TRAFFIC SAFETY FACTS DANGEROUS DRIVING, 2010 TUNE 2011 • ISSUE 11-C05

In 2010, dangerous driving actions were a contributing factor in 13 percent of all traffic collisions and 22 percent of fatal collisions in Indiana (see last page for dangerous driving definitions). Nationally, speeding is a factor in approximately one-third of all fatal collisions, while vehicles disregarding a signal is a factor in six percent (National Highway Traffic Safety Administration (NHTSA), Fatality Analysis Reporting System (FARS)). According to data reported by FARS and the Bureau of

Transportation Statistics (BTS), in 2009, Indiana reported 2.2 fatal speed-related collisions per one billion vehicle miles travelled (VMT), a rate below the national rate (3.2), the Great Lakes region (2.3), and all other regions of the United States.

The number of collisions involving dangerous driving actions increased two percent from 2009 to 2010 and seven percent on average each year since 2006 in Indiana. Fatal collisions involving dangerous driving actions decreased three percent from 2009 to 2010 and three percent on average each year since 2006. When dangerous driving actions

were involved, collisions were two times more likely to result in a fatality in 2010; this "relative risk" has decreased in each of the past two years.

Young drivers and male drivers involved in collisions are more likely than other demographic groups to have been driving dangerously. For example, 91 of every 10,000 licensed 15-20 year old drivers involved in collisions in 2010 were classified as speeding, compared to nine of every 10,000 licensed drivers 65 years of age or older. Nine percent of male drivers involved in collisions in 2010 were driving dangerously, versus seven percent of females.

and space. In 2010, dangerous driving collisions were more likely to be fatal when occurring in exurban locales, compared to urban, suburban and rural locales (see last page for locale definitions). Dangerous driving collisions were more likely to be fatal on state roads in urban and rural locales and U.S. routes in suburban and exurban locales. Drivers involved in collisions were more likely to be driving dangerously in the late

The incidence of and risk related to dangerous driving varies across time

N^{early one-} third of 2010 fatal dangerous driving collisions involved alcohol.

evening and early morning hours (9pm-6am), and counties in northern Indiana experienced higher rates of collisions involving dangerous driving; the highest rates were recorded in Tipton (21.4%), Newton (18.7%) and Carroll (17.7%) counties.

In 2010, nearly one-third of fatal dangerous driving collisions involved alcohol, compared to 23 percent of all fatal collisions. When dangerous driving and alcohol were involved, collisions were 11 times more likely to result in a fatality than those where neither were involved.

Drivers involved in collisions who were driving dangerously were less likely to have valid licenses and more likely to be habitual traffic violators or have suspended or revoked licenses. Additionally, drivers in dangerous driving collisions were more likely to have convictions for traffic offenses in the past five years than those not driving dangerously.







GENERAL TRENDS

From 2000 to 2009, Indiana reported fewer fatal speed-related collisions per 1 billion vehicle miles travelled than the Great Lakes region, each of the other nine U.S. regions, and the U.S. as a whole, for all years except 2005 and 2008 (Table 1). During this 10-year period, the Indiana rate declined less on average each year (1.4%) than the U.S. (2.2%) and less than all but two of the other U.S. regions—a finding that largely reflects the fact that Indiana's rate is already very low and has less opportunity to

fall. However, more recently, during the five-year period from 2005 to 2009, Indiana's fatal speed-related collision rate dropped 7.5 percent on average each year, more than all other geographies except the Pacific region. While the numbers of speed-related collisions and other types of dangerous driving collisions in Indiana increased at a faster rate than collisions overall in recent years, the proportion of all collisions classified as dangerous driving has not changed (calculated from Table 2). Further, the relative risks of fatal collisions associated with dangerous driving collisions decreased (Figure 1).

