

Motor Vehicle Traffic Injury Among Urban and Rural Wisconsin Residents

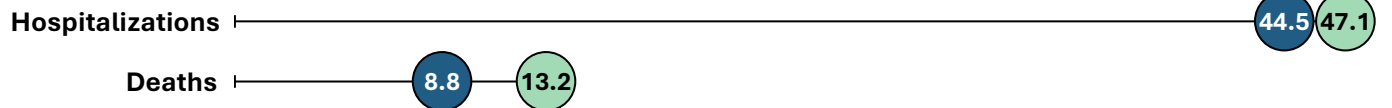
Urban and rural roadway environments are designed for different purposes and different types of traffic. These differences can affect traffic injury* risk as well as where and how soon someone gets care after a crash.

Geography and motor vehicle traffic injury

Hospitalizations and deaths due to overall traffic injury occur at lower rates among **urban residents** than **rural residents**.

Motor vehicle traffic injury hospitalization and death rates, 2021–2023¹

Age-adjusted rate per 100,000



By design, rural roads have fewer traffic signals and signs, narrower space, less lighting, and higher speed limits. However, these features can contribute to motor vehicle crashes in rural areas.² Emergency responders often travel further to crashes in rural areas as well, delaying care for injured roadway users.² Seatbelt use is less common among rural residents which can also result in more severe crash injury. In urban areas, there are higher rates of pedestrian and bicycle injury. Greater urban pedestrian injury is related to the fact that more vehicles and pedestrians are in a condensed area, increasing chances of a crash.³ There is also more bicycle usage in urban settings and more locations (like intersections and driveways) where crashes are more likely to occur.³

Preventing motor vehicle injury

Wisconsin is working to prevent crashes with the Safe Systems Approach. This approach focuses on changes to both the environment (like roadway design, speed limits, and post-crash care) and individual behaviors (like seatbelt use and sober driving) to prevent injury and save lives. Learn more about this approach on the [Wisconsin traffic safety webpage](#).

***Motor vehicle traffic injury:** Injuries involving a motor vehicle (self-propelled vehicles) that occur on public roads or highways

Bicycle and pedestrian injuries not involving a motor vehicle or that took place off a public roadway are not included in this definition.

Motor vehicle non-traffic injury: Injuries involving a motor vehicle that occur off public roads

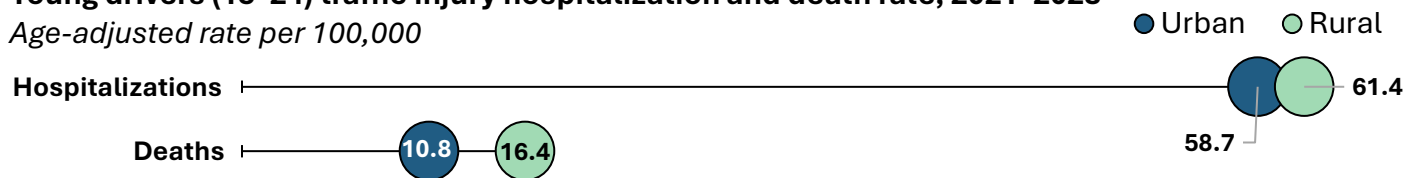


Younger drivers (15–24 years)

Younger people have more limited driving experience which increases their risk of a crash. In Wisconsin, the death rate of younger drivers in motor vehicle traffic crashes is significantly lower among **urban residents** than **rural residents**. There is not a significant difference in hospitalization rates.

Young drivers (15–24) traffic injury hospitalization and death rate, 2021–2023¹

Age-adjusted rate per 100,000

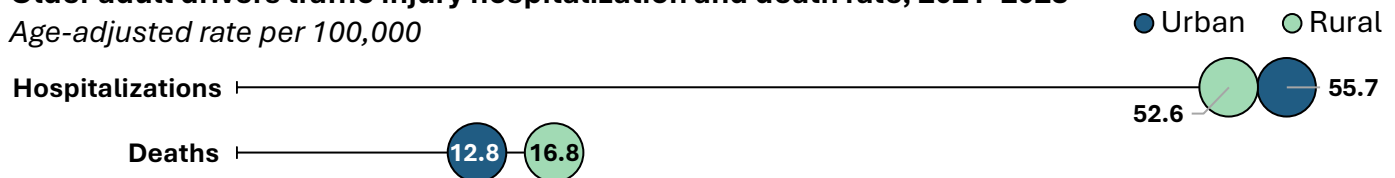


Older adult drivers (65+ years)

Age brings about physical and mental changes that can affect driving and increase the risk of a crash. Older Wisconsin drivers who are **rural residents** have a higher rate of traffic death than older **urban residents**. There is not a significant difference in hospitalization rates.

Older adult drivers traffic injury hospitalization and death rate, 2021–2023¹

Age-adjusted rate per 100,000



Type of road user

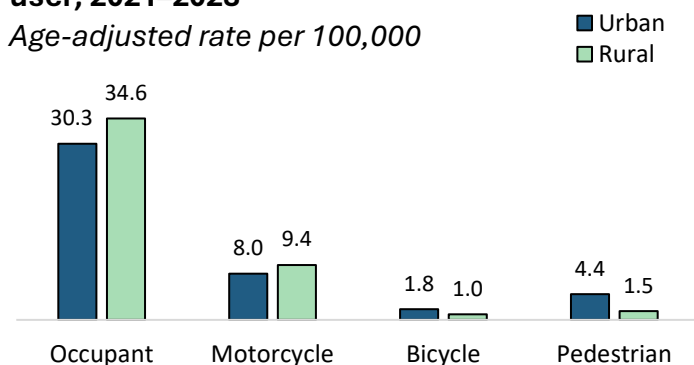
Higher rates of traffic injury hospitalization and death occur among **urban residents** who are pedestrians. The bicycle traffic injury hospitalization rate is also higher among **urban residents**. No comparison could be made with rural residents for bicycle deaths due to low counts.

