A dangerous driving collision is defined as any collision where a driver takes any 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 21, 2014.

About three-quarters of Indiana dangerous driving collisions typically involve excessive speed. A recent publication by the National Highway Traffic Safety Administration (NHTSA) summarizes national attitudes and behavior on speeding. According to NHTSA, nearly half of all drivers, nationally, believe that speeding (the most common form of dangerous driving in Indiana) is a serious problem on U.S. roads; however, 25 percent of survey respondents admitted "speeding is something I do without thinking" (DOT HS 811 865).

The number of Indiana collisions involving dangerous driving increased for the first time since 2009 (from 22,527 collisions in 2012 to 24,768 collisions in 2013) (Figure 1). The rate of dangerous driving collisions per 1,000 total collisions also reached a five-year high of 128.3 per 1,000 in 2013.

**HIGHLIGHTS**

- In 2013, 24,768 of the 193,013 traffic collisions (13 percent) that occurred in Indiana involved one or more actions defined as dangerous driving.
- Thirty-three percent (253 of 777) of 2013 Indiana traffic fatalities occurred in dangerous driving collisions; 28 percent (214 of 777) of traffic fatalities occurred in collisions that involved a speeding driver.
- Male drivers, ages 15 to 20, represented the highest percentage of drivers engaged in dangerous driving behaviors in 2013 crashes across all age and gender categories.
- Twenty-eight percent of fatal dangerous driving collisions (61 of 219) involved a driver who was legally alcohol-impaired (BAC = 0.08+ g/DL).
- The relative risk of a fatality in 2013 crashes was 3.1 times greater when any type of dangerous driving was involved, and 3.3 times greater when speeding was involved.

**Figure 1. Indiana collisions that involve dangerous driving, 2009-2013**

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

Nearly 13 percent of all 2013 collisions and 31 percent of all fatal collisions involved dangerous driving in 2013 (Table 1). The number of fatal dangerous driving collisions increased 14 percent from 2012 to 2013. When looking closer at specific dangerous driving actions, 3 percent (5,039) of all 2013 Indiana collisions involved aggressive driving, and 2 percent (4,171) involved a driver disregarding a signal. Ten percent (18,571) of all Indiana collisions involved speeding, and 26 percent (183 of 703) of all fatal collisions involved speeding (calculated from Table 1).

Table 1. Indiana collisions, by dangerous driving involvement and collision severity, 2009-2013

<table>
<thead>
<tr>
<th>Dangerous driving type/ Collision severity</th>
<th>Count of collisions</th>
<th>Annual rate of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total collisions</td>
<td>189,661</td>
<td>192,885</td>
</tr>
<tr>
<td>Fatal</td>
<td>631</td>
<td>701</td>
</tr>
<tr>
<td>Non-fatal injury</td>
<td>33,410</td>
<td>34,083</td>
</tr>
<tr>
<td>Property damage</td>
<td>155,620</td>
<td>158,101</td>
</tr>
<tr>
<td>All dangerous driving collisions</td>
<td>24,027</td>
<td>24,391</td>
</tr>
<tr>
<td>Fatal</td>
<td>160</td>
<td>155</td>
</tr>
<tr>
<td>Non-fatal injury</td>
<td>6,006</td>
<td>6,078</td>
</tr>
<tr>
<td>Property damage</td>
<td>17,861</td>
<td>18,158</td>
</tr>
<tr>
<td>Dangerous driving as % of total</td>
<td>12.7%</td>
<td>12.6%</td>
</tr>
<tr>
<td>Fatal</td>
<td>25.4%</td>
<td>22.1%</td>
</tr>
<tr>
<td>Non-fatal injury</td>
<td>18.0%</td>
<td>17.8%</td>
</tr>
<tr>
<td>Property damage</td>
<td>11.5%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Aggressive</td>
<td>3,947</td>
<td>4,133</td>
</tr>
<tr>
<td>Fatal</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>Non-fatal injury</td>
<td>982</td>
<td>1,125</td>
</tr>
<tr>
<td>Property damage</td>
<td>2,943</td>
<td>2,988</td>
</tr>
<tr>
<td>Disregard signal</td>
<td>3,983</td>
<td>4,011</td>
</tr>
<tr>
<td>Fatal</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Non-fatal injury</td>
<td>1,506</td>
<td>1,519</td>
</tr>
<tr>
<td>Property damage</td>
<td>2,463</td>
<td>2,477</td>
</tr>
<tr>
<td>Speed</td>
<td>18,251</td>
<td>18,580</td>
</tr>
<tr>
<td>Fatal</td>
<td>136</td>
<td>136</td>
</tr>
<tr>
<td>Non-fatal injury</td>
<td>4,117</td>
<td>4,143</td>
</tr>
<tr>
<td>Property damage</td>
<td>13,998</td>
<td>14,271</td>
</tr>
</tbody>
</table>
| Source: Indiana State Police Automated Reporting Information Exchange System, as of March 21, 2014