Table 1. Rate of fatal speed-related collisions per 1 billion vehicle miles travelled (VMT), by region, 2000-2009

Geography	Fatal speed-related collisions per 1 billion VMT									Average a	annual % nge	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2000-09	2005-09
INDIANA	2.9	2.8	2.2	2.7	3.1	3.2	2.5	2.5	3.0	2.2	-1.4%	-7.5%
UNITED STATES	4.0	4.1	4.2	4.1	3.9	4.0	4.0	3.9	3.6	3.2	-2.2%	-5.1%
Upper New England (CT, ME, MS, NH, RI, VT)	3.4	3.5	3.7	3.2	3.3	3.1	2.9	2.8	2.3	2.4	-3.3%	-6.0%
Lower New England (NJ, NY, PA)	3.3	3.4	3.7	3.4	3.3	3.7	3.3	3.6	3.5	3.2	0.0%	-3.3%
Mid-Atlantic (DE, DC, KY, MD, NC, VA, WV)	3.8	4.0	4.2	4.0	4.1	4.0	3.7	4.0	3.4	3.4	-1.2%	-4.0%
Southern Atlantic (AL, FL, GA, SC, TN)	4.1	4.2	4.0	3.9	3.9	3.9	4.3	3.9	3.6	3.2	-2.6%	-4.7%
Great Lakes (IL, IN, MI, MN, OH, WI)	3.2	3.1	3.1	3.3	3.2	3.0	2.9	2.9	2.6	2.3	-3.2%	-6.1%
Southern Central (LA, MS, NM, OK, TX)	5.2	5.2	5.6	5.6	5.3	5.2	5.7	5.2	5.2	4.4	-1.6%	-3.9%
Central (AR, IA, KS, MO, NE)	4.1	4.2	5.1	4.4	3.9	4.2	3.8	3.4	3.2	3.3	-1.8%	-5.4%
West (CO, NV, ND, SD, UT, WY)	5.4	6.0	5.8	5.2	4.9	4.2	3.9	4.2	3.9	3.7	-3.7%	-2.6%
Pacific (AZ, CA, HI)	4.1	4.5	4.5	4.4	4.0	4.5	4.5	4.4	3.6	3.2	-2.4%	-8.3%
Upper Northwest (AK, ID, MT, OR, WA)	4.7	4.4	4.6	4.5	4.1	4.6	4.3	4.0	4.1	4.0	-1.5%	-3.2%

Sources: Fatality Analysis Reporting System; Bureau of Transportation Statistics

Note: Geographic regions are defined by the National Highway Traffic Safety Administration.

Table 2. Indiana collisions, by dangerous driving involvement and collisionseverity, 2006-2010

		Cou	% Change				
Dangerous driving type / Collision severity	2006	2007	2008	2009	2010	'09-'1 0	Average annual '06-'10
Aggressive	3,721	3,761	4,018	3,947	4,133	4.7%	2.7%
Fatal	12	22	24	22	20	-9.1%	18.8%
Non-fatal	1,079	984	983	982	1,125	14.6%	1.4%
Property damage	2,630	2,755	3,011	2,943	2,988	1.5%	3.3%
Disregard signal	2,855	4,797	4,343	3,983	4,011	0.7%	12.7%
Fatal	15	23	16	14	15	7.1%	4.4%
Non-fatal	1,149	1,772	1,590	1,506	1,519	0.9%	9.9%
Property damage	1,691	3,002	2,737	2,463	2,477	0.6%	14.8%
Speed	14,570	18,492	22,820	18,251	18,551	1.6%	8.0%
Fatal	159	165	188	136	136	0.0%	-2.5%
Non-fatal	4,317	4,377	4,711	4,117	4,144	0.7%	-0.7%
Property damage	10,094	13,950	17,921	13,998	14,271	2.0%	11.7%
Any/All	19,358	25,011	28,915	24,027	24,392	1.5%	7.4%
Fatal	181	196	211	160	155	-3.1%	-2.8%
Non-fatal	5,956	6,515	6,661	6,006	6,079	1.2%	0.8%
Property damage	13,221	18,300	22,043	17,861	18,158	1.7%	10.4%
All collisions	192,721	204,999	205,452	189,661	192,890	1.7%	0.2%
Fatal	817	804	722	631	701	11.1%	-3.3%
Non-fatal	38,849	37,416	35,358	33,410	34,084	2.0%	-3.2%
Property damage	153,055	166,779	169,372	155,620	158,105	1.6%	1.0%

Figure 1. Relative risk of fatal collision, by dangerous driving type, 2006-2010



Source: Indiana State Police

Note: Relative risk defined as ratio of % fatal (DD involved) to % Fatal (No DD involved).

Source: Indiana State Police

Note: Dangerous driving categories are not mutally exclusive; Any/All may not equal total of individual categories.

