Anatomy of Dane County
A Traffic Safety Summary

WISCONSIN DEPARTMENT OF TRANSPORTATION

ZERO IN WISCONSIN
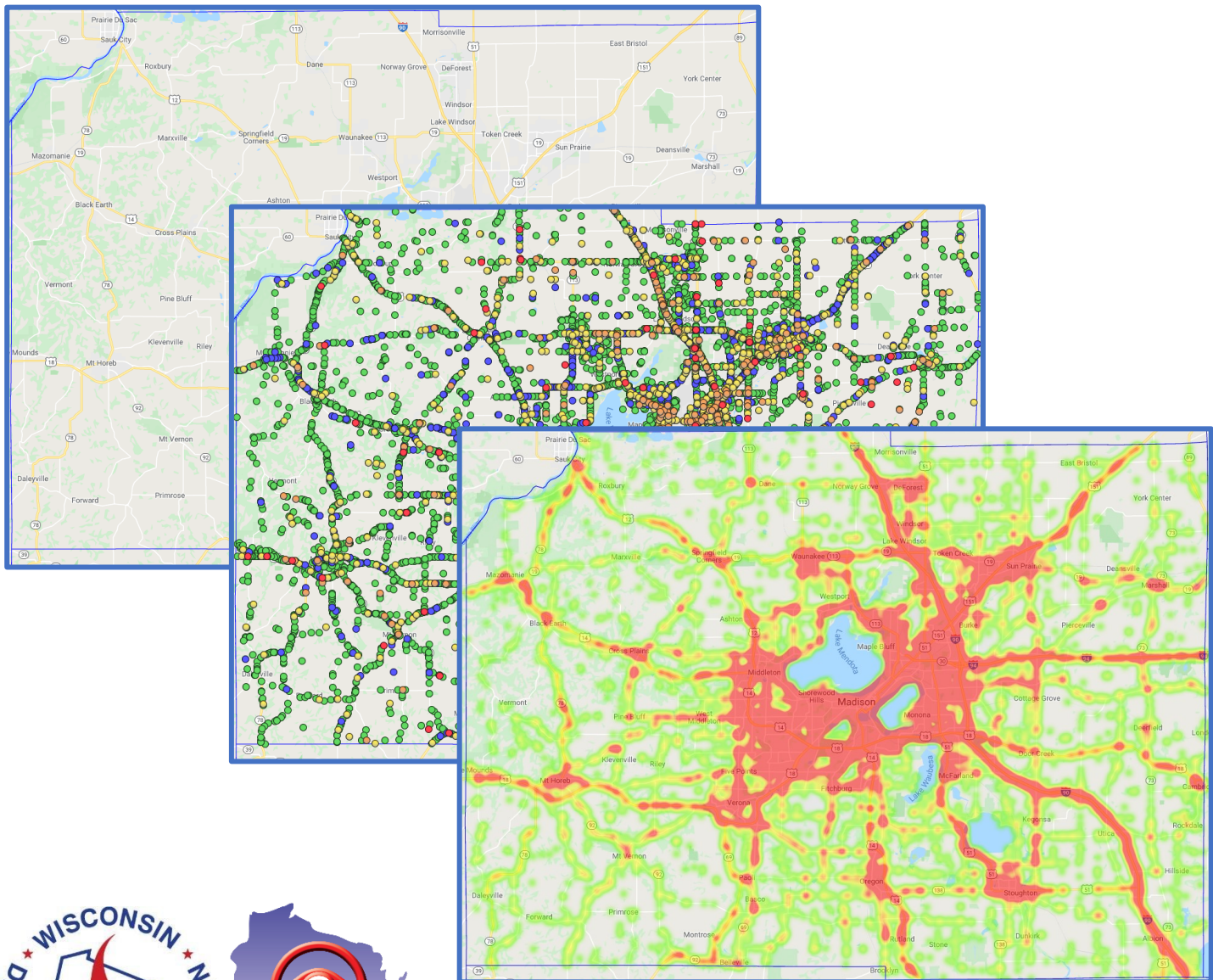
Did you know...

one individual is killed or injured in a crash in Dane County every three hours?

January 2020

Table of Contents

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 Dane County, an average of

20,413 drivers are involved in a crash

3,457 people are injured

34 people are killed

While

November has the highest number of crashes

September has the highest number of injury and fatal crashes

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

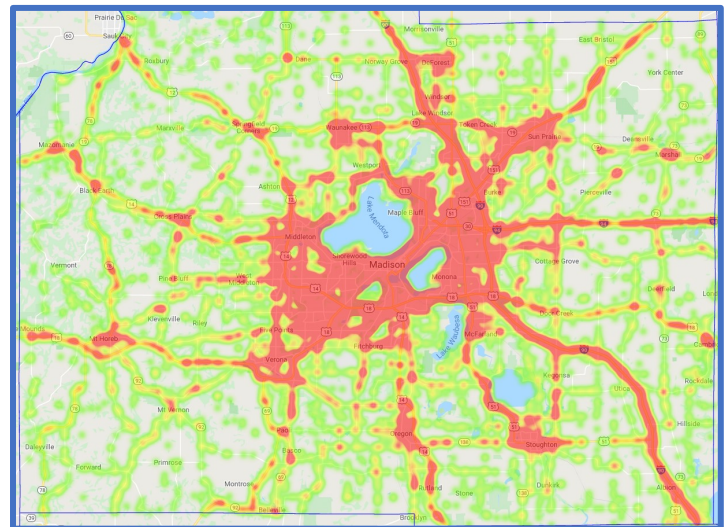**19 out of 20** injured or killed people are Wisconsin residents

Where

3 out of 10 fatal and injury crashes occur on U.S. and interstate roads
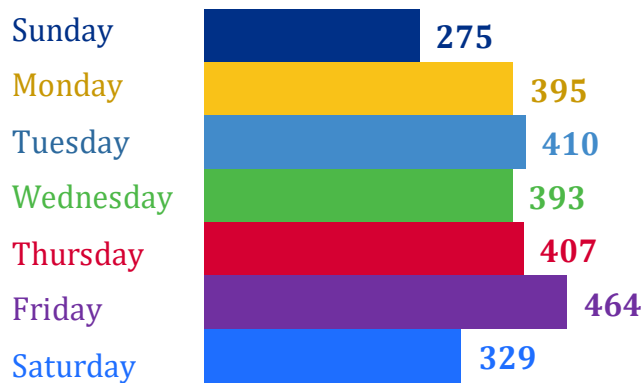
When