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

Table 2. Risk of fatality in dangerous driving collisions, by dangerous driving (DD) action, 2013

<table>
<thead>
<tr>
<th>Dangerous driving action</th>
<th>DD type? (Y/N)</th>
<th>Fatal</th>
<th>Non-fatal</th>
<th>Total</th>
<th>% Fatal</th>
<th>Relative risk</th>
<th>Lower limit</th>
<th>Upper limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressive driving</td>
<td>Yes</td>
<td>54</td>
<td>4,985</td>
<td>5,039</td>
<td>1.1%</td>
<td>3.1</td>
<td>2.4</td>
<td>4.1</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>649</td>
<td>187,325</td>
<td>187,974</td>
<td>0.3%</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Disregard signal</td>
<td>Yes</td>
<td>18</td>
<td>4,153</td>
<td>4,171</td>
<td>0.4%</td>
<td>1.2</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>685</td>
<td>188,157</td>
<td>188,842</td>
<td>0.4%</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Speeding</td>
<td>Yes</td>
<td>183</td>
<td>18,388</td>
<td>18,571</td>
<td>1.0%</td>
<td>3.3</td>
<td>2.8</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>520</td>
<td>173,922</td>
<td>174,442</td>
<td>0.3%</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>All dangerous driving</td>
<td>Yes</td>
<td>219</td>
<td>24,549</td>
<td>24,768</td>
<td>0.9%</td>
<td>3.1</td>
<td>2.6</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>484</td>
<td>167,761</td>
<td>168,245</td>
<td>0.3%</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
</tbody>
</table>

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

Notes:
1) Dangerous driving categories are not mutually exclusive. All dangerous driving may not equal total of individual categories.
2) Relative risk defined as ratio of % fatal (dangerous driving type involved) to % fatal (no dangerous driving involved).
3) Non-fatal collisions include incapacitating, non-incapacitating, and property damage collision severity categories.
4) With the exception of disregarding a traffic signal, all relative risk ratios are significant at p<0.05. For example, in 95 out of 100 cases, the relative risk would fall within the lower and upper limit range presented.
The number of individuals suffering fatal or incapacitating injuries in dangerous driving collisions decreased 3 percent between 2012 (1,059) and 2013 (1,024) (calculated from Figure 2). The 2012-2013 decline in fatal and incapacitating injuries was the first in dangerous driving collisions since 2009. The rate of fatal and incapacitating injuries per 1,000 involved in dangerous driving collisions reached a five year high in 2012 at 27.7 per 1,000, before declining to 24.6 in 2013. The number of individuals injured in dangerous driving collisions grew 4 percent between 2012 and 2013, increasing from 9,581 to 9,979 (Table 3). The number of individuals killed in dangerous driving collisions increased 22 percent during this same period. The only dangerous driving type that saw a decline (-1 percent) in overall injuries between 2012 and 2013 occurred in collisions that involved a driver who disregarded a traffic signal. The most dramatic increase in 2013 was seen in fatal injuries that occurred in aggressive driving collisions (75 percent). Injuries that occurred in speeding collisions increased 5 percent, while speed-related fatalities increased 22 percent between 2012 and 2013.