GENERAL TRENDS (Continued)

In 2010, nearly one in five of all collision-related injuries occurred in collisions where dangerous driving was involved (calculated from Table 3). Injuries involving aggressive driving increased 20 percent from 2009 to 2010, while injuries in collisions involving any type of dangerous driving action decreased slightly (0.1%). Among different vehicle types, drivers of motorcycles/mopeds involved in collisions were more likely to be driving dangerously (10.7%) than drivers of passenger cars (7.5%), light trucks

(7.4%), and large trucks (5.9%) (Table 4, calculated). While the total number of vehicles driving dangerously increased by 1.2 percent from 2009 to 2010, the number of large trucks driving dangerously increased 24 percent, with 34 percent more speeding. Similarly, the number of motorcycles driving dangerously increased 12.7 percent from 2009 to 2010, with 42.4 percent more driving aggressively. In 2010, the risk of fatality was three times greater for passenger cars driving dangerously than passenger cars not driving dangerously, the highest relative risk of all vehicle types (Figure 2).

Table 3. Injuries in Indiana collisions, by dangerous driving involvement and injury status, 2006-2010

		Co		% Change			
Dangerous driving type / Injury status	2006	2007	2008	2009	2010	'09-'10	Average annual '06-'10
Aggressive	2,344	1,818	1,742	1,626	1,951	20.0%	-3.3%
Fatal	15	22	30	25	21	-16.0%	12.6%
Non-fatal	2,329	1,796	1,712	1,601	1,930	20.5%	-3.4%
Disregard signal	2,570	3,194	2,721	2,576	2,606	1.2%	1.3%
Fatal	15	27	16	16	15	-6.3%	8.3%
Non-fatal	2,555	3,167	2,705	2,560	2,591	1.2%	1.3%
Speed	8,072	7,292	7,516	6,490	6,353	-2.1%	-5.6%
Fatal	174	187	225	158	145	-8.2%	-2.6%
Non-fatal	7,898	7,105	7,291	6,332	6,208	-2.0%	-5.6%
Any/All	11,736	11,134	10,834	9,674	9,661	-0.1%	-4.7%
Fatal	199	222	250	186	164	-11.8%	-3.3%
Non-fatal	11,537	10,912	10,584	9,488	9,497	0.1%	-4.7%
All injuries	77,911	61,904	55,571	51,434	50,871	-1.1%	-9.8%
Fatal	899	898	815	692	754	9.0%	-3.9%
Non-fatal	77,012	61,006	54,756	50,742	50,117	-1.2%	-9.9%

Source: Indiana State Police

Note: Dangerous driving categories are not mutally exclusive; Any/All may not equal total of individual categories.

Table 4. Vehicles involved in Indiana collisions, by vehicle-specific dangerous driving involvement and vehicle type, 2006-2010

		Cou		% Change			
Dangerous driving type / Vehicle type	2006	2007	2008	2009	2010	'09-'10	Average annual '06-'10
Aggressive	3,693	3,688	3,960	3,898	4,092	5.0%	2.7%
Passenger car	2,237	2,234	2,456	2,412	2,566	6.4%	3.6%
Light truck	1,258	1,242	1,291	1,309	1,348	3.0%	1.8%
Large truck	166	174	179	144	131	-9.0%	-5.2%
Motorcycle/Moped	32	38	34	33	47	42.4%	11.9%
Disregard	2,990	4,954	4,488	4,145	4,156	0.3%	12.2%
Passenger car	1,862	3,081	2,869	2,555	2,597	1.6%	12.3%
Light truck	1,053	1,717	1,513	1,490	1,469	-1.4%	12.1%
Large truck	66	128	87	79	67	-15.2%	9.4%
Motorcycle/Moped	9	28	19	21	23	9.5%	49.8%
Speed	14,384	18,171	22,665	18,116	18,365	1.4%	8.1%
Passenger car	8,709	10,454	13,117	10,706	11,014	2.9%	7.5%
Light truck	4,804	6,723	8,388	6,625	6,368	-3.9%	10.0%
Large truck	541	631	797	486	652	34.2%	9.5%
Motorcycle/Moped	330	363	363	299	331	10.7%	0.8%
Any/All	19,303	24,811	28,874	24,032	24,324	1.2%	7.3%
Passenger car	11,700	14,576	17,065	14,375	14,739	2.5%	7.1%
Light truck	6,550	8,983	10,453	8,694	8,428	-3.1%	8.4%
Large truck	704	850	966	632	784	24.1%	6.0%
Motorcycle/Moped	349	402	390	331	373	12.7%	2.4%
All vehicles	325,519	343,556	342,857	319,309	327,174	2.5%	0.2%
Passenger car	186,229	197,106	200,024	187,964	195,795	4.2%	1.4%
Light truck	121,753	127,761	124,122	116,400	114,564	-1.6%	-1.4%
Large truck	14,374	15,033	14,796	11,591	13,320	14.9%	-0.9%
Motorcycle/Moped	3,163	3,656	3,915	3,354	3,495	4.2%	3.1%





Source: Indiana State Police

Note: Relative risk defined as ratio of % fatal (DD involved) in vehicle type to % Fatal (No DD involved) in vehicle type.