5pm-6pm is the peak time for injury and fatal crashes
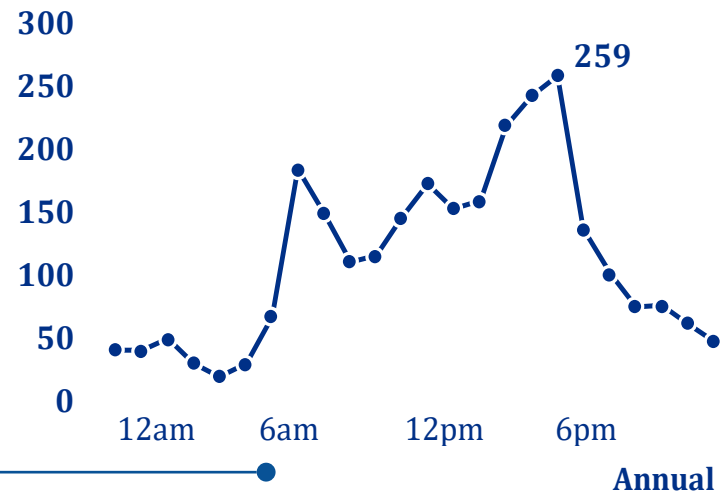
Hotspots of all crashes (2014-2018)

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

On an average year in Dane County, injury and fatal crashes occur somewhat consistently over the weekday while **Friday** has the **most crashes.**
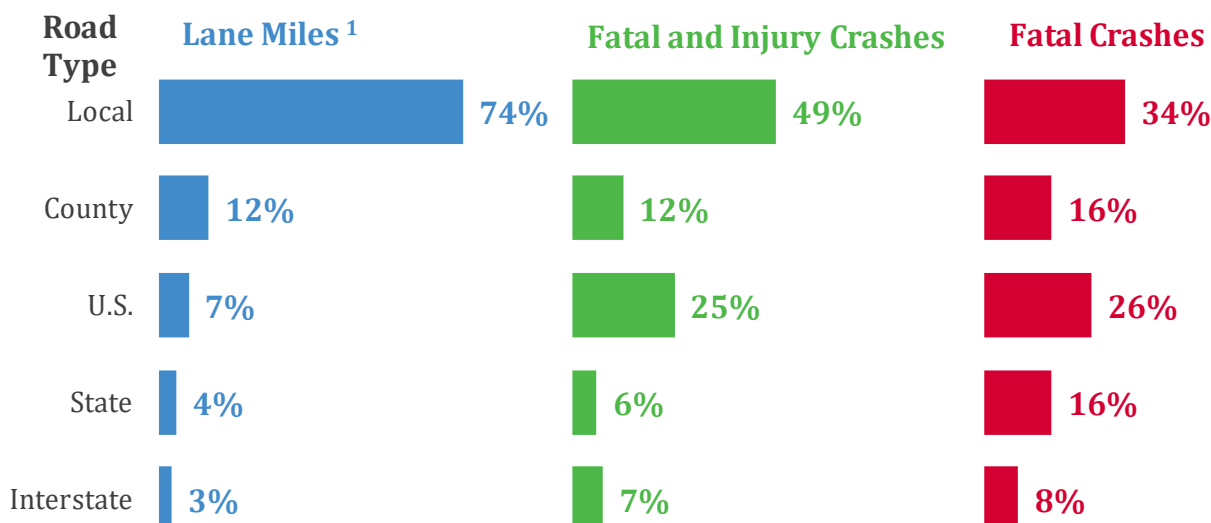
In addition, over a 24-hour period, injury and fatal crashes occur **most frequently** between **5pm-6pm,** peaking at **259** crashes in total throughout the year.

Sunday **275**
Monday **395**
Tuesday **410**
Wednesday **393**
Thursday **407**
Friday **464**
Saturday **329**

