously* in collisions decreased from 2015 for both male and female drivers.

GEOGRAPHY OF DANGEROUS DRIVING IN INDIANA

Map 1 shows the percentage of county collisions that involved *dangerous driving* in 2016. The map illustrates clusters of counties with the highest *dangerous driving* collision rates located in the northern half of the state. Tipton County, located in north central Indiana, had the highest percentage of *dangerous driving* collisions (25.3 percent), while Jay County, located in eastern Indiana, had the lowest percentage of *dangerous driving* collisions (2.5 percent). The median rate of county *dangerous driving* collisions was 10.7 percent, and the mean rate was 11.4 percent.

Table 2. Injuries in Indiana collisions, by dangerous driving involvement and injury status, 2012-2016

Dangerous driving type/Injury status	Count of injuries					Annual rate of change	
	2012	2013	2014	2015	2016	2015-16	2012-16
Total injuries in ALL collisions	**49,937**	**48,318**	**49,308**	**52,282**	**53,412**	**2.2%**	**1.7%**
Fatal	781	784	745	817	821	0.5%	1.3%
Non-fatal	49,156	47,534	48,563	51,465	52,591	2.2%	1.7%
All dangerous driving collisions	**9,597**	**9,984**	**11,006**	**10,974**	**10,773**	**-1.8%**	**2.9%**
Fatal	208	256	230	267	241	-9.7%	3.8%
Non-fatal	9,389	9,728	10,776	10,707	10,532	-1.6%	2.9%
Dangerous driving as % of total	**19.2%**	**19.0%**	**19.2%**	**19.2%**	**20.2%**	**5.0%**	**1.2%**
Fatal	26.6%	32.7%	30.9%	32.7%	29.4%	-10.2%	2.5%
Non-fatal	97.8%	97.4%	97.9%	97.6%	97.8%	0.2%	0.0%
Aggressive	**2,046**	**2,306**	**2,638**	**2,818**	**2,958**	**5.0%**	**9.7%**
Fatal	36	64	54	67	46	-31.3%	6.3%
Non-fatal	2,010	2,242	2,584	2,751	2,912	5.9%	9.7%
Disregard signal	**2,698**	**2,668**	**2,577**	**2,736**	**2,708**	**-1.0%**	**0.1%**
Fatal	23	20	19	23	19	-17.4%	-4.7%
Non-fatal	2,675	2,648	2,558	2,713	2,689	-0.9%	0.1%
Speed	**6,199**	**6,505**	**7,708**	**7,490**	**7,185**	**-4.1%**	**3.8%**
Fatal	175	216	201	228	213	-6.6%	5.0%
Non-fatal	6,024	6,289	7,507	7,262	6,972	-4.0%	3.7%

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

Note: *Dangerous driving* categories are not mutally exclusive. *All dangerous driving* may not equal total of individual categories.

Table 3. Proportion of drivers engaged in dangerous driving behaviors in Indiana collisions, by age group and gender, 2012-2016