![Figure 2. Fatal and incapacitating injuries in Indiana dangerous driving collisions, 2009-2013](image)

**Table 3. Injuries in Indiana collisions, by dangerous driving involvement and injury status, 2009-2013**

<table>
<thead>
<tr>
<th>Dangerous driving type/Injury status</th>
<th>Count of injuries</th>
<th>Annual rate of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total injuries in ALL collisions</td>
<td>51,419</td>
<td>50,844</td>
</tr>
<tr>
<td>Fatal</td>
<td>692</td>
<td>754</td>
</tr>
<tr>
<td>Non-fatal</td>
<td>50,727</td>
<td>50,090</td>
</tr>
<tr>
<td>All dangerous driving collisions</td>
<td>9,672</td>
<td>9,656</td>
</tr>
<tr>
<td>Fatal</td>
<td>186</td>
<td>164</td>
</tr>
<tr>
<td>Non-fatal</td>
<td>9,486</td>
<td>9,492</td>
</tr>
<tr>
<td>Dangerous driving as % of total</td>
<td>18.8%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Fatal</td>
<td>26.9%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Non-fatal</td>
<td>18.7%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Aggressive</td>
<td>1,626</td>
<td>1,951</td>
</tr>
<tr>
<td>Fatal</td>
<td>25</td>
<td>21</td>
</tr>
<tr>
<td>Non-fatal</td>
<td>1,601</td>
<td>1,930</td>
</tr>
<tr>
<td>Disregard signal</td>
<td>2,576</td>
<td>2,606</td>
</tr>
<tr>
<td>Fatal</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Non-fatal</td>
<td>2,560</td>
<td>2,591</td>
</tr>
<tr>
<td>Speed</td>
<td>6,488</td>
<td>6,348</td>
</tr>
<tr>
<td>Fatal</td>
<td>158</td>
<td>145</td>
</tr>
<tr>
<td>Non-fatal</td>
<td>6,330</td>
<td>6,203</td>
</tr>
</tbody>
</table>

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

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

Dangerous driving behavior can be linked to both age and gender of vehicle operators. Table 4 illustrates that the likelihood of drivers engaging in dangerous driving behavior decreases with age. Between 2009 and 2013, male drivers under the age of 25 consistently represented the highest proportion of drivers in dangerous driving collisions. In 2013, 15 percent of male drivers and 11 percent of female drivers in the 15- to 20-year-old age group engaged in dangerous driving behavior in collisions, while only 5 percent of male drivers and 6 percent of female drivers in the 75+ age group were reported to drive dangerously in collisions.

**Table 4. Proportion of drivers engaged in dangerous driving behaviors in Indiana collisions, by age group and gender, 2009-2013**

