



Speed Related

- Fact Sheet
- Crash Trees
- Possible Safety Strategy



Speed Related Fact Sheet

How Significant is the Issue?

On Iowa roadways, there were 5,088 severe injuries between 2007 and 2011 in which the crash involved a speeding driver. This is an average of 1,018 severe injuries per year and involved nearly 48% of all severe injuries during the five year period.

What are the Contributing Factors?

Age Distribution

19% of speed-related severe injuries were between the ages of 15 and 20.

Age Group	Total	Age Group	Total	Age Group	Total
<14	4%	25 - 34	18%	55 - 64	9%
15 - 20	19%	35 - 44	14%	≥65	8%
21 - 24	12%	45 - 54	15%	Other	1%

Manner of Crash/Collision Impact

69% of severe injuries involved a non-collision.

Manner of Crash Collision	Percent	Manner of Crash Collision	Percent
Non-collision	69%	Head-on	7%
Rear-end	12%	Broadside	3%

Time

Most speed related severe injuries occurred between noon - 7:59 PM (44%) and on Fri-Sun (51%).

Time of Day	Percent							Total
	M	Tu	W	Th	F	Sa	Su	
Midnight to 3:59 AM	1%	1%	1%	1%	2%	4%	4%	14%
4:00 AM to 7:59 AM	2%	1%	1%	2%	2%	2%	2%	12%
8:00 AM to 11:59 AM	3%	2%	2%	2%	2%	2%	2%	15%
Noon to 3:59 PM	3%	3%	3%	3%	3%	4%	3%	22%
4:00 PM to 7:59 PM	3%	3%	2%	3%	3%	4%	4%	22%
8:00 PM to Midnight	2%	1%	2%	2%	3%	3%	2%	15%
Total	14%	11%	11%	13%	15%	19%	17%	100%

Road and Area Type

Speed-related severe injuries were primarily in rural areas (67%).

Combining rural and urban roadways, speed related severe injuries are mostly on local roads (54%).

Jurisdiction	Rural	Urban	Total
State	31%	15%	46%
County	36%	1%	37%
City	-	17%	17%
Total	67%	33%	100%

38% of speed related severe injuries on state jurisdiction were on rural two-lane roads, while paved roads accounted for 56% of the injuries on the county system.

Jurisdiction	Facility Type	Rural	Urban	Total
State	Freeway	22%	14%	36%
	Expressway	12%	5%	17%
	Multi-Lane	<1%	9%	9%
	Two-Lane	34%	4%	38%
County	Paved	53%	3%	56%
	Unpaved	36%	<1%	36%
	Other	7%	<1%	8%
City	Multi-Lane Undivided	-	11%	11%
	Two-Lane	-	76%	76%
	Other	-	13%	13%

County

The top five counties represent 27% of speed related serious injuries in Iowa.

