Anatomy of Brown County
A Traffic Safety Summary

WISCONSIN DEPARTMENT OF TRANSPORTATION

ZERO IN WISCONSIN
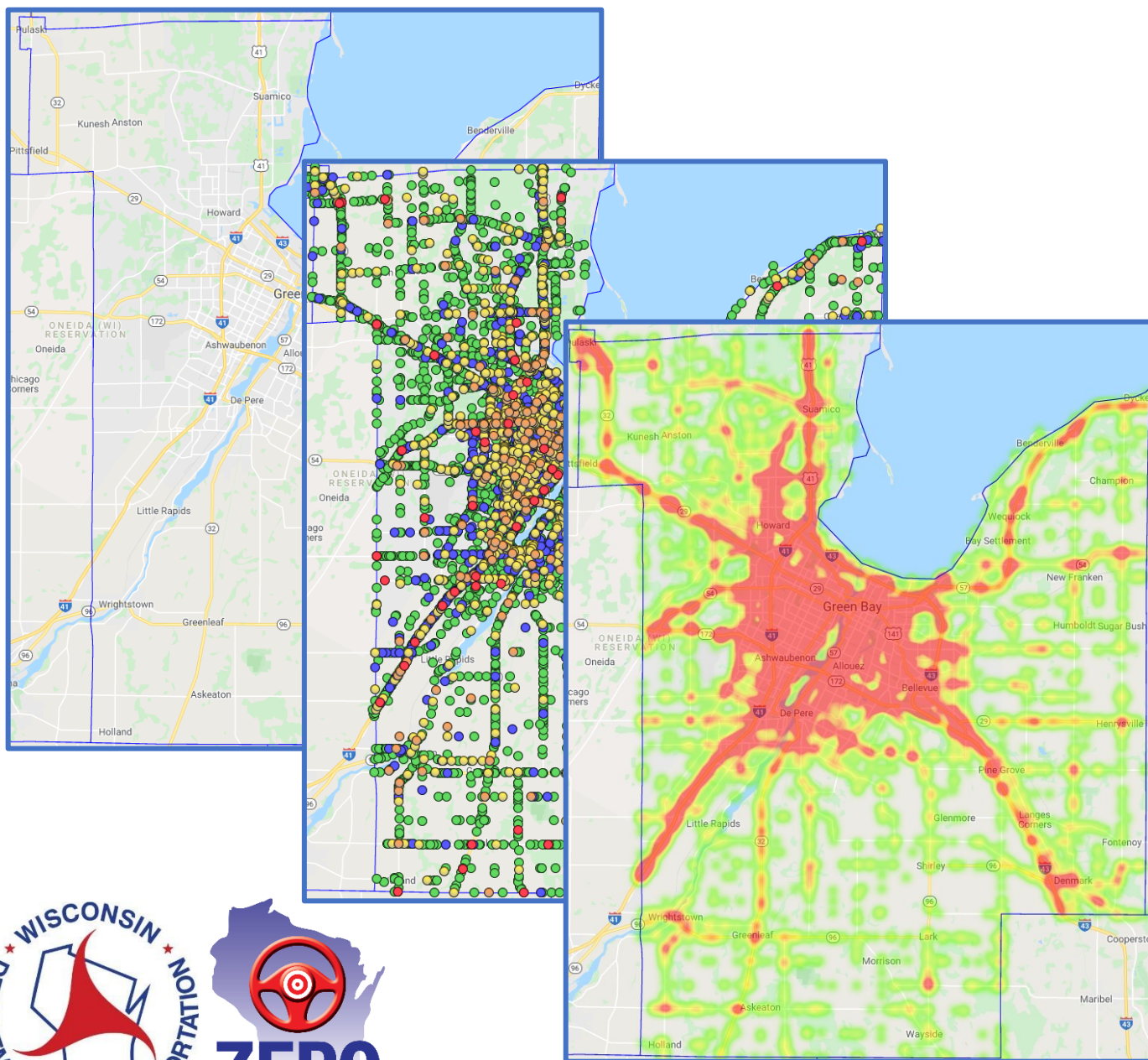
Did you know...

one individual is killed or injured in a crash in Brown County every six hours?

January 2020

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This document was created by the Division of State Patrol Bureau of Transportation Safety and Technical Services (BOTSTS). The data is based on a five-year (2014-2018) trend, while suspected drug or alcohol impairment and distracted driving is based on a two-year (2017-2018) trend. The intention of this document is to assist Traffic Safety Commissions to examine their own transportation safety issues within their respective county.

For further data, email BOTSTS at CrashDataAnalysis@dot.wi.gov.

Cover page (left to right): County map, five-year (2014-2018) trends of all crashes, heat map of crashes

Crash Trends

Per year in Brown County, an average of

6,486 drivers are involved in a crash

1,391 people are injured

17 people are killed

While

December has the highest number of crashes

July has the highest number of injury and fatal crashes

8 out of 10 injured or killed people are Brown County residents

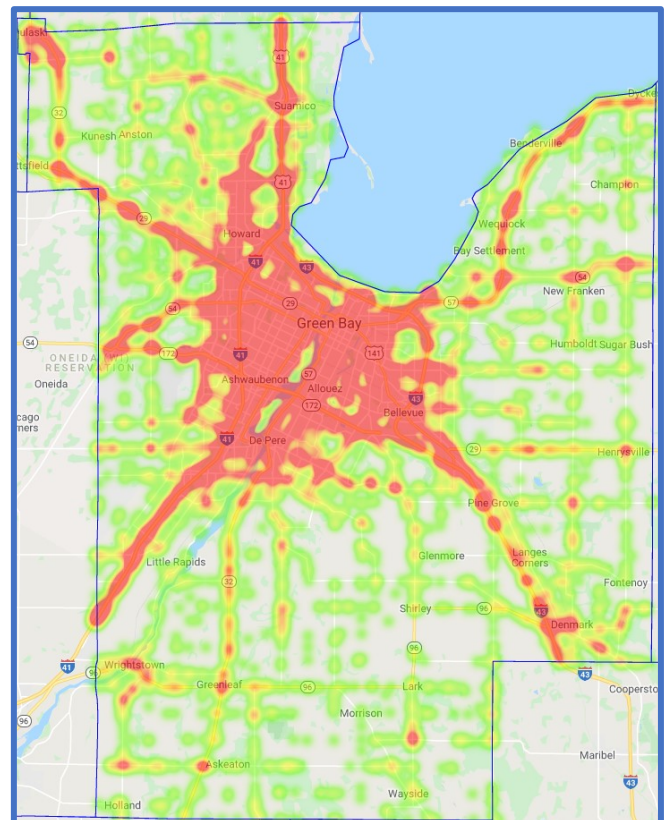**19 out of 20** injured or killed people are Wisconsin residents