<table>
<thead>
<tr>
<th>Age group</th>
<th>2009 Male</th>
<th>2009 Female</th>
<th>2010 Male</th>
<th>2010 Female</th>
<th>2011 Male</th>
<th>2011 Female</th>
<th>2012 Male</th>
<th>2012 Female</th>
<th>2013 Male</th>
<th>2013 Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
<td>14.1%</td>
<td>9.9%</td>
<td>14.3%</td>
<td>10.1%</td>
<td>14.0%</td>
<td>10.2%</td>
<td>14.0%</td>
<td>9.5%</td>
<td>14.6%</td>
<td>11.0%</td>
</tr>
<tr>
<td>21-24</td>
<td>12.4%</td>
<td>9.5%</td>
<td>12.1%</td>
<td>9.0%</td>
<td>12.2%</td>
<td>9.2%</td>
<td>12.2%</td>
<td>8.3%</td>
<td>12.7%</td>
<td>10.0%</td>
</tr>
<tr>
<td>25-34</td>
<td>9.7%</td>
<td>7.8%</td>
<td>9.9%</td>
<td>7.5%</td>
<td>9.4%</td>
<td>7.5%</td>
<td>9.4%</td>
<td>6.8%</td>
<td>10.6%</td>
<td>7.6%</td>
</tr>
<tr>
<td>35-44</td>
<td>7.4%</td>
<td>6.2%</td>
<td>7.3%</td>
<td>6.3%</td>
<td>7.1%</td>
<td>6.2%</td>
<td>7.1%</td>
<td>5.6%</td>
<td>7.5%</td>
<td>6.4%</td>
</tr>
<tr>
<td>45-54</td>
<td>6.1%</td>
<td>5.2%</td>
<td>6.3%</td>
<td>5.0%</td>
<td>6.3%</td>
<td>5.3%</td>
<td>6.3%</td>
<td>5.2%</td>
<td>6.2%</td>
<td>5.2%</td>
</tr>
<tr>
<td>55-64</td>
<td>5.3%</td>
<td>5.2%</td>
<td>5.6%</td>
<td>4.9%</td>
<td>5.3%</td>
<td>4.8%</td>
<td>5.3%</td>
<td>4.4%</td>
<td>5.5%</td>
<td>4.6%</td>
</tr>
<tr>
<td>65-74</td>
<td>4.8%</td>
<td>4.4%</td>
<td>4.8%</td>
<td>4.5%</td>
<td>5.0%</td>
<td>4.5%</td>
<td>5.0%</td>
<td>4.8%</td>
<td>4.9%</td>
<td>4.7%</td>
</tr>
<tr>
<td>75+</td>
<td>5.0%</td>
<td>5.1%</td>
<td>5.8%</td>
<td>5.3%</td>
<td>5.5%</td>
<td>5.1%</td>
<td>5.5%</td>
<td>5.1%</td>
<td>5.2%</td>
<td>5.6%</td>
</tr>
<tr>
<td>All ages</td>
<td>8.7%</td>
<td>7.1%</td>
<td>8.8%</td>
<td>6.9%</td>
<td>8.5%</td>
<td>7.0%</td>
<td>8.5%</td>
<td>6.4%</td>
<td>8.9%</td>
<td>7.2%</td>
</tr>
</tbody>
</table>

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

Note: Data limited to drivers with valid gender and age reported.
RESTRAINT USE AND DANGEROUS DRIVING

Restraint use rates among vehicle occupants involved in dangerous driving collisions decreased annually between 2009 and 2013 across all injury categories, with the exception of not injured (Table 5). Among individuals killed in dangerous driving collisions, the rate of restraint use remained largely unchanged between 2012 and 2013. Consistent with other traffic safety analyses, the rate of restraint use among individuals involved in dangerous driving collisions decreases as the severity of injury increases.

For example, among those who sustained no injuries in dangerous driving collisions in 2013, the rate of restraint use was 91 percent, while only 33 percent of individuals killed in dangerous driving collisions were restrained. The relative risk of obtaining a fatal or incapacitating injury in a collision was more than 4 times higher among dangerously driven vehicle occupants who were not wearing safety restraints than for those who were restrained (Table 6). All relative risk ratios for all dangerous driving types were significant at p<0.05.

Table 5. Individuals in vehicles where driver was reported to be driving dangerously, by restraint use and injury status, 2009-2013