300
250
200
150
100
50
0

12am   6am   12pm   6pm

259

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

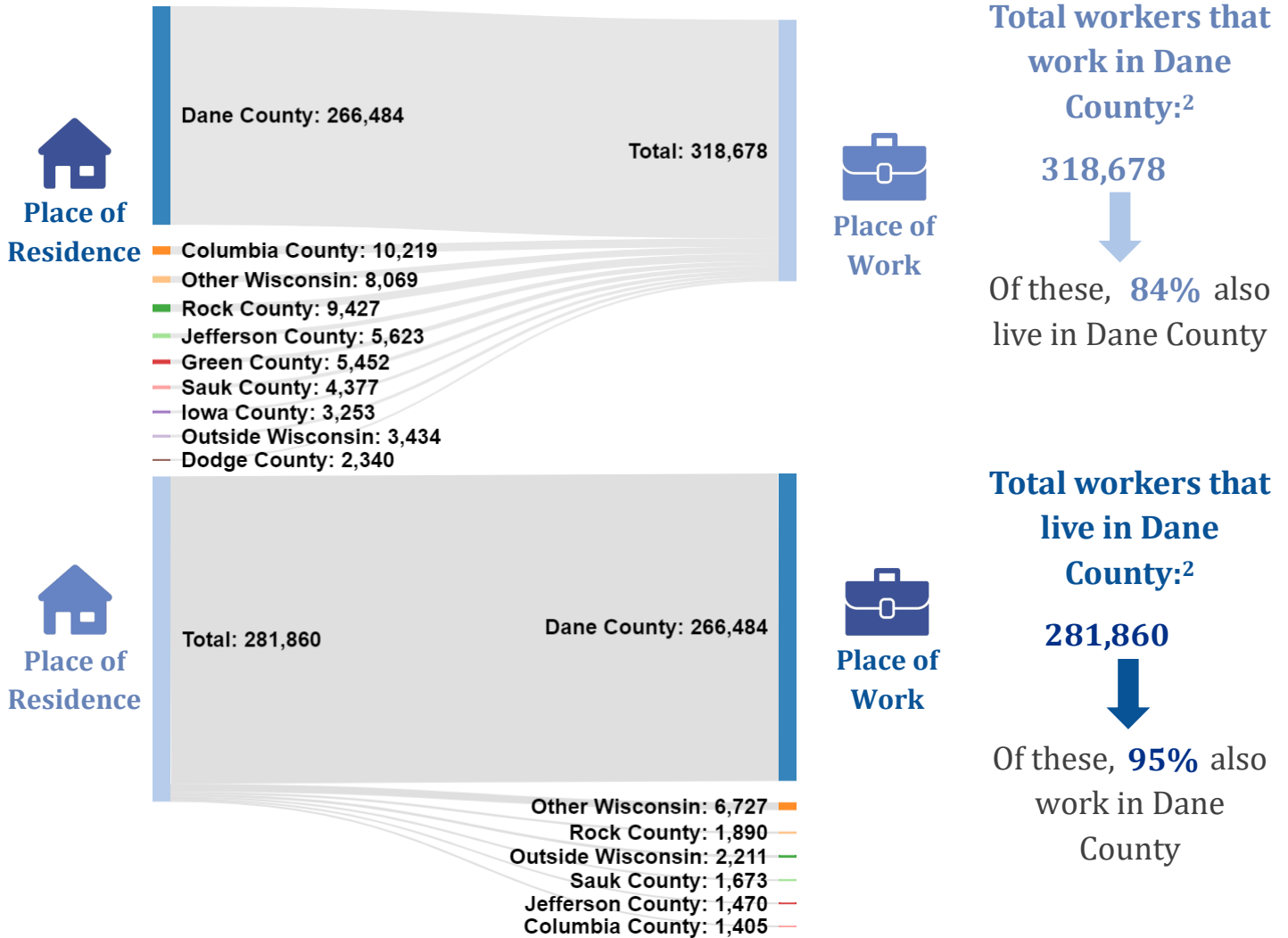| Year	2014	2015	2016	2017	2018	Annual Trends
Fatal	28	30	33	28	34	
Injury	2,419	2,547	2,717	2,652	2,592	
Property Damage	8,215	8,453	9,075	9,450	9,792	
Total	**10,662**	**11,030**	**11,825**	**12,130**	**12,418**	

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.
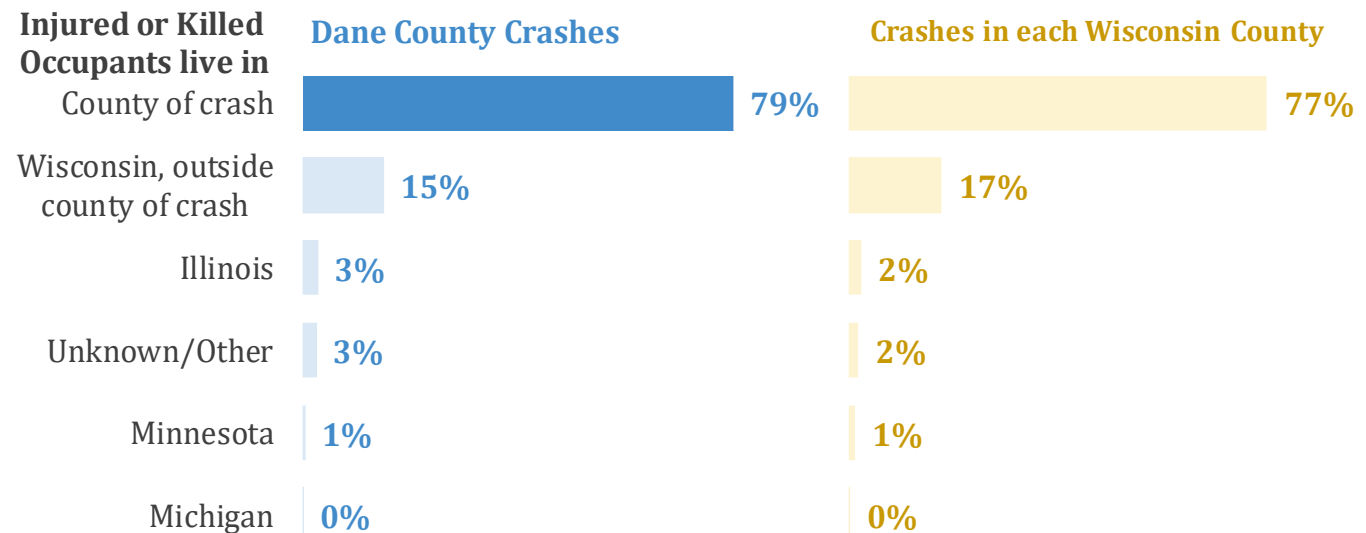
Road Type	Lane Miles [1]	Fatal and Injury Crashes	Fatal Crashes
Local	74%	49%	34%
County	12%	12%	16%
U.S.	7%	25%	26%
State	4%	6%	16%
Interstate	3%	7%	8%

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

Commuting Flows

Dane County: 266,484

Total: 318,678

Place of Residence

Place of Work

- Columbia County: 10,219
- Other Wisconsin: 8,069
- Rock County: 9,427
- Jefferson County: 5,623
- Green County: 5,452
- Sauk County: 4,377
- Iowa County: 3,253
- Outside Wisconsin: 3,434
- Dodge County: 2,340

Total workers that work in Dane County:[2]

318,678

Of these, **84%** also live in Dane County

Total: 281,860

Dane County: 266,484

Place of Residence

Place of Work

- Other Wisconsin: 6,727
- Rock County: 1,890
- Outside Wisconsin: 2,211
- Sauk County: 1,673
- Jefferson County: 1,470
- Columbia County: 1,405

Total workers that live in Dane County:[2]

281,860

Of these, **95%** also work in Dane County

Locals are **more likely** to be involved in a crash in Dane County as opposed to visitors. **79%** of occupants injured or killed in a crash in Dane County also live in Dane County.