Where

4 out of 10 fatal and injury crashes occur on a county or state road

When

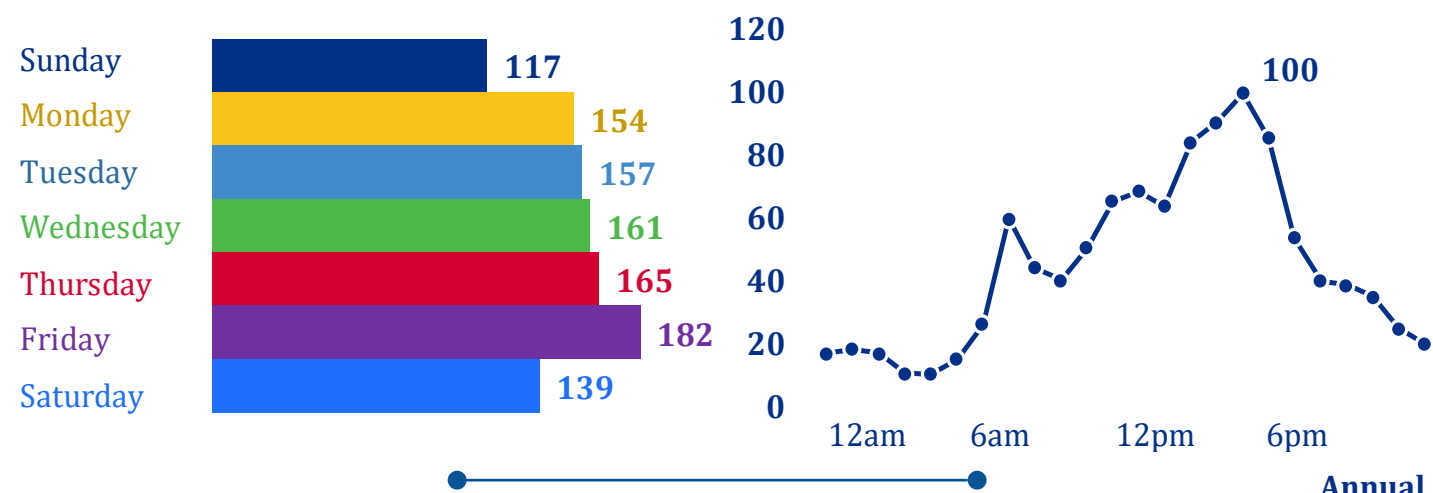**4pm-5pm** is the peak time for injury and fatal crashes

Hotspots of all crashes (2014-2018)

Source: TOPS Lab Community Maps. Explore this tool here.

On an average year in Brown County, injury and fatal crashes occur somewhat consistently over the weekday while **Friday** has the **most crashes.**
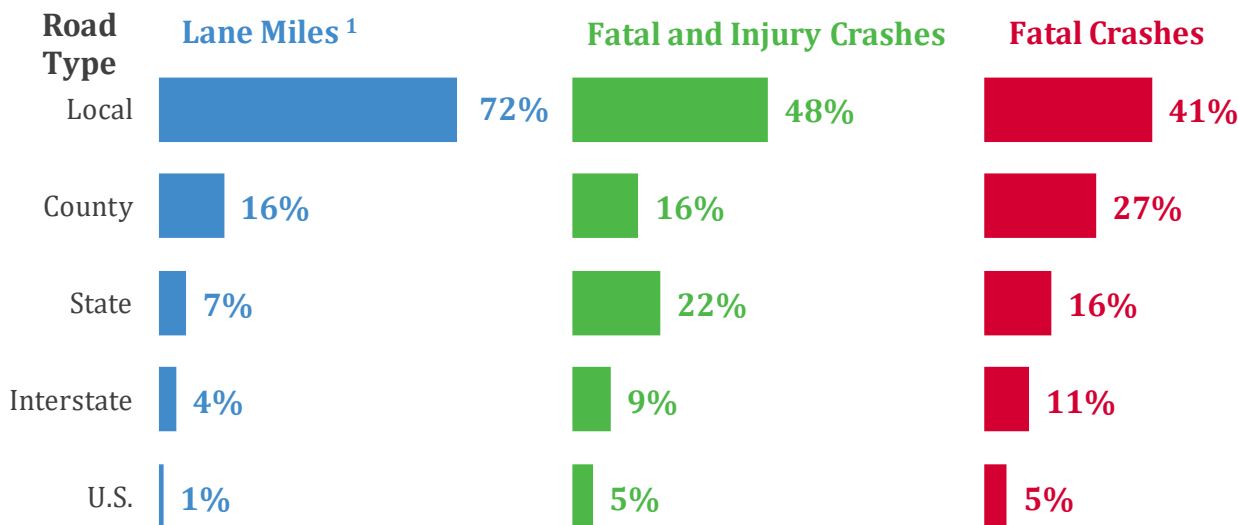
In addition, over a 24-hour period, injury and fatal crashes occur **most frequently** between **4pm-5pm,** peaking at **100** crashes in total throughout the year.

Day	Crashes
Sunday	117
Monday	154
Tuesday	157
Wednesday	161
Thursday	165
Friday	182
Saturday	139

Over the past 5 years, fatal, injury, and property damage crashes have **varied.**

Year	2014	2015	2016	2017	2018	Annual Trends
Fatal	9	12	15	21	16	
Injury	1,028	1,028	1,074	1,060	964	
Property Damage	2,819	2,699	2,773	3,092	3,006	
Total	**3,856**	**3,739**	**3,862**	**4,173**	**3,986**	