Higher rates of traffic injury hospitalization and death occur among **rural residents** who are:

- Motor vehicle occupants.
- Motorcycle riders.

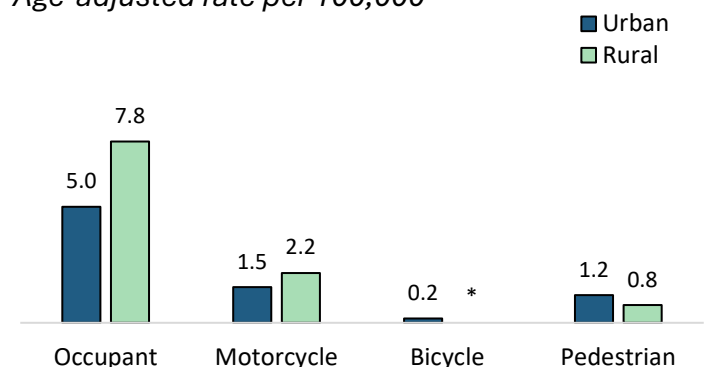
Motor vehicle traffic injury hospitalization rate by type of road user, 2021–2023¹

Age-adjusted rate per 100,000



Motor vehicle traffic injury death rate by type of road user, 2021–2023¹

Age-adjusted rate per 100,000



*Less than 20 deaths. Rate cannot be calculated

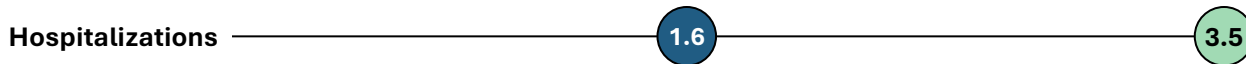
All-terrain vehicles (ATVs)

While much of the injury involving ATVs (three or four-wheeled ATV) happens off public roads (called non-traffic injury), traffic crashes involving ATVs can occur, as ATVs are increasingly allowed on public roads in Wisconsin. **Rural residents** experience higher rates of hospitalization related to ATV traffic injury than **urban residents**.

ATV traffic and non-traffic injury hospitalization rate, 2021–2023

Age-adjusted rate per 100,000

● Urban ● Rural



Note: Death rates are not displayed because ICD-10 codes for ATV vehicles do not get as specific as 3-or 4-wheeled vehicles and may include other types of ATVs

Traffic safety behaviors

Seatbelt usage⁴

Seat belts are a key injury prevention tool. Nationally, it's estimated that seatbelts saved 20,443 lives in 2019 alone.⁵ Ninety-three-point-three percent of Wisconsinites always or almost always wear their seatbelts. However, there is significantly more seatbelt use among **urban residents** of Wisconsin than **rural residents**.



94% of **urban residents** always or almost always wear their seatbelts



92% of **rural residents** always or almost always wear their seatbelts

Speeding⁶

Speed is involved in 18.1% of non-fatal crash hospitalizations among Wisconsin residents. The level of speed involvement in non-fatal crash hospitalizations is significantly lower among **urban** than **rural** residents.



17% of crash non-fatal hospitalizations are speed-related among **urban residents**



20% of crash non-fatal hospitalizations are speed-related among **rural residents**

Driving under the influence⁴

Taking a drive while intoxicated is dangerous. If you've had something to drink, it's safest to have a sober friend drive you home or use a rideshare service. There is no difference in the percentage of people who have driven after having too much to drink between **urban** and **rural** Wisconsin residents.



1 out of every 25 adults in Wisconsin has driven after having too much to drink in the past 30 days (among those who drank in the past month)

Data notes: The data in this report may vary what is reported in the Wisconsin Interactive Statistics on Health (WISH) injury modules due to differing methodologies. Death data in WISH is provisional while the data in this report is finalized/frozen. In this report, residency was determined based on geo-coding while residency in WISH uses zip codes. Data from the Crash Outcome Data Evaluation System is based on linked motor vehicle traffic injury hospitalizations (at the patient level) and crash records. Seatbelt use, speeding, and sober driving levels were not adjusted for other variables, like sex or age. For more information about limitations of this linkage please see the [Crash Hospitalization documentation page](#).

Urban and rural: The terms urban and rural refer to number and density of people in a geographic region. For this analysis, the [Federal Office of Rural Health Policy classification](#) (based on the 2020 census) was used to categorize Wisconsin resident counties into urban and rural. Classification based as urban or rural reflects the residence of the injured person, not where the crash occurred.

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1 Wisconsin Hospital Discharge Data, Inpatient Discharges, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services and death records for Wisconsin residents, 2021–2023. **2** [Rural Health Information Hub](#) **3** [National Highway Traffic Safety Administration](#) **4** 2023 Wisconsin Behavioral Risk Factor Surveillance System **5** [Kahane & Simons, 2024](#) **6** Traffic Records Coordinating Committee, Crash Outcome Data Evaluation System data, 2021-2023