Injured or Killed Occupants live in	Dane County Crashes	Crashes in each Wisconsin County
County of crash	79%	77%
Wisconsin, outside county of crash	15%	17%
Illinois	3%	2%
Unknown/Other	3%	2%
Minnesota	1%	1%
Michigan	0%	0%

[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.
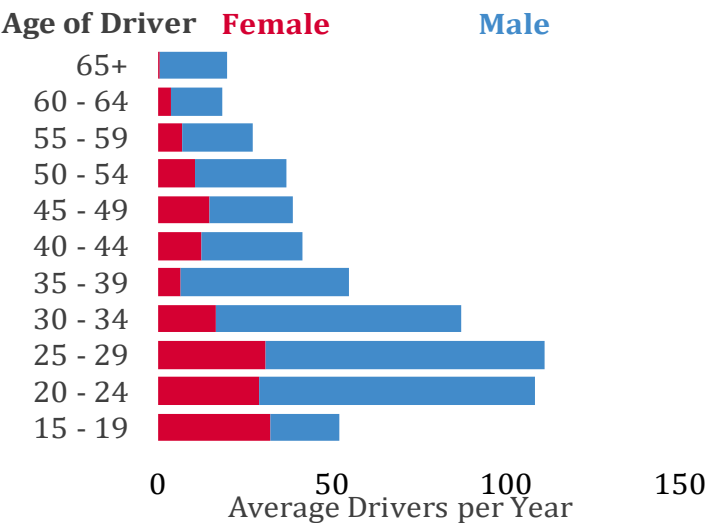
Transportation Safety

Alcohol and Drug-Impaired Driving

In Dane County, **333** people are injured or killed in a crash involving a driver believed to be impaired by drugs or alcohol, in an average year.
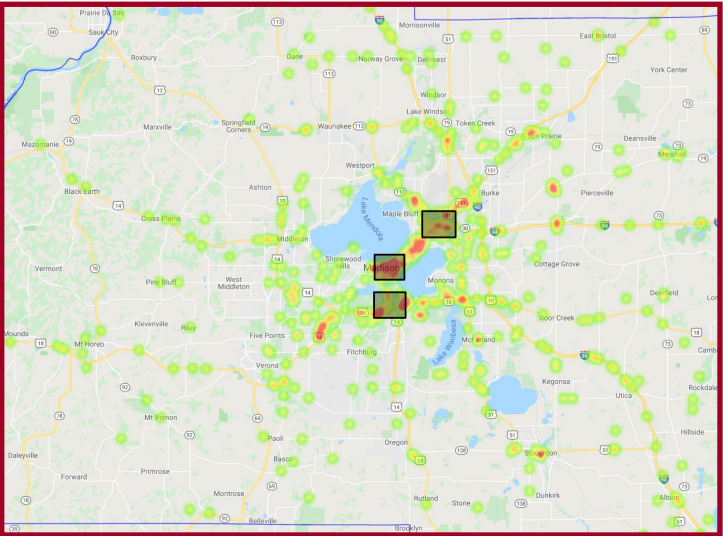
That is **27%** of all persons killed in a crash. Statewide, this is 33% of all persons killed.

While **72%** 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. Madison (U.S. 18/ Fish Hatchery Rd,, Park St, and Rimrock Rd.)

2. Madison (downtown/campus)

3. Madison (U.S. 151/S.R. 30/Aberg Ave.)

Distracted Driving

In Dane 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.

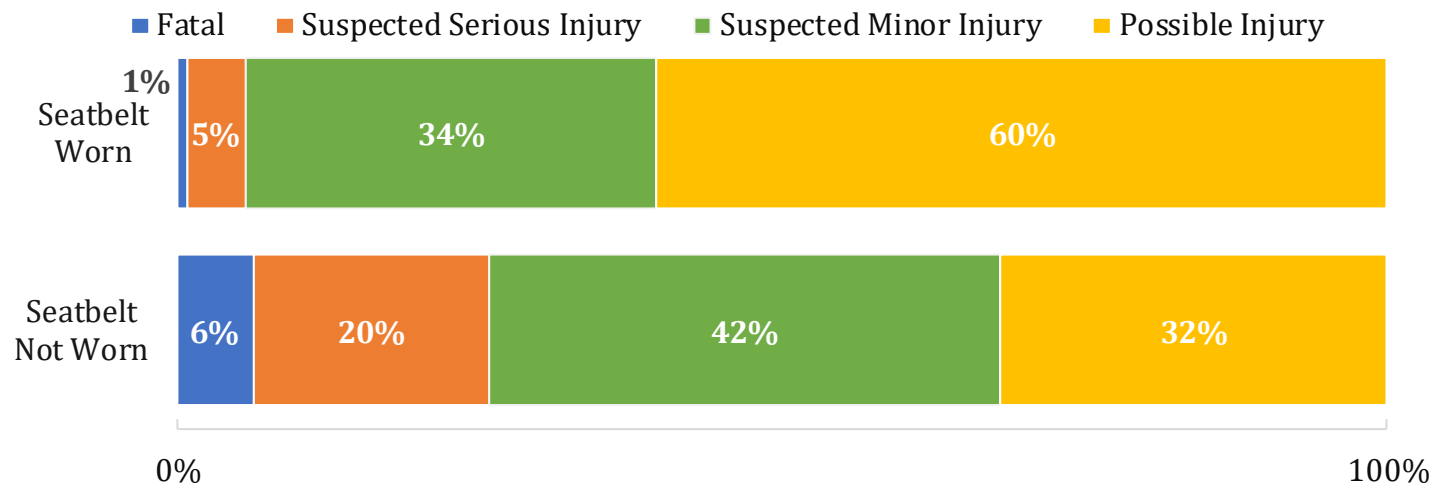**Top factors a driver was distracted were**