Source: Indiana State Police

Note: Dangerous driving categories are not mutally exclusive; Any/All may not equal total of individual categories.

DRIVERS INVOLVED

Driving dangerously is inversely related to age; that is, as driver age increases, the likelihood of driving dangerously in a collision decreases. In 2010, 91 of every 10,000 licensed 15- to 20-year-olds involved in collisions were speeding, a rate nearly 10 times higher than drivers 65 and older (Figure 3). Similarly, compared to drivers 65 and older, 15- to 20-year-old

drivers involved in collisions were nearly four times as likely to have been driving aggressively and 1.5 to 2 times as likely to have disregarded a signal (calculated from Figure 3). In 2010, 8.8 percent of male drivers involved in collisions were driving dangerously, compared to 6.9 percent of female drivers (Figure 4). Males of every age group were more likely to have been driving dangerously than females of the same age group.

Figure 3. Drivers driving dangerously in Indiana collisions, by age cohort, 2010



Source: Indiana State Police

Note: Data exclude cases with invalid age.

Figure 4. Drivers driving dangerously in Indiana collisions, by gender and age cohort, 2010



Source: Indiana State Police

Note: Data exclude cases with invalid or unknown gender and age.

TIME & LOCATION

Dangerous driving collisions occurred most frequently in urban areas (65%) in 2010 (Table 5, calculated). However, collisions in suburban and exurban areas were more likely to involve dangerous driving than those in urban and rural locales (16.2% versus 13.1 and 13.5%, respectively). Within urban areas, the relative risk of fatality was greatest on state roads (3.6) while U.S. routes posed the greatest risk in suburban areas (2.4). U.S. routes were also the most dangerous road type in exurban locales (2.2), while state roads had the highest relative risk of fatality (2.3) in rural areas. Considering time of day, drivers involved in collisions during late night and early morning hours (9pm to 6am) were more likely to be speeding or driving aggressively (Figure 5). The rate of drivers disregarding a signal

increased steadily from 2am through 10am, peaking between 10 and 11am. Dangerous driving collisions occurred most frequently in urban areas (65%) in 2010 (Table 5, calculated). However, collisions in suburban and exurban areas were more likely to involve dangerous driving than those in urban and rural locales (16.2% versus 13.1 and 13.5%, respectively). Within urban areas, the relative risk of fatality was greatest on state roads (3.6) while U.S. routes posed the greatest risk in suburban areas (2.4). U.S. routes were also the most dangerous road type in exurban locales (2.2), while state roads had the highest relative risk of fatality (2.3) in rural areas. Considering time of day, drivers involved in collisions during late night and early morning hours (9pm to 6am) were more likely to be speeding or driving aggressively (Figure 5). The rate of drivers disregarding a signal increased steadily from 2am through 10am, peaking between 10 and 11am.