Crashes on state, U.S., and interstate roads are disproportionally represented in injury and fatal crashes. On roads with **higher posted speed limits**, there's a higher risk for a **severe injury or fatality** if a crash were to occur.
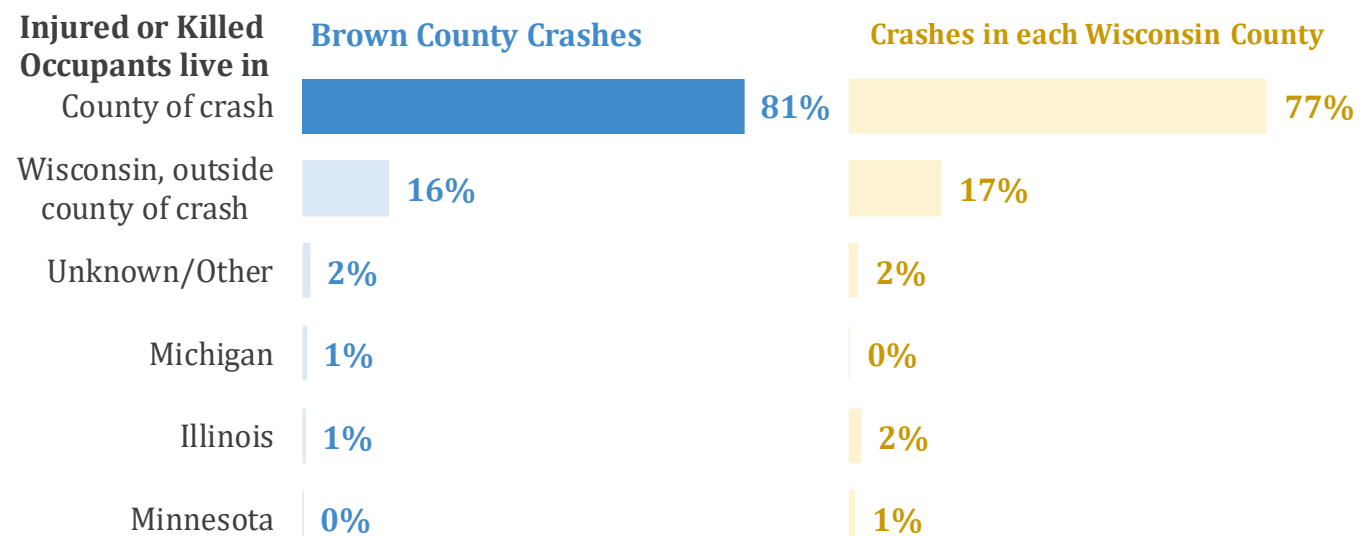
Road Type	Lane Miles [1]	Fatal and Injury Crashes	Fatal Crashes
Local	72%	48%	41%
County	16%	16%	27%
State	7%	22%	16%
Interstate	4%	9%	11%
U.S.	1%	5%	5%

[1] Wisconsin Department of Transportation. Received from K. Spencer. Dec. 3, 2019.

Commuting Flows

Place of Residence

Brown County: 115,752
Total: 147,929
Outagamie County: 7,950
Oconto County: 7,748
Kewaunee County: 3,293
Shawano County: 2,954
Outside Wisconsin: 2,249
Manitowoc County: 2,013
Other Wisconsin: 1,782
Calumet County: 1,259
Winnebago County: 1,150
Door County: 930
Marinette County: 849

Place of Work

Total workers that work in Brown County:[2]

147,929

Of these, **78%** also live in Brown County

Place of Residence

Total: 128,697
Brown County: 115,752
Outagamie County: 5,028
Other Wisconsin: 2,825
Kewaunee County: 1,246
Winnebago County: 1,199
Manitowoc County: 1,128
Calumet County: 835
Outside Wisconsin: 684

Place of Work

Total workers that live in Brown County:[2]

128,697

Of these, **90%** also work in Brown County

Locals are **more likely** to be involved in a crash in Brown County as opposed to visitors. **81%** of occupants injured or killed in a crash in Brown County also live in Brown County.

Injured or Killed Occupants live in	Brown County Crashes	Crashes in each Wisconsin County
County of crash	81%	77%
Wisconsin, outside county of crash	16%	17%
Unknown/Other	2%	2%
Michigan	1%	0%
Illinois	1%	2%
Minnesota	0%	1%

[2] United States Census Bureau. 2011-2015 5-Year American Community Survey Commuting Flows. https://www.census.gov/data/tables/2015/demo/metro-micro/commuting-flows-2015.html Accessed Oct. 11, 2019.
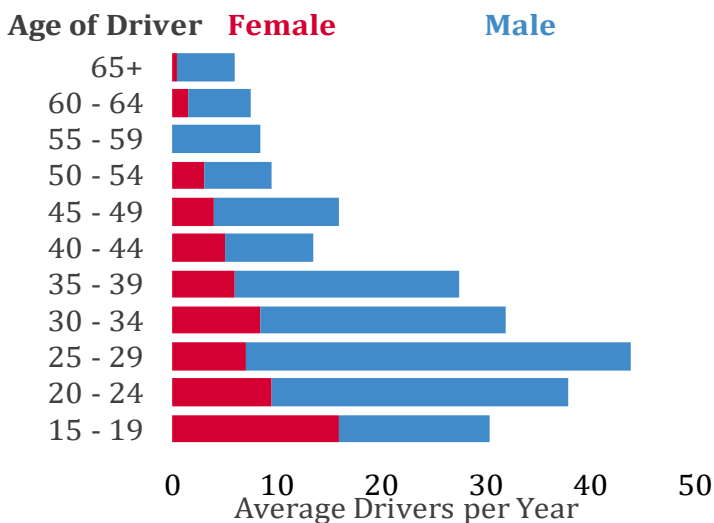
Transportation Safety