<table>
<thead>
<tr>
<th>Vehicle occupant injuries in dangerous driving collisions</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Annual rate of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>All occupants</td>
<td>24,821</td>
<td>25,092</td>
<td>23,975</td>
<td>23,394</td>
<td>25,623</td>
<td>9.5% 0.8%</td>
</tr>
<tr>
<td>Restraint use rate</td>
<td>87.7%</td>
<td>87.6%</td>
<td>87.2%</td>
<td>86.4%</td>
<td>87.5%</td>
<td>1.2% -0.1%</td>
</tr>
<tr>
<td>Fatalities</td>
<td>153</td>
<td>130</td>
<td>136</td>
<td>160</td>
<td>207</td>
<td>29.4% 7.8%</td>
</tr>
<tr>
<td>Restraint use rate</td>
<td>35.3%</td>
<td>29.2%</td>
<td>33.8%</td>
<td>32.5%</td>
<td>33.3%</td>
<td>2.6% -1.4%</td>
</tr>
<tr>
<td>Incapacitating injuries</td>
<td>467</td>
<td>532</td>
<td>533</td>
<td>575</td>
<td>541</td>
<td>-5.9% 3.7%</td>
</tr>
<tr>
<td>Restraint use rate</td>
<td>53.7%</td>
<td>55.3%</td>
<td>52.2%</td>
<td>50.4%</td>
<td>49.9%</td>
<td>-1.0% -1.8%</td>
</tr>
<tr>
<td>Non-incapacitating injuries</td>
<td>4,730</td>
<td>4,802</td>
<td>4,590</td>
<td>4,719</td>
<td>4,953</td>
<td>5.0% 1.2%</td>
</tr>
<tr>
<td>Restraint use rate</td>
<td>79.8%</td>
<td>80.9%</td>
<td>78.9%</td>
<td>78.0%</td>
<td>79.4%</td>
<td>-0.8% -0.1%</td>
</tr>
<tr>
<td>Other injuries</td>
<td>322</td>
<td>201</td>
<td>180</td>
<td>208</td>
<td>221</td>
<td>6.3% -9.0%</td>
</tr>
<tr>
<td>Restraint use rate</td>
<td>87.9%</td>
<td>84.6%</td>
<td>82.2%</td>
<td>83.2%</td>
<td>83.3%</td>
<td>0.1% -1.3%</td>
</tr>
<tr>
<td>Not injured</td>
<td>19,149</td>
<td>19,427</td>
<td>18,536</td>
<td>17,732</td>
<td>19,701</td>
<td>11.1% 0.7%</td>
</tr>
<tr>
<td>Restraint use rate</td>
<td>90.8%</td>
<td>90.6%</td>
<td>90.7%</td>
<td>90.4%</td>
<td>91.1%</td>
<td>0.9% 0.1%</td>
</tr>
</tbody>
</table>

Source: Indiana State Police Automated Reporting Information Exchange System, as of March 21, 2014
Note: Counts are limited to drivers and injured vehicle occupants in vehicles where driver was driving dangerously.

Table 6. Risk of fatal and incapacitating injury to occupants of vehicles driven dangerously, by dangerous driving action and restraint use, 2013

<table>
<thead>
<tr>
<th>Dangerous driving action</th>
<th>Restraint?</th>
<th>Fatal and incapacitating injuries</th>
<th>Non-serious injuries</th>
<th>Total</th>
<th>% Fatal/incap injury</th>
<th>Relative risk</th>
<th>Lower limit</th>
<th>Upper limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressive driving</td>
<td>No</td>
<td>41</td>
<td>118</td>
<td>159</td>
<td>25.8%</td>
<td>3.3</td>
<td>2.3</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>61</td>
<td>716</td>
<td>777</td>
<td>7.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disregard signal</td>
<td>No</td>
<td>13</td>
<td>53</td>
<td>66</td>
<td>19.7%</td>
<td>4.4</td>
<td>2.5</td>
<td>7.7</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>45</td>
<td>958</td>
<td>1,003</td>
<td>4.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speeding</td>
<td>No</td>
<td>308</td>
<td>635</td>
<td>943</td>
<td>32.7%</td>
<td>3.8</td>
<td>3.3</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>272</td>
<td>2,892</td>
<td>3,164</td>
<td>8.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All dangerous driving</td>
<td>No</td>
<td>329</td>
<td>722</td>
<td>1,051</td>
<td>31.3%</td>
<td>4.1</td>
<td>3.6</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>339</td>
<td>4,117</td>
<td>4,456</td>
<td>7.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Indiana State Police Automated Reporting Information Exchange System, as of March 21, 2014
Notes:
1) Limited to drivers and injured occupants of vehicles driven dangerously with valid restraint use identified. NULL restraint use values are excluded.
2) Non-serious injuries excludes NULL values in the injury status code field.
3) Relative risk of fatal/incap injury = the percent of unrestrained fatal/incap injuries in a given dangerous driving type divided by the percent of restrained fatal/incap injuries in the same dangerous driving type.
4) All relative risk ratios are significant at p<0.05. For example, in 95 out of 100 cases, the relative risk would fall within the lower and upper limit range presented.
5) Dangerous driving categories are not mutually exclusive. All dangerous driving may not equal total of individual categories.
DANGEROUS DRIVING BY MONTH AND TIME OF DAY

Figure 3 shows the number of dangerous driving collisions by month and time of day (day/night). The monthly average count of daytime dangerous driving collisions in 2013 was 1,344. The monthly average of nighttime dangerous driving collisions was 720. The months with monthly totals of dangerous driving collisions that exceeded the monthly average (for both daytime and nighttime collisions) were the winter months of December, January, February, and March.