Top Counties	Percent
Polk	11%
Scott	5%
Linn	4%
Pottawattamie	4%
Johnson	3%

Iowa's Strategic Highway Safety Plan

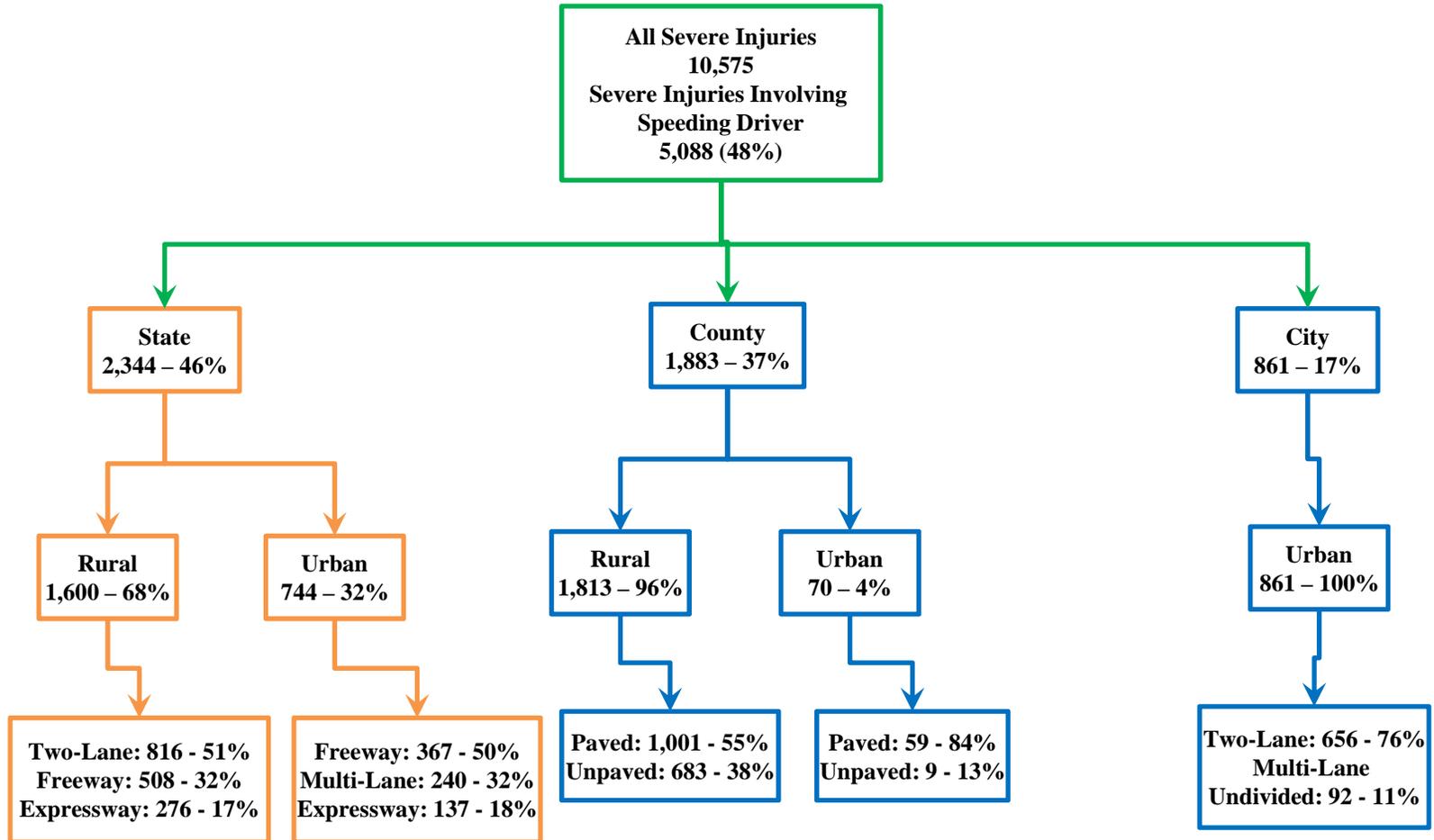
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Speed Related Crash Trees – By System

Source: Iowa Crash Records System, 2007-2011
 -- Severe injuries include fatalities and major injuries

What the Crash Data Tells Us:

- Severe injuries occurred primarily on the State (46%) and County (37%) road systems.
- Nearly 1/2 of severe speed related injuries occurred on paved 2-lane roads.
- Nearly 1/4 of severe speed related injuries occurred on state freeways and expressways.



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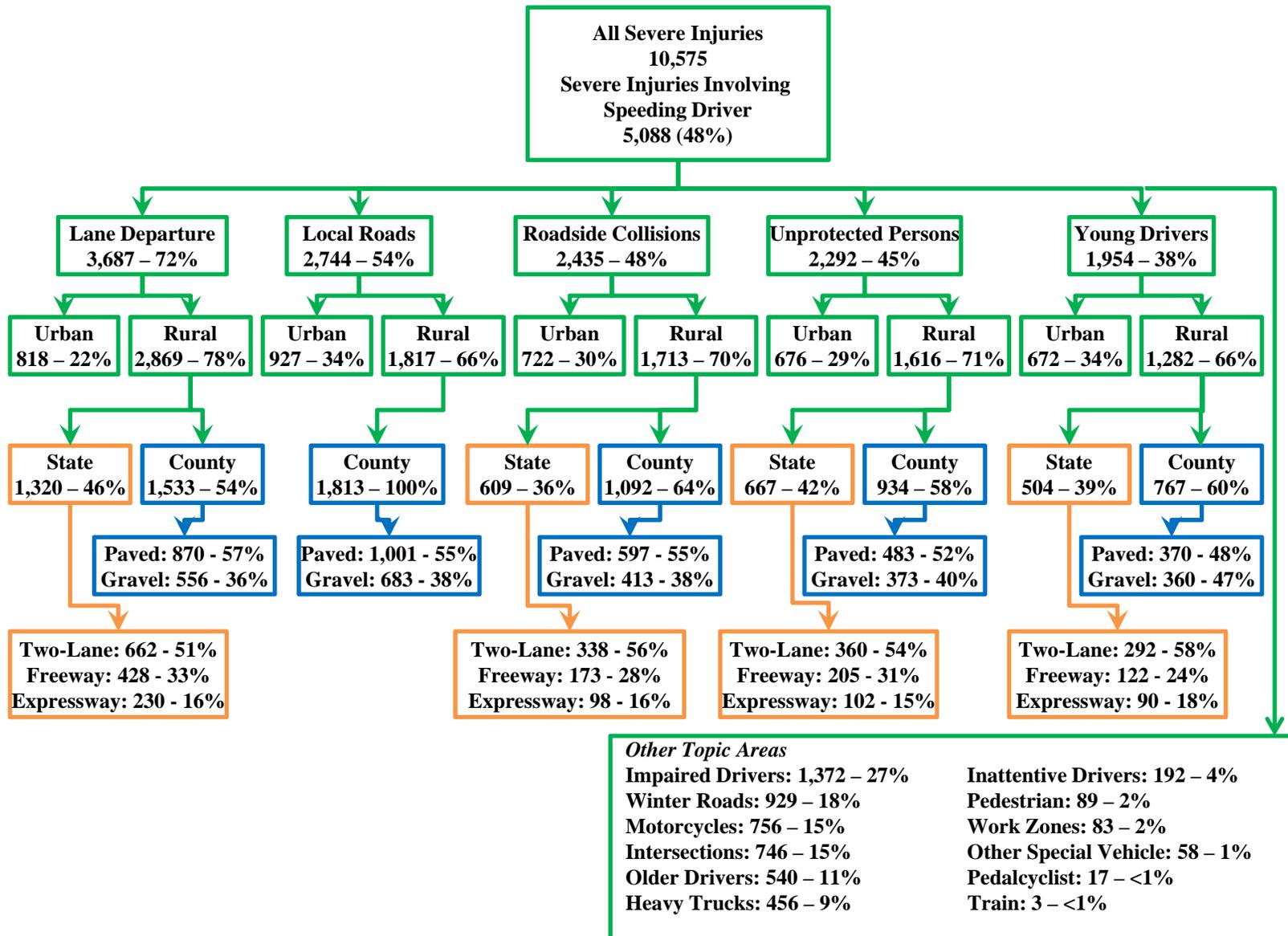
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Speed Related Crash Trees – By Topic