Alcohol and Drug-Impaired Driving

In Brown County, **141** people are injured or killed in a crash involving a driver believed to be impaired by drugs or alcohol, in an average year.
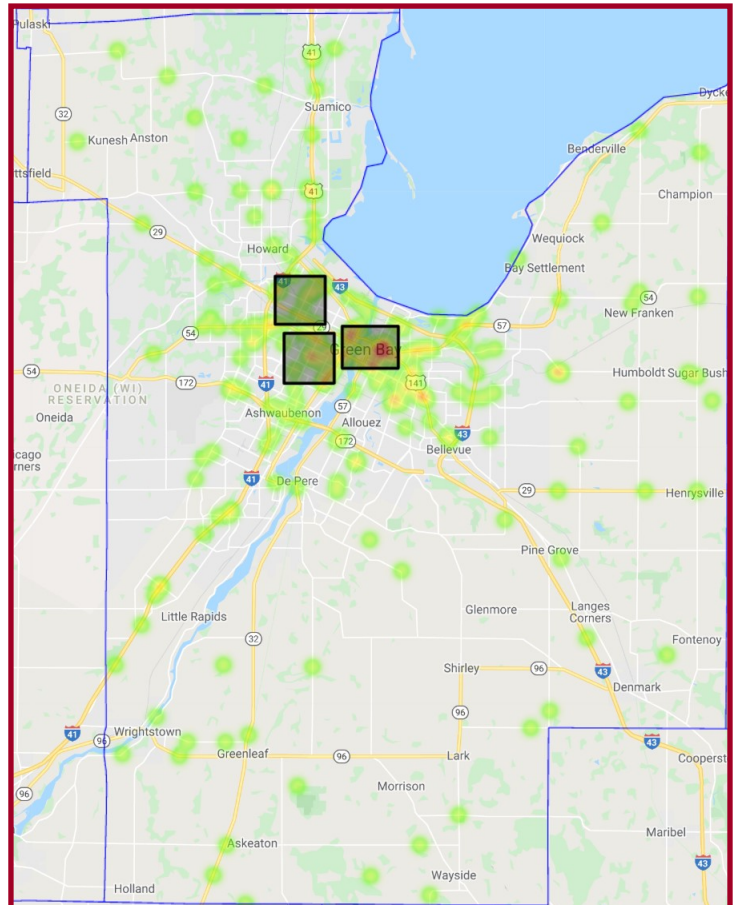
That is **40%** of all persons killed in a crash. Statewide, this is 33% of all persons killed.

While **74%** of drivers believed to be impaired by drugs or alcohol are **male.**

Hotspots of alcohol and drug-related crashes with an injury or fatality

Top 3 Areas:

1. Green Bay (Military Ave./U.S. 141)

2. Green Bay (Mason St/S.R. 32)

3. Green Bay (downtown)

Age of Driver   **Female**   **Male**

Average Drivers per Year

Distracted Driving

In Brown County, a driver being distracted is listed as a contributing factor in **24%** of injury and fatal crashes. Statewide, this is 22% of injury and fatal crashes.

Below shows the **breakdown** of the factors in these distracted driving crashes.
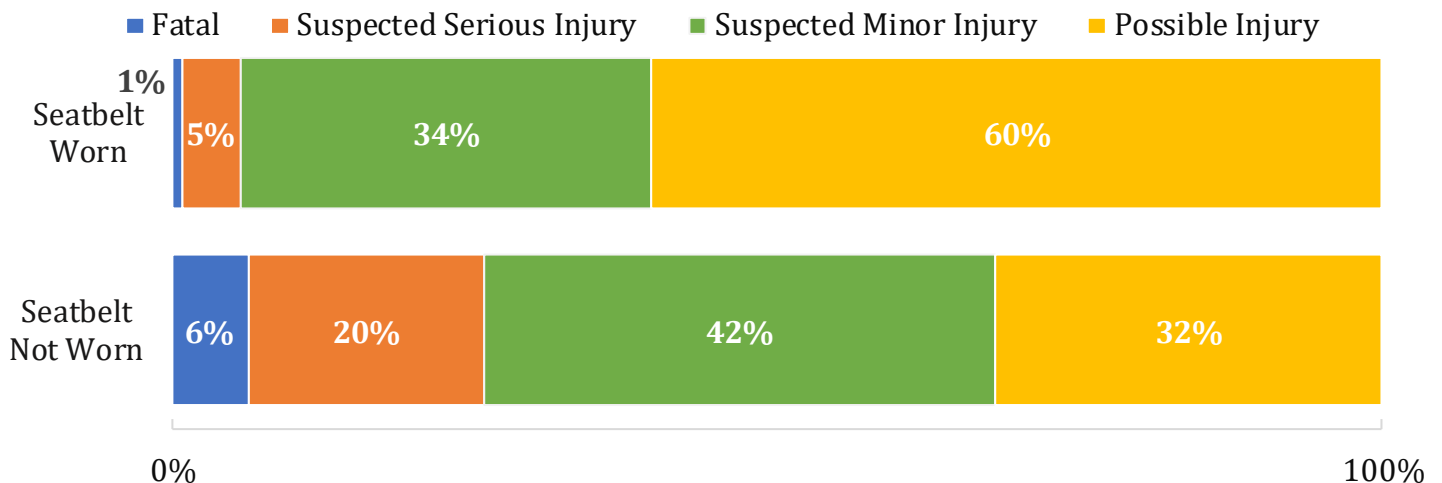
Top factors a driver was distracted were

	Brown County Crashes	Wisconsin Crashes
Distraction/Inattention	37%	32%
Looked But Did Not See	24%	28%
Careless/Inattention	10%	9%
Other Distraction	5%	6%
Inattention Details Unknown	3%	3%
Distracted By Outside Person	3%	4%
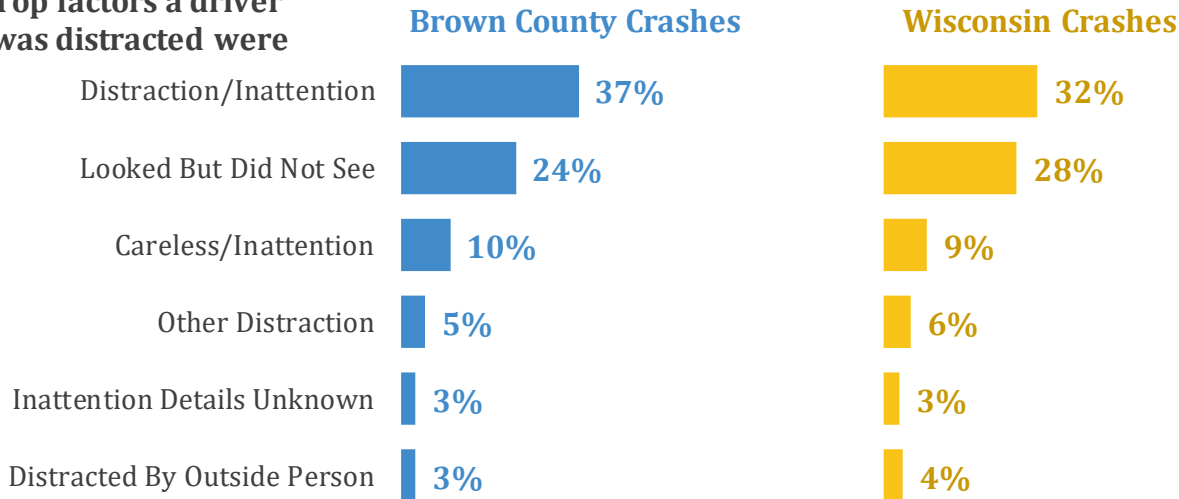
Occupant Protection

Statewide **seatbelt usage** has been **increasing** over the past two decades. This past year experienced a usage rate of **90.2%,** which is based on an annual seatbelt survey.