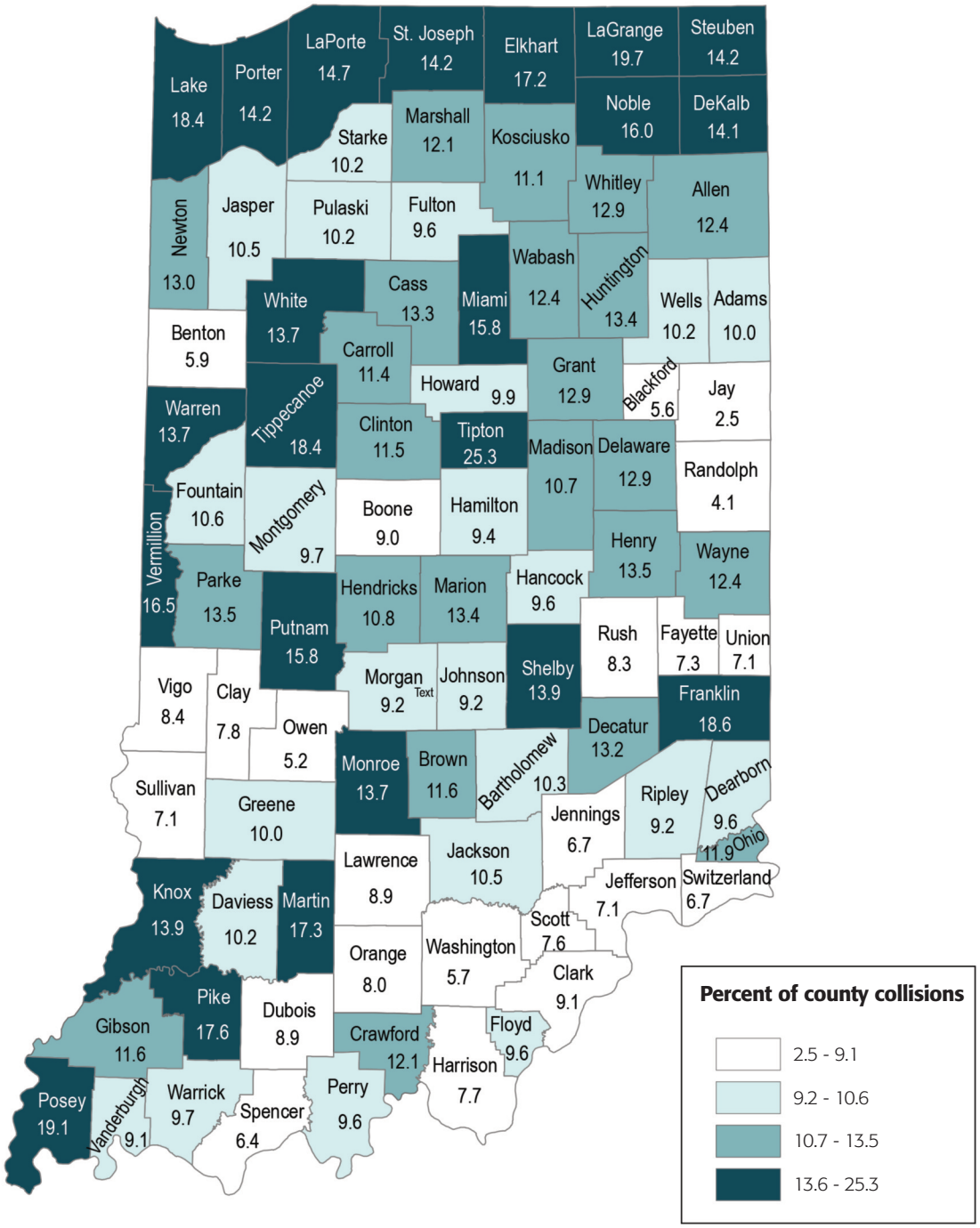
Low < < > > High

	2012		2013		2014		2015		2016	
Age group	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
15-20	14.3%	9.5%	14.6%	11.0%	15.9%	11.9%	15.1%	10.6%	14.4%	10.5%
21-24	12.1%	8.3%	12.7%	10.0%	14.8%	11.7%	13.5%	9.6%	12.6%	8.9%
25-34	10.1%	6.8%	10.6%	7.6%	12.8%	9.5%	10.7%	7.9%	10.2%	7.4%
35-44	7.7%	5.6%	7.6%	6.4%	9.3%	7.4%	7.8%	6.1%	7.7%	5.7%
45-54	6.5%	5.1%	6.2%	5.2%	7.9%	6.9%	6.6%	5.6%	6.1%	5.1%
55-64	5.4%	4.4%	5.5%	4.6%	7.0%	5.7%	5.8%	4.8%	5.2%	4.2%
65-74	4.6%	4.7%	4.9%	4.7%	5.9%	5.0%	5.4%	4.1%	4.7%	4.3%
75 +	5.7%	5.1%	5.2%	5.6%	6.4%	5.3%	5.5%	5.1%	5.2%	4.8%
All ages	**8.7%**	**6.4%**	**8.9%**	**7.2%**	**10.5%**	**8.4%**	**9.2%**	**7.1%**	**8.7%**	**6.7%**

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

Note: Data limited to drivers with valid gender and age reported.

Map 1. Percent of county collisions that involved dangerous driving behavior, 2016



Median percent = 10.7
Mean percent = 11.4
n = 28,352 dangerous driving collisions

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

DEFINITIONS

- ***Aggressive driving*** applies when the investigating officer determines that a driver was engaged in at least two of the following: *Unsafe speed; speed too fast for weather conditions; failing to yield right of way; disregarding a traffic signal/sign; improper passing/turning/lane usage;* or *following too closely.* Indiana Code IC 9-21-8-55 requires three or more of these and similar actions to be considered an aggressive-driving violation.