Source: Iowa Crash Records System, 2007-2011
 -- Severe injuries include fatalities and major injuries

What the Crash Data Tells Us:

- The following topic areas are related to speed related severe injuries:
 - Lane Departure(72%)
 - Local Roads (54%)
 - Roadside Collisions (48%)
 - Unprotected (45%)
 - Younger Drivers (38%)
- For each of the topics noted above, at least 65% of severe injuries occur on rural roads.
- For each of the topic areas noted above, paved 2-lane rural roads are most at risk.



Iowa's Strategic Highway Safety Plan

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Speed Related – Possible Strategies

Objectives	Strategies	Relative Cost to Implement and Operate	Effectiveness	Typical Timeframe for Implementation
A - Set appropriate speed limits	A1 - Set appropriate speed limits for safety which account for roadway design, traffic, and environment	Low	Tried	Short
	A2 - Implement variable speed limits	Low	Tried	Short
B - Heighten driver awareness of aggressive driving/speed-related consequences	B1 - Increase public perception of being stopped by law enforcement through highly visible enforcement including public communication campaigns	High	Tried	Medium
	B5 - Implement Safe Community Programs to support speed enforcement efforts.	Moderate	Tried	Short
	B6 - Implement employer sanction programs prohibiting the use of any electronic communication device while driving within work hours.	Low	Experimental	Medium
C - Improve efficiency and effectiveness of aggressive driving/speed enforcement efforts	C1 - Conduct highly visible, publicized and saturated enforcement campaigns at locations with higher incidence of aggressive driving/speed-related crashes	Moderate to High	Proven	Medium
	C2 - Implement automated speed enforcement	Moderate to High	Tried	Medium
	C3 - Support legislation to strengthen penalties for right of way and speed violations (e.g., speed fines)	Low	Tried	Short
	C5 - Strengthen the adjudication of speeding citations to enhance the deterrent effect of fines	Low	Tried	Short
D - Communicate appropriate speeds through use of traffic control devices	D1 - Improve speed limit signage	Low	Tried	Short
	D2 - Implement active speed warning signs	Low	Tried	Short
	D3 - Use in-pavement measures to communicate the need to reduce speeds	Moderate	Tried	Short
	D4 - Implement variable message signs (High Speed Only)	Moderate to High	Tried	Medium
E - Ensure that roadway design and traffic control elements support appropriate and safe speeds	E1 - Use combinations of geometric elements to control speeds (horizontal and vertical curves, cross section), including providing design consistency along an alignment	High	Tried	Long
	E2 - Effect safe speed transitions through design elements and on approaches to lower speed areas	High	Tried	Medium
	E3 - Provide appropriate intersection design for speed of roadway	Moderate to High	Tried	Medium
	E4 - Provide adequate change + clearance intervals at signalized intersections	Low	Proven	Short
	E8 - Install lighting at high-speed intersections (High Speed Only)	Moderate to High	Tried	Short
	E9 - Reduce speeds and/or volumes on both neighborhood and downtown streets with the use of traffic calming and other related countermeasures (Low Speed Only)	Moderate to High	Tried	Medium
F - Review crash data	F1 - Analyze data to clearly define aggressive driving and identify factors contributing to aggressive driving	Low	Tried	Long

Source: NCHRP 500 Series & NHTSA's Countermeasures that Work

Note: Short (<1 year); Medium (1-2 years); Long (>2 years)