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Localo / Poad class	DD in	volved	No DD) involved	All C	All Collisions		Fatal	Relative risk of
LUCale / KUau Class	Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal	DD involved	No DD involved	fatality
Urban	65	12,890	179	85,582	244	98,472	0.50%	0.21%	
County Road	0	498	13	2,480	13	2,978	0.00%	0.52%	0.0
Interstate	4	1,241	16	5,058	20	6,299	0.32%	0.32%	1.0
US Route	7	1,167	24	7,047	31	8,214	0.60%	0.34%	1.8
Local/City Road	43	8,868	103	62,432	146	71,300	0.48%	0.16%	2.9
State Road	11	1,116	23	8,565	34	9,681	0.98%	0.27%	3.6
Suburban	30	4,041	126	20,896	156	24,937	0.74%	0.60%	1.2
State Road	5	640	46	5,098	51	5,738	0.78%	0.89%	0.9
Interstate	4	1,082	10	2,666	14	3,748	0.37%	0.37%	1.0
Local/City Road	3	835	14	4,929	17	5,764	0.36%	0.28%	1.3
County Road	9	1,037	30	5,058	39	6,095	0.86%	0.59%	1.5
US Route	9	447	26	3,145	35	3,592	1.97%	0.82%	2.4
Exurban	23	1,542	85	8,009	108	9,551	1.47%	1.05%	1.4
Local/City Road	0	131	3	600	3	731	0.00%	0.50%	0.0
State Road	5	317	34	2,582	39	2,899	1.55%	1.30%	1.2
Interstate	3	353	5	925	8	1,278	0.84%	0.54%	1.6
County Road	10	564	28	2,717	38	3,281	1.74%	1.02%	1.7
US Route	5	177	15	1,185	20	1,362	2.75%	1.25%	2.2
Rural	20	1,476	93	9,456	113	10,932	1.34%	0.97%	1.4
Local/City Road	0	85	4	750	4	835	0.00%	0.53%	0.0
Interstate	2	343	10	1,046	12	1,389	0.58%	0.95%	0.6
US Route	2	157	15	1,346	17	1,503	1.26%	1.10%	1.1
County Road	8	526	31	2,813	39	3,339	1.50%	1.09%	1.4
State Road	8	365	33	3,501	41	3,866	2.14%	0.93%	2.3
All locales/roads	138	19 949	483	123 943	621	143 892	0.69%	0 39%	18

Table 5. Indiana collisions, by dangerous driving involvement, locale type, and road class, 2010

Source: Indiana State Police

Note: Data exclude cases with unknown locale and road class.



Figure 5. Drivers driving dangerously in Indiana collisions, by hour of day, 2010

Source: Indiana State Police

Note: Data exclude cases where collision time was not reported.

TIME & LOCATION (Continued)

In 2010, on average, 11.3 percent of collisions in a given county involved dangerous driving (Map 1). All counties on the northern border of the state recorded rates above the mean, while most counties along the

southern border experienced rates below the mean. The highest rates were observed in Tipton (21.4%), Newton (18.7%) and Carroll (17.7%) counties, while the lowest rates were recorded in Blackford (3.6%), Jay (3.6%), Washington (4.3%), and Orange (4.2%) counties.



Map 1. Proportion of Indiana traffic collisions involving dangerous driving, by county, 2010

Source: Indiana State Police

ALCOHOL INVOLVEMENT

In 2010, nearly one of every three fatal collisions that involved dangerous driving was alcohol-related (Table 6). Dangerous driving collisions involving alcohol increased 8.4 percent from 2009 to 2010, but decreased an average of two percent each year from 2006 to 2010. In 2010, fatal collisions linked to dangerous driving had a seriously impaired driver (BAC of 0.08 g/dl or greater) 26 percent of the time. Compared to collisions with neither alcohol nor dangerous driving, collisions with both dangerous driving and alcohol involved were 11 times more likely to result in a fatality in 2010 (Figure 6). In 2010, more than one in every 10 injuries suffered in dangerous driving collisions occurred in dangerous driving collisions involving alcohol (calculated from Table 7). One in four drivers involved in dangerous driving collisions was seriously impaired in 2010.

Table 6. Dangerous driving collisions in Indiana, by alcohol involvement and collision severity, 2010

		Cour	t of colli	sions		% Change		
	2006	2007	2008	2009	2010	'09-'1 0	Average annual '06-'10	
Dangerous driving collisions	19,358	25,011	28,915	24,027	24,392	1.5%	7.4%	
Fatal	181	196	211	160	155	-3.1%	-2.8%	
Non-fatal	5,956	6,515	6,661	6,006	6,079	1.2%	0.8%	
Property damage	13,221	18,300	22,043	17,861	18,158	1.7%	10.4%	
Alcohol-related (BAC >= 0.01 g/dl)	1,699	1,474	1,508	1,425	1,545	8.4%	-2.0%	
Fatal	71	63	78	60	50	-16.7%	-6.8%	
Non-fatal	735	661	599	580	637	9.8%	-3.2%	
Property damage	893	750	831	785	858	9.3%	-0.4%	
Alcohol-impaired (BAC = 0.08+ g/dl)	637	531	494	621	901	45.1%	11.8%	
Fatal	58	48	58	45	41	-8.9%	-6.9%	
Non-fatal	258	182	150	224	355	58.5%	15.2%	
Property damage	321	301	286	352	505	43.5%	13.8%	
% Alcohol-related	9%	6%	5%	6%	6%			
Fatal	39%	32%	37%	38%	32%			
Non-fatal	12%	10%	9%	10%	10%			
Property damage	7%	4%	4%	4%	5%			
% Alcohol-impaired	3%	2%	2%	3%	4%			
Fatal	32%	24%	27%	28%	26%			
Non-fatal	4%	3%	2%	4%	6%			
Property damage	2%	2%	1%	2%	3%			