  Disregarding a traffic signal applies when a vehicle driver was involved in a collision at an intersection of two or more roads and disregarded a traffic signal/sign.

  Speeding applies when a vehicle driver was issued a speeding citation or driving at an unsafe speed, as indicated by unsafe speed or speed too fast for weather conditions as a contributing factor to the collision. Indiana Code 9-21-5-1 delineates this action from the legal perspective.

  Dangerous driving in this factsheet applies when a driver takes any of the above actions in a collision.

- ***Annual rate of change (ARC)*** – is the rate that a beginning value must increase/decrease each period (e.g. month, quarter, or year) in a time series to arrive at the ending value in the time series. ARC is a "smoothed" rate of change because it measures change in a variable as if the change occurred at a steady rate each period with compounding. For example, to measure change in a variable from 2012 to 2016, it is calculated as (Value in 2016 / Value in 2012)$^{1/4}$ -1.

- ***Non-fatal*** injury includes *incapacitating, non-incapacitating, possible, not reported, refused (treatment)* and *unknown* injury categories.

DATA SOURCES

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

This publication was prepared on behalf of the Indiana Criminal Justice Institute (ICJI) by the Indiana University Public Policy Institute (PPI). Please direct any questions concerning data in this document to ICJI at 317-232-1233.

This publication is one of a series of publications that form the analytical foundation of traffic safety program planning and design in the state of Indiana. Funding for these publications is provided by ICJI and the National Highway Traffic Safety Administration.

An electronic copy of this document can be accessed via the PPI website (www.policyinstitute.iu.edu), the ICJI website (www.in.gov/cji/), or you may contact the PPI at 317-261-3000.

INDIANA UNIVERSITY PUBLIC POLICY INSTITUTE

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Traffic Safety Project

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 collaborates each year with the Indiana Criminal Justice Institute to analyze vehicle crash data from the Automated Reporting Information Exchange System (ARIES), maintained by the Indiana State Police. This marks the eleventh year of this partnership. Research findings are summarized in a series of publications on various aspects of traffic collisions, including alcohol-related crashes, commercial vehicles, dangerous driving, child passenger safety, motorcycles, occupant protection, and drivers. An additional publication provides detailed information on county and municipality data. These publications serve as the analytical foundation of traffic safety program planning and design in Indiana.

Indiana collision data are obtained from Indiana Crash Reports, as completed by law enforcement officers. Crash reports for all Indiana collisions are entered electronically through ARIES. Collisions trends as reported in these publications incorporate the effects of changes to data elements on the Crash Report, agency-specific enforcement policy changes, re-engineered roadways, driver safety education programs, and other unspecified effects. A collision produces three levels of data: collision, unit (vehicles), and individual. For this reason, readers should pay particular attention to the wording of statements about the data to avoid misinterpretations. If you have questions regarding trends or unexpected results, please contact the Indiana Criminal Justice Institute, Traffic Safety Division for more information.

The Indiana Criminal Justice Institute

Guided by a Board of Trustees representing all components of Indiana's criminal and juvenile justice systems, the Indiana Criminal Justice Institute serves as the state's planning agency for criminal justice, juvenile justice, traffic safety, and victim services. ICJI develops long-range strategies for the effective administration of Indiana's criminal and juvenile justice systems and administers federal and state funds to carry out these strategies.

The Governor's Council on Impaired & Dangerous Driving

The Governor's Council on Impaired & Dangerous Driving, a division of the Indiana Criminal Justice Institute, serves as the public opinion catalyst and the implementing body for statewide action to reduce death and injury on Indiana roadways. The Council provides grant funding, training, coordination, and ongoing support to state and local traffic safety advocates.

Indiana University Public Policy Institute

The IU Public Policy Institute delivers unbiased research and data-driven, objective, expert analysis to help public, private and nonprofit sectors make important decisions that directly impact quality of life in Indiana. Using the knowledge and expertise of our staff and faculty, we provide research and analysis that is free of political and ideological bias. A multidisciplinary institute within the Indiana University School of Public and Environmental Affairs (SPEA), our efforts also support the Indiana Advisory Commission on Intergovernmental Relations (IACIR).

The National Highway Traffic Safety Administration (NHTSA)

NHTSA provides leadership to the motor vehicle and highway safety community through the development of innovative approaches to reducing motor vehicle crashes and injuries. The mission of NHTSA is to save lives, prevent injuries and reduce economic costs due to road traffic crashes, through education, research, safety standards and enforcement activity.

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