	Dane County Crashes	Wisconsin Crashes
Distraction/Inattention	36%	32%
Looked But Did Not See	25%	28%
Careless/Inattention	6%	9%
Other Distraction	5%	6%
Distracted By Outside Person	4%	4%
Inattention Details Unknown	3%	3%
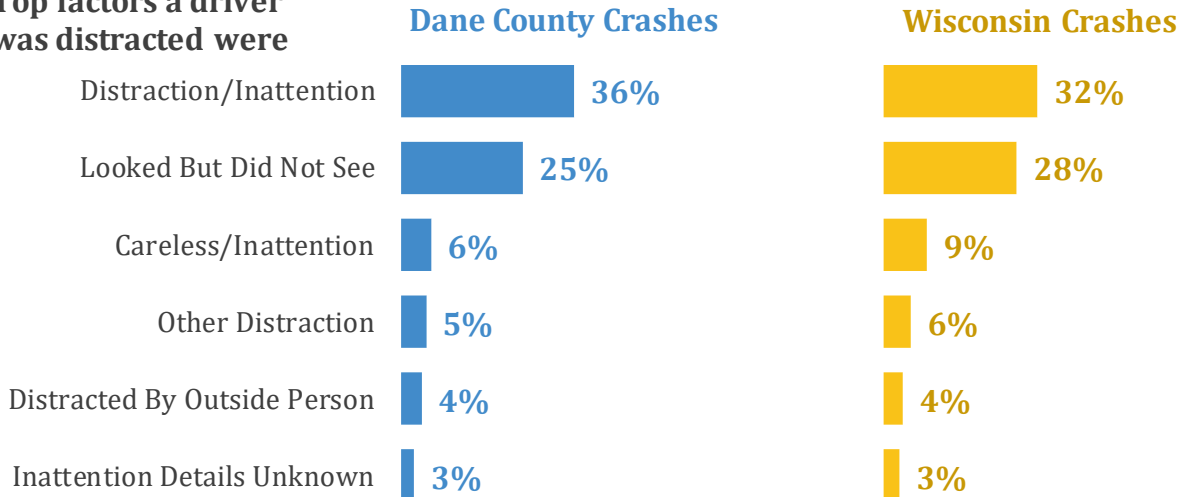
Occupant Protection

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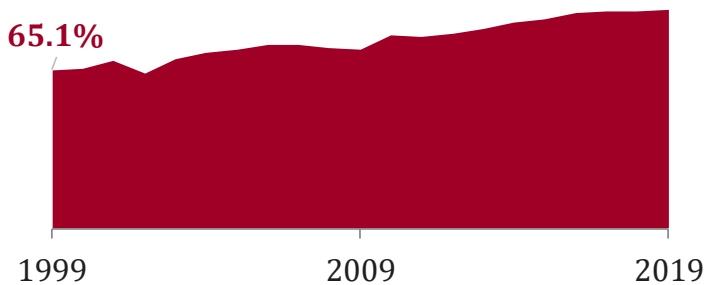
People in your community can conduct their own seatbelt survey via the 'Local Seatbelt Survey' in the app store.

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

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

0%   100%

Bicyclist and Pedestrian Safety

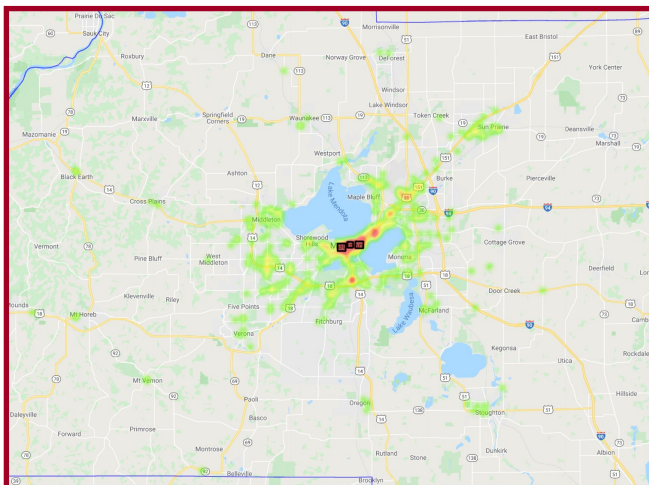In the last 5 years in Dane County, **649** cyclists and **615** pedestrians were killed or injured.

Hotspots of injury and fatal bicycle crashes
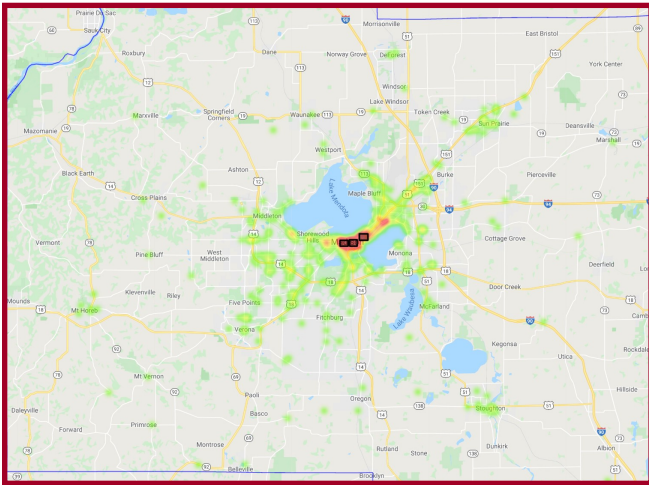
Top 3 Areas:

1. Madison (campus)
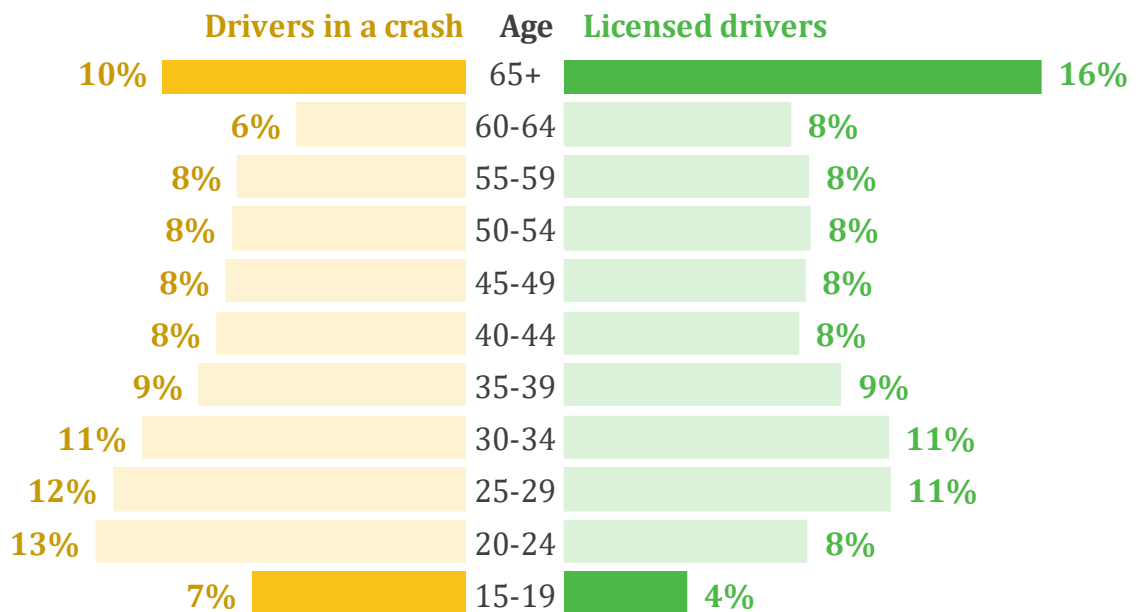2. Madison (downtown)
3. Madison (near-east side)

Hotspots of injury and fatal pedestrian crashes

Top 3 Areas:

1. Madison (campus)
2. Madison (downtown)
3. Madison (near-east side)

A bike or pedestrian crash is more likely to happen in an urban area, however, a fatal or serious injury crash is more likely to occur in a rural area due to higher speeds.

Motorcycle Safety

In the last 5 years in Dane County, **598** motorcyclists were killed or injured.

Of these, **48%** 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
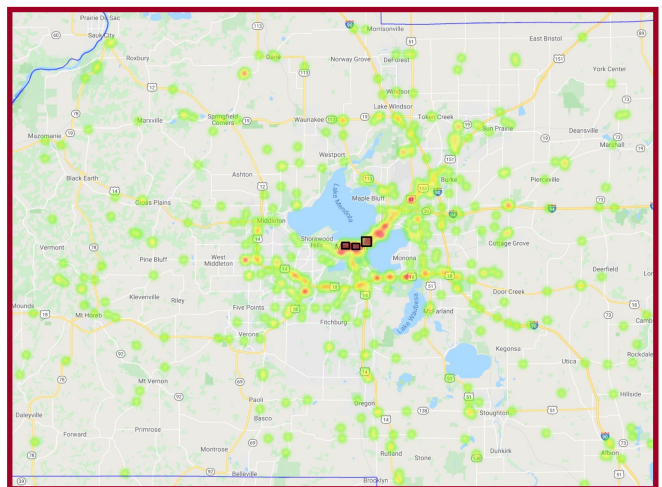
Top 3 Areas:

1. Madison (campus)
2. Madison (downtown)
3. Madison (near-east side)

Teen and Older Drivers

In Dane County, **teen or older drivers** make up **17%** of drivers involved in a fatal or injury crash. Statewide, this is 21% of drivers in fatal and injury crashes.
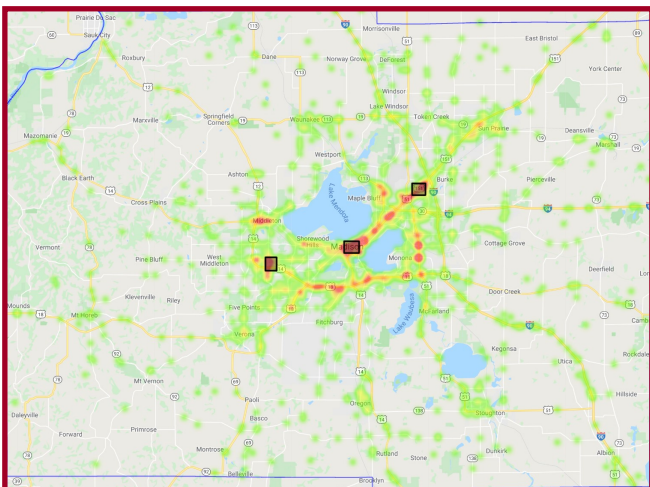
Breaking this down,

teen drivers make up **7%** of drivers involved in a crash and make up **4%** of licensed drivers and

**older drivers** make up **10%** of drivers involved a crash and make up **16%** of licensed drivers.

Drivers in a crash	Age	Licensed drivers
10%	65+	16%
6%	60-64	8%
8%	55-59	8%
8%	50-54	8%
8%	45-49	8%
8%	40-44	8%
9%	35-39	9%
11%	30-34	11%
12%	25-29	11%
13%	20-24	8%
7%	15-19	4%

Hotspots of injury and fatal crashes involving a teen driver

Top 3 Areas:

1. Madison (U.S. 14/ S Gammon Rd.)
2. Madison (campus/ downtown)
3. Madison (U.S. 151/Zeier Rd.)

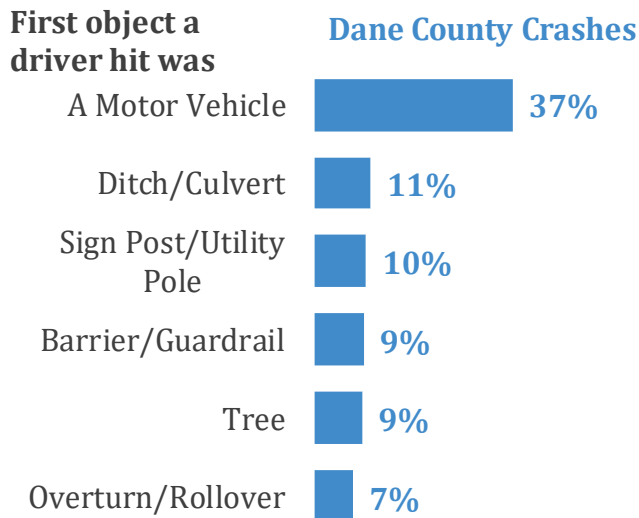## Hotspots of injury and fatal crashes involving an older driver
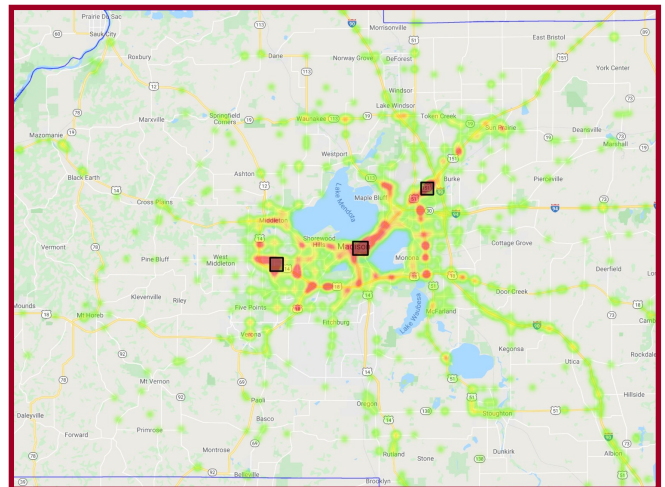
Top 3 Areas:

1. Madison (U.S. 14/ S Gammon Rd.)
2. Madison (campus/ downtown)
3. Madison (U.S. 151/Zeier Rd.)

Lane Departure Crashes

35% Wisconsin
29% Dane County

Fewer lane departure crashes occur in Dane County, out of total injury and fatal crashes, compared to the state. **Colliding** with a **Motor Vehicle** was the most frequent 'first harmful event.'
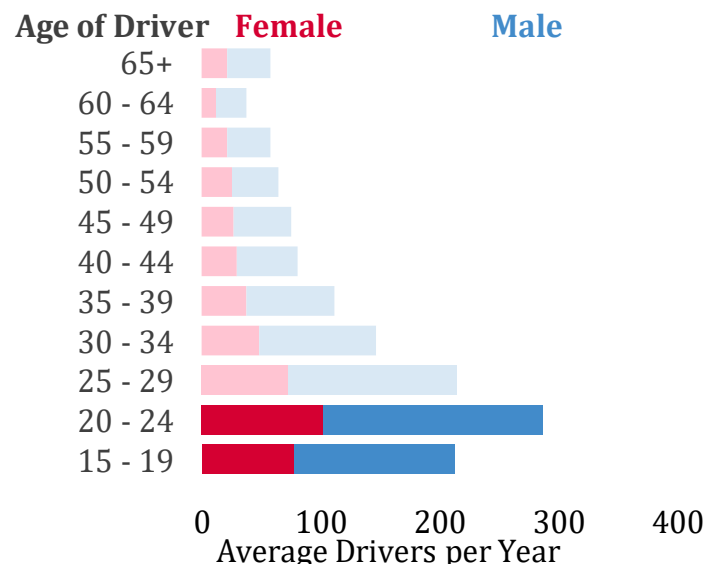
A **lane departure crash** is defined as when the driver crosses the centerline, edge line, or leaves the roadway and then usually colliding with another vehicle or an object, such as a guardrail or a tree.

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

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

First object a driver hit was	Dane County Crashes	Wisconsin Crashes
A Motor Vehicle	37%	30%
Ditch/Culvert	11%	18%
Sign Post/Utility Pole	10%	8%
Barrier/Guardrail	9%	8%
Tree	9%	9%
Overturn/Rollover	7%	11%

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, **16%** involved speed as a contributing factor resulting in **548** 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

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

0   100   200   300   400
Average Drivers per Year

Appendix

Urbanization

Dane County contains most of the Madison metropolitan area. Dane County is also adjacent to the Janesville metropolitan area and the Baraboo, Watertown-Fort Atkinson, and Beaver Dam urban clusters.

Vehicle Miles of Travel (VMT)[3]

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

In Dane County, the 2018 VMT was 5,258,268,110 miles with a crash rate of 50 injury and fatal crashes per 100 million VMT, higher than the state's rate of 46 crashes.

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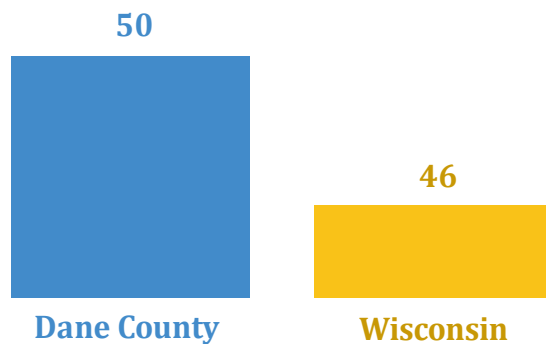
*Crash rate as measured by total injury and fatal crashes per 1 million vehicles miles traveled in 2018

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.

[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 Dane County agencies.

■ Participate □ Did not participate

Mobilization Campaign	Dane County SO	Belleville PD	Blue Mounds PD	Brooklyn PD	Cottage Grove PD	Cross Plains 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

	Dane County SO	Belleville PD	Blue Mounds PD	Brooklyn PD	Cottage Grove PD	Cross Plains PD
Impaired Driving	Dane County				Suburban Dane County	
Speed Enforcement	Dane County					
Occupant Protection	Dane County	Suburban Dane County	Suburban Dane County	Suburban Dane County	Suburban Dane County	

2019 Grant Funded Amount for a Task Force

Dane County Impaired Driving Taskforce	$200,000	Suburban Dane County Impaired Driving Taskforce	$68,000
Dane County Speed Enforcement Taskforce	$60,000	Suburban Dane County Speed Enforcement Taskforce	$35,000
Dane County Occupant Protection Taskforce	$113,400	Suburban Dane County Occupant Protection Taskforce	$98,000

Abbreviations: DPS = Department of Public Safety, PD = Police Department, SO = Sheriff's Office

■ Participate □ Did not participate

Mobilization Campaign	Dane PD	DeForest PD	Edgerton PD	Fitchburg PD	Madison PD	Madison Town 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

	Dane PD	DeForest PD	Edgerton PD	Fitchburg PD	Madison PD	Madison Town PD
Impaired Driving		Suburban Dane County			Dane County	Suburban Dane County
Speed Enforcement		Suburban Dane County			Dane County	Suburban Dane County
Occupant Protection		Suburban Dane County	Suburban Dane County	Dane County		Suburban Dane County

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Abbreviations: DPS = Department of Public Safety, PD = Police Department, SO = Sheriff's Office

Mobilization Campaign	Maple Bluff PD	Marshall PD	McFarland PD	Middleton PD	Monona PD	Mount Horeb PD	Oregon PD
Legend: ■ Participate ☐ Did not participate							
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