Occupants **not wearing a seatbelt** are **more likely** to suffer a serious injury or fatality. Of the total statewide occupant fatalities, **1 out of 3** were not wearing a seatbelt.

Statewide **seatbelt use rate** reached an all time **high** in 2019.

65.1% — **90.2%**

1999   2009   2019
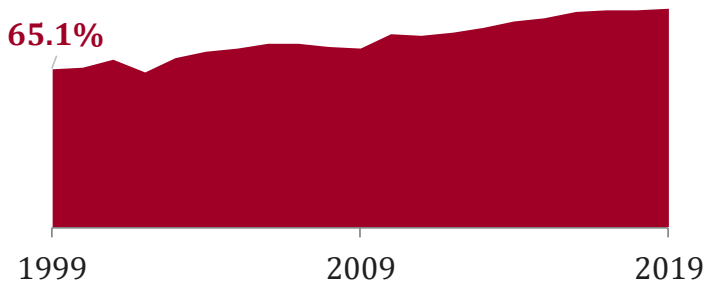
People in your community can conduct their own seatbelt survey via the 'Local Seatbelt Survey' in the app store.

■ Fatal   ■ Suspected Serious Injury   ■ Suspected Minor Injury   ■ Possible Injury

	Fatal	Suspected Serious Injury	Suspected Minor Injury	Possible Injury
1% Seatbelt Worn	1%	5%	34%	60%
Seatbelt Not Worn	6%	20%	42%	32%

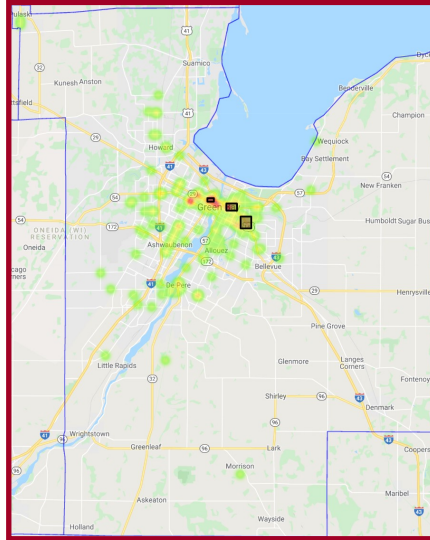0%   100%

Bicyclist and Pedestrian Safety

In the last 5 years in Brown County, **168** cyclists and **242** pedestrians were killed or injured.

Hotspots of injury and fatal bicycle crashes
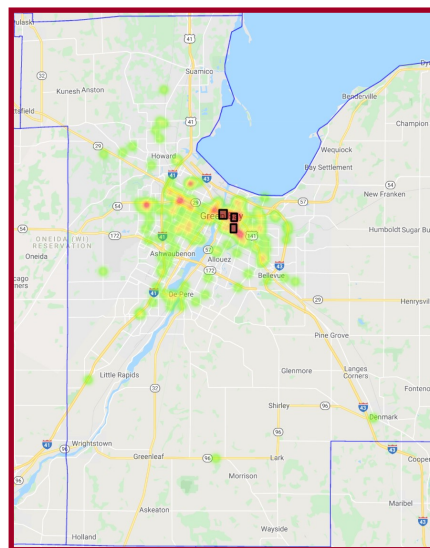
Top 3 Areas:

1. Green Bay (Dousman St./ Broadway)

2. Green Bay (Main St.)

3. Green Bay (S.R. 29/Deckner Ave.)

Hotspots of pedestrian injury and fatal crashes

1. **Top 3** Areas**:**

2. Green Bay (downtown)

3. Green Bay (Main St.)

4. Green Bay (Baird St./ Mason St.)

Motorcycle Safety

In the last 5 years in Brown County, **372** motorcyclists were killed or injured.

Of these, **51%** were not wearing a helmet.

The type of helmet and other safety equipment worn, such as protective gear and gloves, can also impact the type of injury sustained.

Hotspots of injury and fatal motorcycle crashes

Top 3 Areas:

1. Green Bay (I.H. 41/Mason St.

2. Green Bay (downtown)

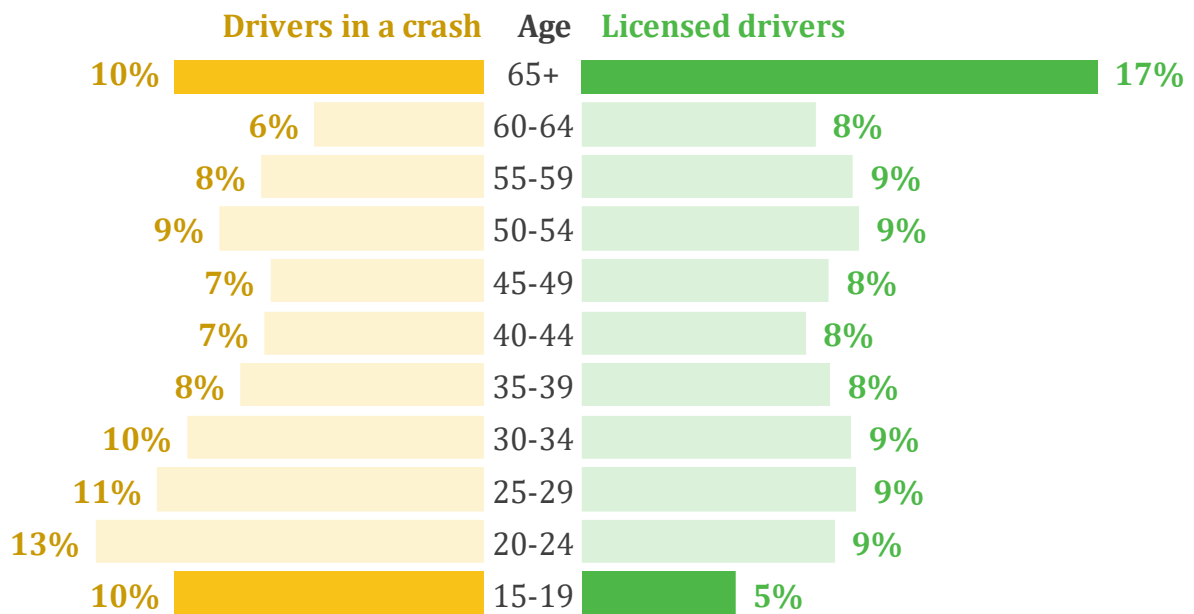3. De Pere (I.H. 41/Main Ave.)
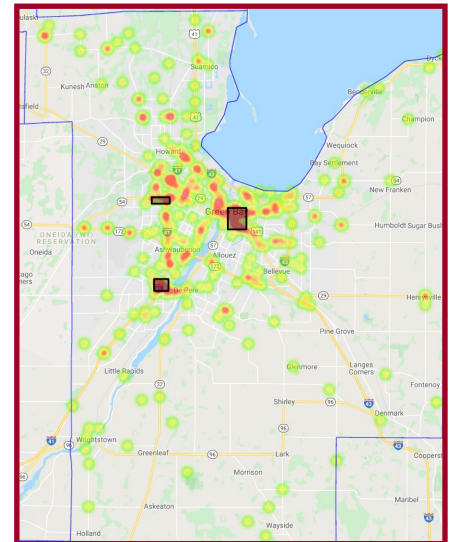
Teen and Older Drivers