Figure 1. Relative risk of fatal collision, by dangerous driving type, 2006-2010



Source: Indiana State Police

Note: Relative risk defined as ratio of % fatal (DD involved) when alcohol involved to % Fatal (No DD involved) when alcohol is not involved.

Source: Indiana State Police

Note: Due to changes in the way alcohol-involved collisions are reported, caution should be used when comparing 2010 data to previous years.

Table 7. Injuries in dangerous driving collisions in Indiana, by collision alcohol involvement and injury severity, 2010

		C	Count of collision	ns		% Change		
	2006	2007	2008	2009	2010	'09-'10	Average annual '06-'10	
Dangerous driving collisions	11,736	11,134	10,834	9,674	9,661	-0.1%	-4.7%	
Fatal	199	222	250	186	164	-11.8%	-3.3%	
Incapacitating	767	749	777	675	744	10.2%	-0.4%	
Non-incapacitating	8,265	9,089	9,055	8,262	8,378	1.4%	0.6%	
Other	2,505	1,074	752	551	375	-31.9%	-36.4%	
Alcohol-related (BAC >= 0.01 g/dl)	1,438	1,152	1,037	983	1,071	9.0%	-6.5%	
Fatal	75	67	91	66	50	-24.2%	-6.6%	
Incapacitating	186	140	136	148	149	0.7%	-4.5%	
Non-incapacitating	952	866	768	725	833	14.9%	-2.8%	
Other	225	79	42	44	39	-11.4%	-29.6%	
Alcohol-impaired (BAC = $0.08 + g/dl$)	569	375	320	397	603	51.9%	6.8%	
Fatal	62	51	68	49	41	-16.3%	-7.2%	
Incapacitating	48	30	25	49	82	67.3%	27.3%	
Non-incapacitating	382	268	219	287	464	61.7%	11.1%	
Other	77	26	8	12	16	33.3%	-13.0%	
% Alcohol-related	12.3%	10.3%	9.6%	10.2%	11.1%			
Fatal	37.7%	30.2%	36.4%	35.5%	30.5%			
Incapacitating	24.3%	18.7%	17.5%	21.9%	20.0%			
Non-incapacitating	11.5%	9.5%	8.5%	8.8%	9.9%			
Other	9.0%	7.4%	5.6%	8.0%	10.4%			
% Alcohol-impaired	4.8%	3.4%	3.0%	4.1%	6.2%			
Fatal	31.2%	23.0%	27.2%	26.3%	25.0%			
Incapacitating	6.3%	4.0%	3.2%	7.3%	11.0%			
Non-incapacitating	4.6%	2.9%	2.4%	3.5%	5.5%			
Other	3.1%	2.4%	1.1%	2.2%	4.3%			

Source: Indiana State Police

RESTRAINT USE

Restraint use rates for all occupants and occupants in vehicles driving dangerously increased on average each year from 2006 to 2010 (Table 8). However, while restraint use rates for all occupants increased 0.2 percent

from 2009 to 2010, rates decreased marginally for occupants in vehicles driving dangerously. Additionally, in 2010, restraint use rates were lower for occupants of vehicles driving dangerously, compared to restraint use rates for all individuals.

Table 8. Safety equipment use rates for vehicle occupants involved in Indiana collisions, by vehicle-specific dangerous driving involvement and injury status, 2006-2010