	Maple Bluff PD	Marshall PD	McFarland PD	Middleton PD	Monona PD	Mount Horeb PD	Oregon PD
Impaired Driving			Suburban Dane County	Suburban Dane County			Suburban Dane County
Speed Enforcement			Suburban Dane County	Suburban Dane County			Suburban Dane County
Occupant Protection	Suburban Dane County	Suburban Dane County	Suburban Dane County	Suburban Dane County			Suburban Dane County

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Dane County Occupant Protection Taskforce	$113,400	Suburban Dane County Occupant Protection Taskforce	$98,000

Abbreviations: DPS = Department of Public Safety, PD = Police Department, SO = Sheriff's Office

Mobilization Campaign	Shorewood Hills PD	Stoughton PD	Sun Prairie PD	UW-Madison PD	Verona PD	Waunakee 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	☐	☐	☐	☐	☐	☐

■ Participate ☐ Did not participate

2019 Task Force Participation

|	Shorewood Hills PD	Stoughton PD	Sun Prairie PD	UW-Madison PD	Verona PD	Waunakee PD
Impaired Driving			Suburban Dane County		Suburban Dane County	
Speed Enforcement			Suburban Dane County		Suburban Dane County	
Occupant Protection	Suburban Dane County	Suburban Dane County			Suburban Dane County	Suburban Dane County

2019 Grant Funded Amount for a Task Force

|			
Dane County Impaired Driving Taskforce	$200,000	Suburban Dane County Impaired Driving Taskforce	$200,000
Dane County Speed Enforcement Taskforce	$60,000	Suburban Dane County Speed Enforcement Taskforce	$60,000
Dane County Occupant Protection Taskforce	$113,400	Suburban Dane County Occupant Protection Taskforce	$113,400

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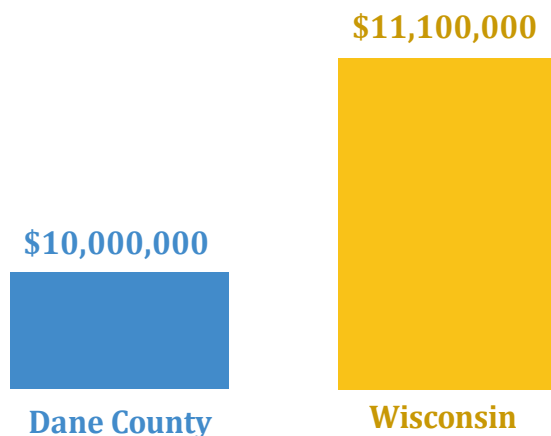
Health Impacts and Medical Costs

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

55

Dane County

52

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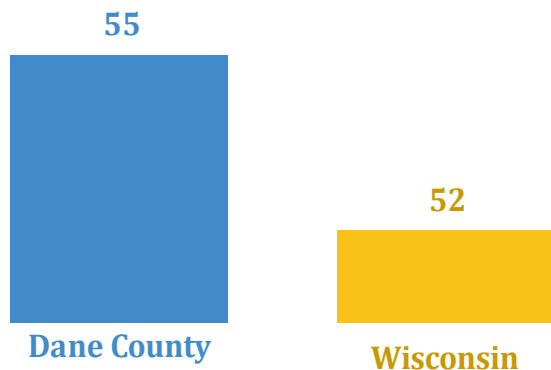
And **more** people are hospitalized due to a crash (per 100,000 residents)[4]

52

Dane County

47
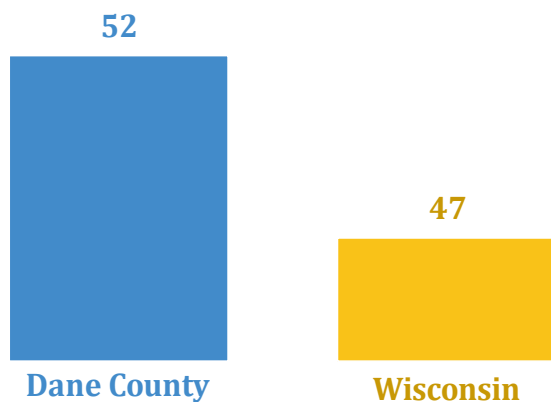
Wisconsin

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

$11,100,000

$10,000,000

Dane County

Wisconsin

In Dane County, for every **101 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
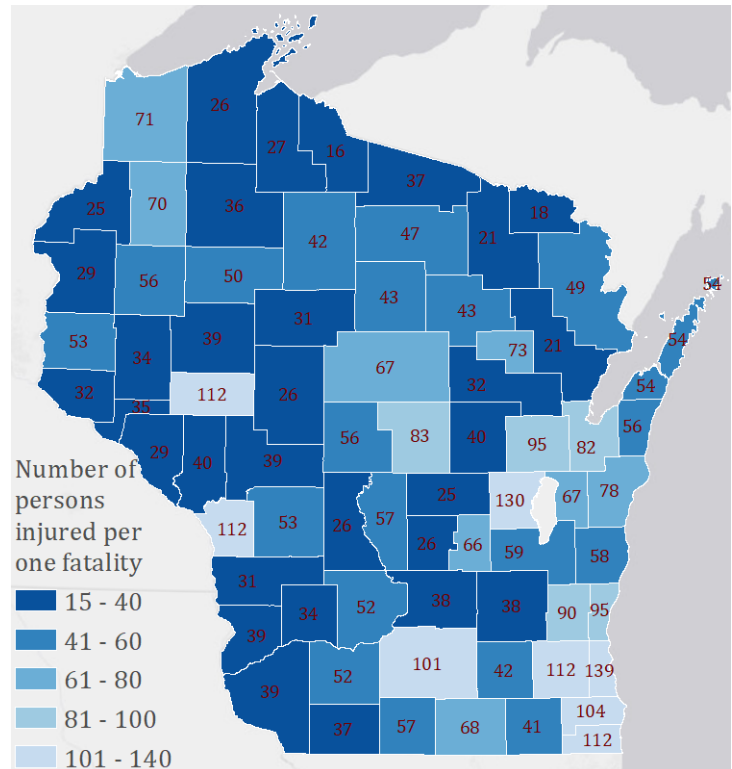
Injury-to-Fatality Ratio

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.