In 2013, hourly rates of fatal and incapacitating injury collisions and speed-related collisions generally followed a similar pattern, with both peaking in late overnight hours (Figure 4). The highest hourly percentage of speeding collisions occurred on Mondays, Wednesdays, and Thursdays between midnight and 4am (19 percent). The highest hourly percentage of fatal and incapacitating injury collisions occurred on Saturdays between 3am and 4am (6 percent).
GEOGRAPHY OF DANGEROUS DRIVING IN INDIANA

Figure 5 shows 2013 Indiana dangerous driving collisions by locale. The number of dangerous driving collisions that occurred in urban areas was 15,872 (69 percent of all dangerous driving collisions, where locale was known). When looking at the proportion of dangerous driving collisions within each locale, the highest proportions occurred in suburban (15 percent) and exurban (14 percent) areas.

Map 1 shows the percentage of county collisions that involved dangerous driving in 2013. The map illustrates clusters of counties with higher dangerous driving collision rates located in the far northern region of the state. Pike County, located in southwestern Indiana, had the highest percentage of dangerous driving collisions (24 percent), while Union County, located in eastern Indiana, had the lowest percentage of dangerous driving collisions (41 percent). The median rate of county dangerous driving collisions was 10.8 percent, while the mean rate was 11.5 percent.

Figure 5. Indiana collisions involving dangerous driving, by locale, 2013

<table>
<thead>
<tr>
<th>Dangerous driving collisions counts (bars)</th>
<th>Dangerous driving collisions as a % of total collisions (lines)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>15,872 12.2%</td>
</tr>
<tr>
<td>Suburban</td>
<td>3,735 15.3%</td>
</tr>
<tr>
<td>Exurban</td>
<td>1,663 14.3%</td>
</tr>
<tr>
<td>Rural</td>
<td>1,802 12.7%</td>
</tr>
</tbody>
</table>

Source: Indiana State Police Automated Reporting Information Exchange System, as of March 21, 2014
Map 1. Percentage of county collisions that involved dangerous driving behavior, 2013

Median percent = 10.8
Mean percent = 11.5
n = 24,768 dangerous driving collisions

Source: Indiana State Police Automated Reporting Information Exchange System, as of March 21, 2014
ALCOHOL AND DANGEROUS DRIVING

In 2013, four percent of all dangerous driving collisions (976 of 24,768) involved an alcohol-impaired driver. Twenty-eight percent of fatal dangerous driving collisions involved a legally impaired driver (Table 7). The relative risk of fatal and incapacitating injury is 2.2 times greater for drivers in dangerous driving collisions when the driver is legally impaired. Aggressive drivers who were legally impaired were 2.4 times more likely to suffer fatal and incapacitating injuries than those who were not impaired (Table 8). With the exception of disregard signal, relative risk ratios for all dangerous driving types were significant at p<0.05.

Table 7. Dangerous driving (DD) collisions in Indiana, by alcohol impairment and collision severity, 2009-2013

<table>
<thead>
<tr>
<th></th>
<th>Count of collisions</th>
<th>Annual rate of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous driving collisions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fatal</td>
<td>160</td>
<td>155</td>
</tr>
<tr>
<td>Non-fatal</td>
<td>6,006</td>
<td>6,078</td>
</tr>
<tr>
<td>Property damage</td>
<td>17,861</td>
<td>18,158</td>
</tr>
<tr>
<td>DD alcohol-impaired (BAC = 0.08+ g/DL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fatal</td>
<td>45</td>
<td>41</td>
</tr>
<tr>
<td>Non-fatal</td>
<td>224</td>
<td>355</td>
</tr>
<tr>
<td>Property damage</td>
<td>352</td>
<td>505</td>
</tr>
<tr>
<td>% DD alcohol-impaired</td>
<td>2.6%</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