		Safety	Change (percentage points)				
Dangerour driving type/injury status	2006	2007	2008	2009	2010	'09-'10	Average annual '06-'10
Aggressive	93.2%	94.5%	95.9%	96.7%	95.4%	-1.3	0.6
Fatal	28.6%	38.5%	16.7%	75.0%	40.0%	-35.0	70.3
Incapacitating	57.9%	56.9%	74.3%	69.8%	62.7%	-7.1	3.1
Non-incapacitating	84.8%	83.8%	86.4%	87.4%	87.9%	0.5	0.9
Other	93.7%	93.6%	92.5%	98.2%	96.8%	-1.4	0.9
Not injured	96.7%	97.8%	98.5%	98.8%	97.9%	-0.9	0.3
Disregard signal	96.2%	96.4%	97.8%	97.7%	97.3%	-0.4	0.3
Fatal	50.0%	77.8%	62.5%	40.0%	10.0%	-30.0	-18.8
Incapacitating	79.1%	78.3%	87.5%	84.0%	80.3%	-3.7	0.6
Non-incapacitating	92.9%	92.2%	93.4%	94.7%	93.7%	-1.0	0.2
Other	98.7%	97.3%	98.7%	98.4%	100.0%	1.6	0.3
Not injured	97.6%	98.0%	99.4%	99.0%	99.0%	0.0	0.4
Speed	86.7%	90.3%	93.7%	93.9%	93.7%	-0.1	2.0
Fatal	33.3%	26.1%	34.1%	35.5%	35.3%	-0.2	3.1
Incapacitating	45.6%	47.1%	59.8%	55.3%	54.8%	-0.5	5.5
Non-incapacitating	74.0%	76.7%	82.5%	82.6%	83.5%	0.8	3.1
Other	91.6%	92.4%	94.0%	96.2%	93.2%	-3.0	0.4
Not injured	93.8%	96.2%	97.7%	98.2%	97.9%	-0.3	1.1
All individuals	94.4%	95.8%	97.0%	97.2%	97.4%	0.2	0.8
Fatal	41.7%	46.1%	44.8%	47.7%	47.9%	0.2	3.6
Incapacitating	63.7%	63.1%	69.5%	68.8%	71.3%	2.4	3.0
Non-incapacitating	86.1%	87.6%	89.0%	89.7%	90.3%	0.6	1.2
Other	95.7%	96.5%	97.4%	98.1%	96.8%	-1.3	0.3
Not injured	96.7%	97.8%	98.8%	98.9%	99.0%	0.1	0.6

Source: Indiana State Police

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Note: Data exclude individuals with unknown or invalid safety equipment type.

LICENSE STATUS & TRAFFIC OFFENSES

Compared to drivers in collisions not engaged in dangerous driving actions, drivers who were engaged in dangerous driving actions were less likely to have a valid license and more likely to have a suspended, revoked or habitual traffic violator license status at the time of collision (Table 9). Dangerous drivers were also more likely to have traffic convictions in the past five years and nearly twice as likely to have five or more traffic offenses as those not driving dangerously (Figure 7).

	Driving	Not driving		As % of tota	Relative likelihood	
License status	dangerously	dangerously	All drivers	Driving dangerously (DD)	Not driving dangerously (NDD)	of license status (DD/NDD)
Valid	15,612	202,527	218,139	79.4%	84.9%	0.9
Suspended for infraction	2,964	28,398	31,362	15.1%	11.9%	1.3
Suspended for prior conviction	471	3,331	3,802	2.4%	1.4%	1.7
Revoked license	188	1,643	1,831	1.0%	0.7%	1.4
Unlicensed	221	1,330	1,551	1.1%	0.6%	2.0
Suspended for misdemeanor	102	728	830	0.5%	0.3%	1.7
Habitual traffic violator	42	212	254	0.2%	0.1%	2.4
Other status	60	406	466	0.3%	0.2%	1.8
TOTAL (where status known)	19,660	238,575	258,235	100%	100%	
% non-valid	20.6%	15.1%	15.5%			
Suspended	18.0%	13.6%	13.9%			
Unlicensed/revoked	2.1%	1.2%	1.3%			
Other non-valid	0.3%	0.2%	0.2%			

Table 9. License status of drivers involved in Indiana collisions, by dangerous driving involvement, 2010

Sources: Indiana Bureau of Motor Vehicles; Indiana State Police

Note: Limited to drivers where license status was known at the time of the crash.



Figure 7. Proportion of drivers in collisions with prior traffic convictions, by dangerous driving involvement, 2010

Sources: Indiana Bureau of Motor Vehicles; Indiana State Police

Note: Excludes non-pointable (i.e., violations that do not incur points on a driver's record) and non-vehicle related violations.

DEFINITIONS

• Aggressive driving applies when the investigating officer determines that a driver was engaged in at least two of the following: Unsafe speed; 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 applies when a driver takes any of the above actions in a collision.