In Brown County, **teen or older drivers** make up **21%** of drivers involved in a fatal or injury crash. Statewide, this is also 21% of drivers in fatal and injury crashes.
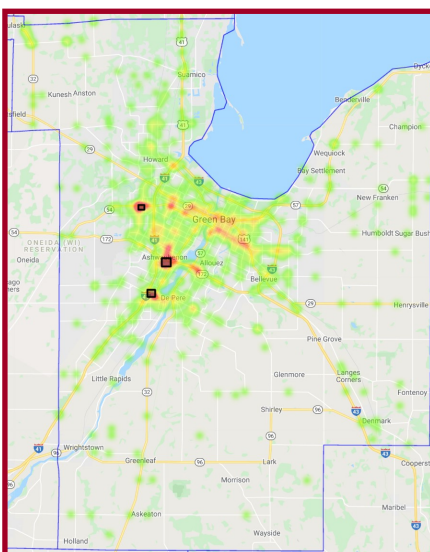
Breaking this down,

teen drivers make up **10%** of drivers involved in a crash and make up **5%** of licensed drivers and

older drivers make up **10%** of drivers involved a crash and make up **17%** of licensed drivers.
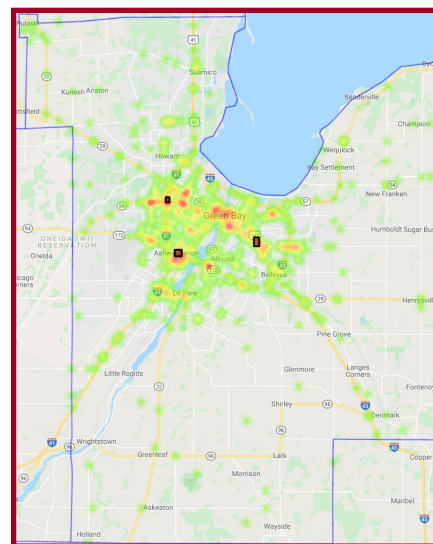
Drivers in a crash	Age	Licensed drivers
10%	65+	17%
6%	60-64	8%
8%	55-59	9%
9%	50-54	9%
7%	45-49	8%
7%	40-44	8%
8%	35-39	8%
10%	30-34	9%
11%	25-29	9%
13%	20-24	9%
10%	15-19	5%

Hotspots of injury and fatal crashes involving a teen driver

Top 3 Areas:

1. Green Bay (Mason St./ Packerland Dr.)
2. Green Bay (Van Der Perren Way)
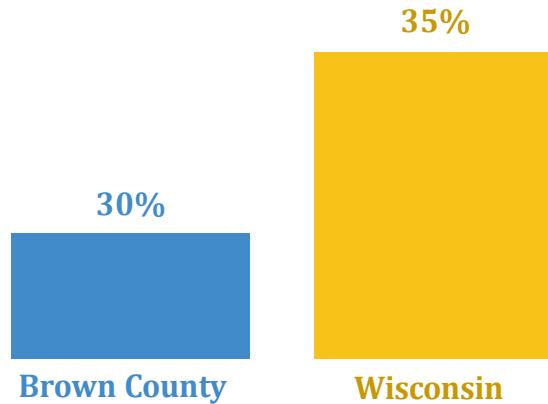3. Green Bay (Main Ave./ Eights St.)

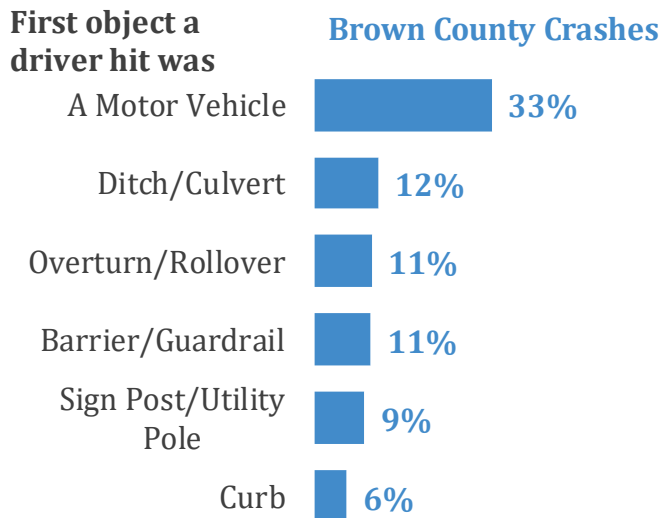## Hotspots of injury and fatal crashes involving an older driver

Top 3 Areas:

1. Green Bay (I.H. 41/Mason St.)
2. Green Bay (Pilgrim Way)
3. Green Bay (S.R. 29/Mason St.)
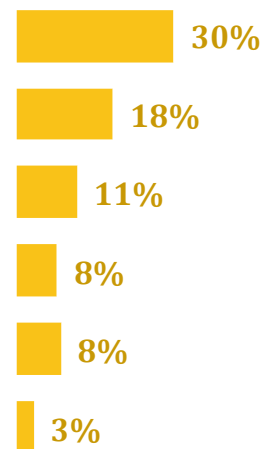
Lane Departure Crashes

Fewer lane departure crashes occur in Brown County, out of total injury and fatal crashes, compared to the state. **Colliding** with a **Motor Vehicle** was the most frequent 'first harmful event'.