Table 8. Risk of fatal and incapacitating injury to drivers of vehicles driven dangerously, by dangerous driving action and alcohol impairment, 2013

<table>
<thead>
<tr>
<th>Dangerous driving action</th>
<th>Driver alcohol-impaired?</th>
<th>Fatal/incap injuries</th>
<th>Non-serious injuries</th>
<th>Total</th>
<th>% Fatal/incap injury</th>
<th>Relative risk</th>
<th>Lower limit</th>
<th>Upper limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressive driving</td>
<td>No</td>
<td>62</td>
<td>607</td>
<td>669</td>
<td>9.3%</td>
<td>2.4</td>
<td>1.5</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>16</td>
<td>56</td>
<td>72</td>
<td>22.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disregard signal</td>
<td>No</td>
<td>43</td>
<td>765</td>
<td>808</td>
<td>5.3%</td>
<td>0.9</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>1</td>
<td>21</td>
<td>22</td>
<td>4.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speeding</td>
<td>No</td>
<td>377</td>
<td>2,481</td>
<td>2,858</td>
<td>13.2%</td>
<td>2.0</td>
<td>1.7</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>94</td>
<td>258</td>
<td>352</td>
<td>26.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All dangerous driving</td>
<td>No</td>
<td>439</td>
<td>3,458</td>
<td>3,897</td>
<td>11.3%</td>
<td>2.2</td>
<td>1.8</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>96</td>
<td>288</td>
<td>384</td>
<td>25.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Notes:
1) Limited to drivers of vehicles driven dangerously.
2) Non-serious injuries excludes NULL values in the injury status code field.
3) Relative risk of fatal/incapacitating injury = the percent of alcohol-impaired fatal/incap injuries in a given dangerous driving type divided by the percent of non-impaired fatal/incap injuries in the same dangerous driving type.
4) With the exception of Disregard signal, all relative risk ratios are significant at p<0.05. For example, in 95 out of 100 cases, the relative risk would fall within the lower and upper limit range presented.
5) Dangerous driving categories are not mutually exclusive; All dangerous driving may not equal total of individual categories.
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 2009 to 2013, it is calculated as (Value in 2013 / Value in 2009)\(^{1/4}\) – 1.

- **Census locale** — *Urban* is defined as Census 2000 Urban Areas (2007-2009) or Census 2010 Urban Areas (2010-2011), *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).

- **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, and refused (treatment) injury categories.

- **Non-incapacitating** injuries include those injuries reported as non-incapacitating or possible.

- **Not injured** status includes individuals involved in collisions reported as null values in the injury status code field. NOTE: The not injured category in ARIES should include only uninjured drivers; nonetheless, vehicle occupants are sometimes reported as not injured on the crash report completed by the investigating officer.

- **Other injury** status includes not reported, unknown, and refused (treatment) status codes.

- **Restraint use** —Vehicle occupants injured in Indiana collisions are counted as having been restrained when the investigating officer selects 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.

REFERENCES


DATA SOURCES

- Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 21, 2014.
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 Public Policy Institute is collaborating with the Indiana Criminal Justice Institute to analyze 2013 vehicle crash data from the Automated Reporting Information Exchange System (ARIES), maintained by the Indiana State Police. This marks the eighth year of this partnership. Research findings are summarized in a series of fact sheets on various aspects of traffic collisions, including alcohol-related crashes, trucks, dangerous driving, children, motorcycles, occupant protection, and drivers. An additional publication provides information on county and municipality data, and the final publication produced is 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, 2013, approximately 99 percent of all collisions are entered electronically through ARIES. Trends in collisions incidence 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. 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 Public Policy Institute (PPI) is a collaborative, multidisciplinary research institute within the Indiana University School of Public and Environmental Affairs (SPEA), Indianapolis. PPI 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. PPI also supports 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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