- Non-fatal collision severity applies when no fatalities and at least one incapacitating, non-incapacitating, or possible injury occurred.
- Non-fatal injury includes incapacitating, non-incapacitating, possible, not reported, unknown, refused (treatment), and invalid injury categories.

Other injury status includes not reported, unknown, refused (treatment), and invalid injury categories.

• Light truck includes sport utility vehicles, vans, and pickup trucks with gross vehicle weight less than 10,000 pounds.

Large truck includes *truck* (*single 2 axle, 6 tires*), *truck* (*single 3 or more axles*), *truck/trailer* (*not semi*), *tractor/one semi trailer*, *tractor/double trailer*, *tractor/trailer*, *tractor/double trailer*, *tractor/trailer*, *tractor/double trailer*, *tractor/double trailer*, *tractor/trailer*, *tractor/double trailer*, *tractor/double trailer*, *tractor/trailer*, *tractor/double trailer*, *tractor/trailer*, *tractor/double trailer*, *tractor/double trailer*, *tractor/trailer*, *tractor/trailer*, *tractor/double trailer*, *tractor/double trailer*, *tractor/trailer*, *tractor/double trailer*, *tractor/trailer*, *tractor/double trailer*, *tractor/trailer*, *tractor/trailer*, *tractor/trailer*, *tractor/trailer*, *tractor/trailer*, *tractor/double trailer*, *tractor/trailer*, *tractor/trail*

- Locale—Urban is defined as Census 2000 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).
- *Restraint use*—Vehicle occupants injured in Indiana collisions are counted as having been restrained when the investigating officer selected any one of the following passenger vehicle safety equipment categories on the Indiana Crash Report: (1) *Lap belt only;* (2) *Harness;* (3) *Airbag deployed and harness;* (4) *Child restraint;* or (5) *Lap and harness.*

DATA SOURCES

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2011

Indiana Bureau of Motor Vehicles, current as of March 1, 2011

- Bureau of Transportation Statistics, State Transportation Statistics, current as of March 15, 2011. http://www.bts.gov/publications/state_ transportation_statistics/
- Fatality Analysis Reporting System, National Highway Traffic Safety Administration, current as of February 1, 2011. http://www.fars.nhtsa.dot.gov/Main/index.aspx

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

This publication is one of a series of fact sheets that, along with the annual Indiana Crash Fact Book, form the analytical foundation of traffic safety program planning and design in the state of Indiana. Funding for these publications is provided by the ICJI and the National Highway Traffic Safety Administration.

An electronic copy of this document can be accessed via the CCJR website (www.ccjr.iupui.edu), the ICJI website (www.in.gov/cji/), or you may contact the Center for Criminal Justice Research at 317-261-3000.



CENTER FOR CRIMINAL JUSTICE RESEARCH





Traffic Safety Project

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.

Designing and implementing effective traffic safety policies requires data-driven analysis of traffic collisions. To help in the policy-making process, the Indiana University Center for Criminal Justice Research is collaborating with the Indiana Criminal Justice Institute to analyze 2010 vehicle crash data from the Automated Reporting Information Exchange System (ARIES), maintained by the Indiana State Police. This marks the fifth year of this partnership. Research findings will be summarized in a series of fact sheets on various aspects of traffic collisions, including alcohol-related crashes, light and large trucks, dangerous driving, children, motorcycles, occupant protection, and drivers. An additional publication will provide information on county and municipality data and the final publication will be the annual Indiana Crash Fact Book. 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. As of December 31, 2010, approximately 99 percent of all collisions are entered electronically through ARIES. Trends in collisions incidence as reported in these publications could 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. 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 Indiana University (IU) Public Policy Institute is a collaborative, multidisciplinary research institute within the Indiana University School of Public and Environmental Affairs (SPEA), Indianapolis. The Institute serves as an umbrella organization for research centers affiliated with SPEA, including the Center for Urban Policy and the Environment and the Center for Criminal Justice Research. The Institute also supports the Office of International Community Development and the Indiana Advisory Commission on Intergovernmental Relations (IACIR).

The Center for Criminal Justice Research

The Center for Criminal Justice Research, one of two applied research centers currently affiliated with the Indiana University Public Policy Institute, works with public safety agencies and social services organizations to provide impartial applied research on criminal justice and public safety issues. CCJR provides analysis, evaluation, and assistance to criminal justice agencies; and community information and education on public safety questions. CCJR research topics include traffic safety, crime prevention, criminal justice systems, drugs and alcohol, policing, violence and victimization, and youth.

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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