A **lane departure crash** is defined as when the driver crosses the centerline, edge line, or leaves the roadway and then usually colliding with another vehicle or an object, such as a guardrail or a tree.

35%

30%

Brown County

Wisconsin

The cause of a lane departure crash could be a mixture of factors – speeding, being impaired by alcohol, or feeling tired.

Below shows the **breakdown** of the 'first harmful event' in these lane departure crashes.

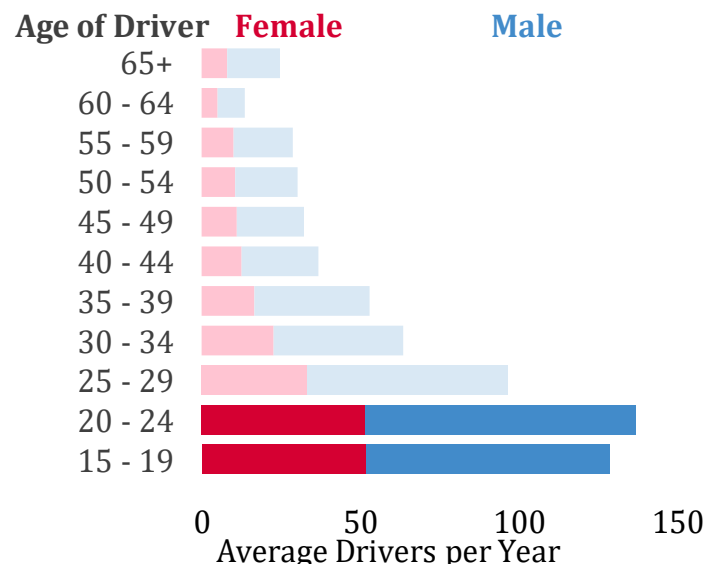| First object a driver hit was	Brown County Crashes	Wisconsin Crashes
A Motor Vehicle	33%	30%
Ditch/Culvert	12%	18%
Overturn/Rollover	11%	11%
Barrier/Guardrail	11%	8%
Sign Post/Utility Pole	9%	8%
Curb	6%	3%

Speeding

Speeding includes both **exceeding the speed limit** and **driving too fast for conditions.** Speeding has a compounded affect in a crash; decreasing speed can reduce the crash risk, reduce injury severity, and make it possible to control the vehicle if an event were to occur.

Of all fatal and injury crashes, **18%** involved speed as a contributing factor resulting in **248** fatalities and injuries. Statewide, this is 19% of fatal and injury crashes.

2 out of 5 of all crashes where **speed** is a factor involves **a young driver.**

Age of Driver — Female — Male

Age of Driver
65+
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19

0   50   100   150
Average Drivers per Year

8

Appendix

Urbanization

Brown County contains the Green Bay metropolitan area, and is adjacent to the Appleton metropolitan area, Shawano urban cluster and the Manitowoc urban cluster.

Vehicle Miles of Travel (VMT)[3]

VMT is a measure of the total amount of and distance of vehicle travel in a year.

In Brown County, the 2018 VMT was 2,569,011,985 miles with a crash rate of 38 injury and fatal crashes per 100 million VMT, lower than the state's rate of 46 crashes.

A crash rate* of
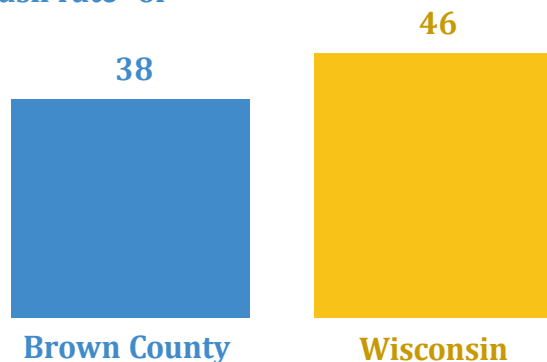
*Crash rate as measured by total injury and fatal crashes per 1 million vehicles miles traveled in 2018

Grants

The State Patrol Bureau of Transportation Safety and Technical Services (BOTSTS) administers federally funded overtime traffic safety grants to local law enforcement agencies each year.

The overtime grants are offered to agencies using a data driven targeting process. The targeting process includes a review of crash data from previous years to determine what areas have a traffic safety problem. The process is used to determine locations of concern in the areas of impaired driving, speeding, and unbelted vehicle occupants. If an agency participates in our national mobilizations, the agency may also receive one or more equipment grants, as determined in several annual drawings.

BOTSTS also provides grants to agencies that are not targeted but are part of a task force in their area. A task force is a group of law enforcement agencies working together to plan high visibility enforcement in their communities. Task forces can operate in their individual communities but only on the same day and at the same time as the group. They can also concentrate on one agency's community during a deployment.

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[3] Wisconsin Department of Transportation. "2018 Vehicles Miles of Travel (VMT) by County." Accessed October 10, 2019. https://wisconsindot.gov/Documents/projects/data-plan/veh-miles/vmt2018.pdf

Below are **agency mobilizations** and **grants** that were recently awarded to Brown County agencies.

■ Participate □ Did not participate

Mobilization Campaign	Brown County SO	Ashwaubenon DPS	De Pere PD	Green Bay PD	Hobart-Lawrence PD	Oneida Tribal PD	Pulaski PD	UW-Green Bay PD	Wrightstown PD
2017 Drive Sober or Get Pulled Over- Winter Holidays	■	■	□	□	■	□	□	□	□
2018 Click It or Ticket	■	■	□	■	■	□	■	■	■
2018 Drive Sober or Get Pulled Over – Labor Day	■	■	□	■	■	□	■	■	■
2018 Drive Sober or Get Pulled Over- Winter Holidays	■	■	□	■	■	□	■	■	■
2019 Click It or Ticket	■	■	■	■	■	■	■	■	■
2019 Drive Sober or Get Pulled Over – Labor Day	■	■	□	■	■	■	■	■	■
2018 Equipment Grant	□	□	□	□	□	□	□	□	□
2019 Equipment Grant	□	□	□	□	□	□	□	■	■

2019 Task Force Participation

|	Brown County SO	Ashwaubenon DPS	De Pere PD	Green Bay PD	Hobart-Lawrence PD	Oneida Tribal PD	Pulaski PD	UW-Green Bay PD	Wrightstown PD
Impaired Driving	Brown County	Brown County	Brown County	Brown County	Brown County				Brown County
Speed Enforcement	Brown County	Brown County	Brown County	Brown County	Brown County				Brown County
Occupant Protection	Brown County	Brown County	Brown County	Brown County	Brown County				Brown County

2019 Grant Funded Amount for a Task Force

|	
Brown County Impaired Driving Taskforce	$249,984
Brown County Speed Enforcement Taskforce	$60,000
Brown County Occupant Protection Taskforce	$104,993

Abbreviations: DPS = Department of Public Safety, PD = Police Department, SO = Sheriff's Office
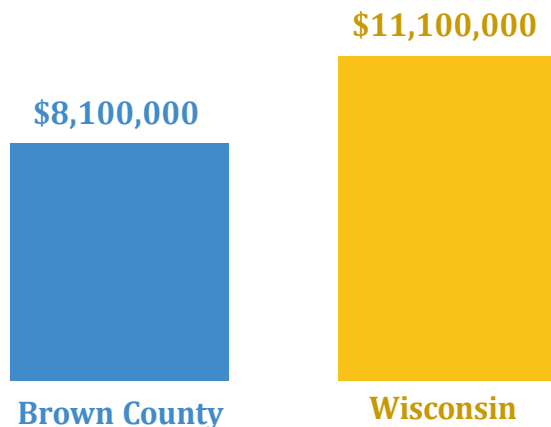
Health Impacts and Medical Costs

Compared to Wisconsin, **fewer** people are in a crash in Brown County (per 1,000 residents)[4]

52
36

Brown County

Wisconsin
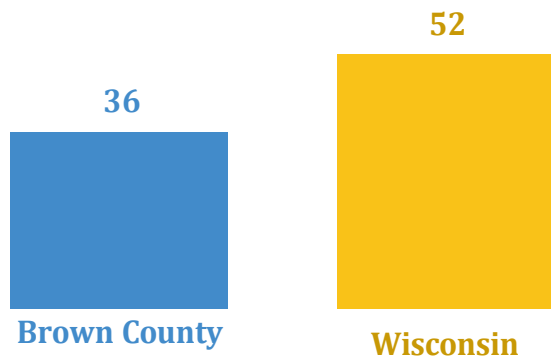
And **fewer** people are hospitalized due to a crash (per 100,000 residents)[4]

47
34

Brown County
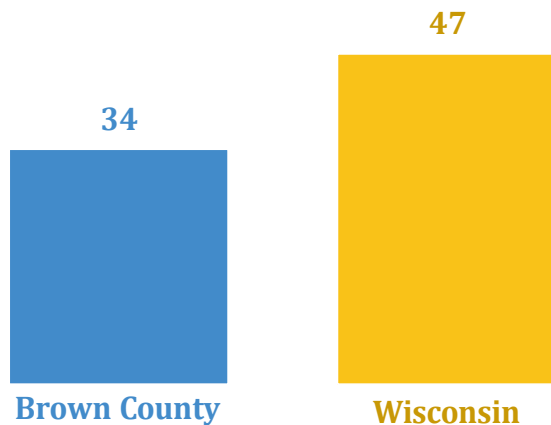
Wisconsin

While total medical costs are **lower** (per 100,000 residents)[4]

$11,100,000
$8,100,000

Brown County

Wisconsin

In Brown County, for every **82 people injured, 1 person is killed**

This is the **injury-to-fatality ratio** and is above average from Wisconsin where the ratio is **74 to 1.**

Number of persons injured per one fatality

- 15 - 40
- 41 - 60
- 61 - 80
- 81 - 100
- 101 - 140
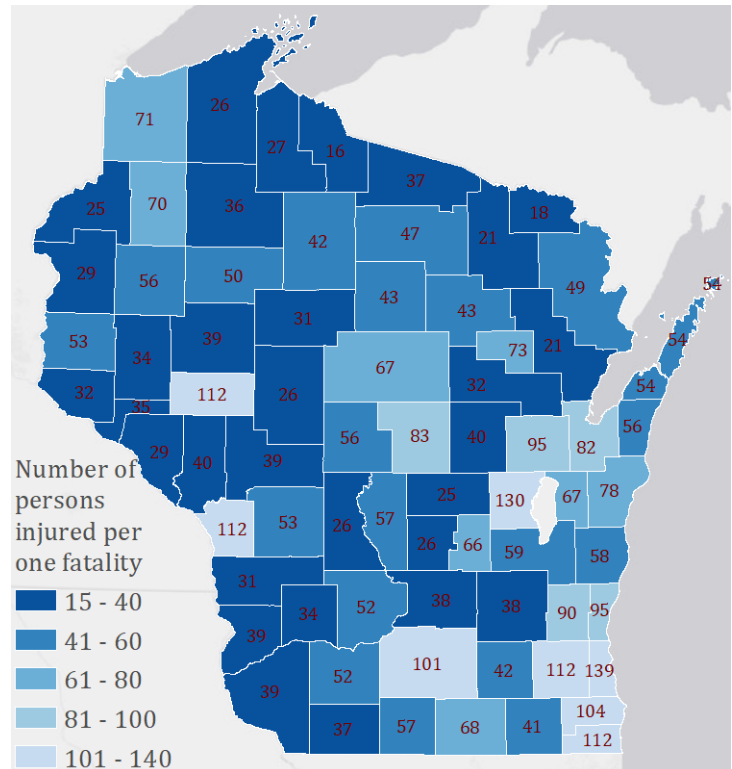
Injury-to-Fatality Ratio

The injury-to-fatality ratio is computed by dividing the total number of crash injuries by the total number of crash fatalities. A higher ratio is more ideal since fatalities comprise a smaller proportion of total crash victims.

The ratio tends to be lower in rural areas where there's a higher proportion of county and state roads. Higher speed limits means higher crash injury severity. Also rural areas generally suffer from a longer distance to hospitals and fewer emergency response services.

[4] University of Wisconsin-Madison, Center for Health Systems Research & Analysis. Wisconsin Crash Outcome Data Evaluation System Project. http://www.chsra.wisc.edu/codes/query/overview.html Accessed Oct. 11, 2019.