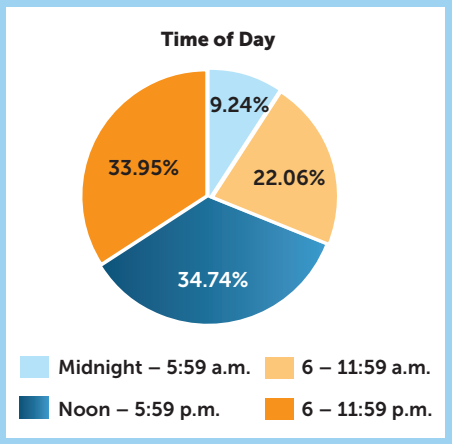
Pedestrian Injury in Motor Vehicle Crashes: What to Know About EMS Activations

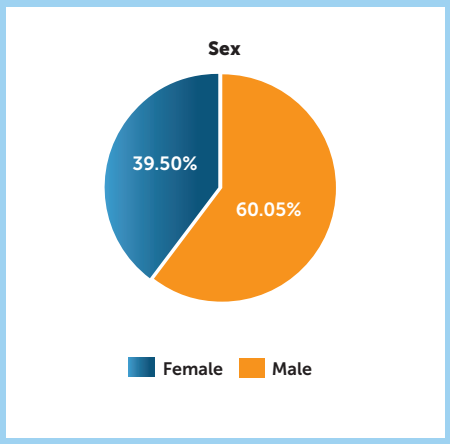
Fatality data is just the tip of the iceberg when it comes to what we can learn about the risk of injury to pedestrians. Examining injury, in addition to fatality data, can enhance our understanding of the burden of dangerous behavior by road users. NHTSA houses several datasets that allow for the examination of pedestrian risk: the Fatality Analysis Reporting System (FARS), the Crash Report Sampling System (CRSS), and the National Emergency Medical Services Information System (NEMSIS). NEMSIS collects information on EMS activations, which are unique electronic patient care reports by a single EMS agency (these do not necessarily represent a unique patient, as patients may encounter multiple agencies). This page reports NEMSIS data from 2017-2018.* In this time period, there were at least 67,814 EMS responses relating to motor vehicle crashes involving a pedestrian. This was 2.54% of all activations reported in NEMSIS during the period.

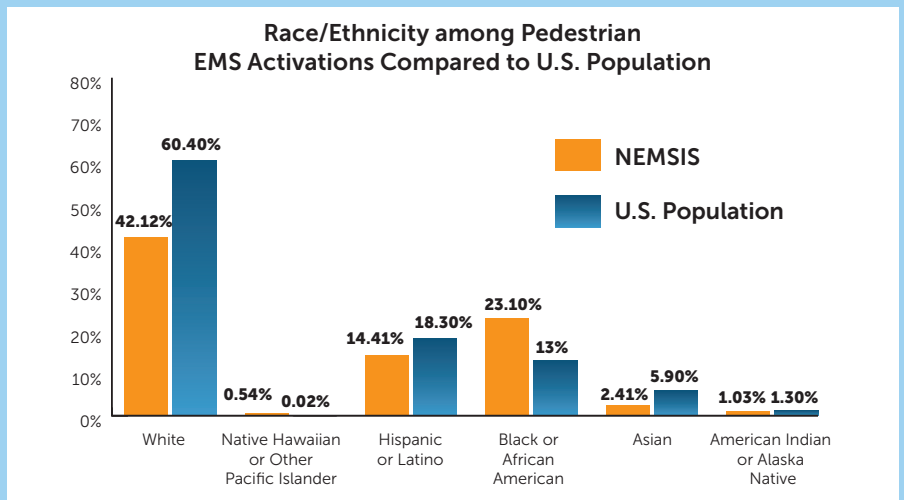
Key Facts

- **90%** of EMS responses involving pedestrians had a scene response time of **10 minutes or less**, and **78%** were **7 minutes or less**. Response time is critical to decreasing injury severity. Bystander intervention programs can decrease the time to care.
- **20- to 29-year-olds** were the most commonly represented age group among pedestrian EMS responses for both males and females. This indicates an additional age group to focus on compared to the older age group that fatality data shows is most affected.
- **68%** of pedestrian EMS activations were in **urban areas** versus suburban, rural or wilderness areas, further emphasizing the need to focus efforts on urban areas.
- **72%** of patients in pedestrian EMS responses were **treated and transported by EMS**, which indicates they were injured severely enough to require further medical treatment.
- **60%** of pedestrian EMS activations had greater than 61% probability of surviving their injuries. Further study on crash impact can add to the understanding of injury mitigation.

NEMSIS can provide information on injuries to expand our understanding of pedestrian safety. While evaluating the sex of injured pedestrians using NEMSIS data shows similar patterns as FARS, the time-of-day and race variables return results that can give us a broader understanding of pedestrian injury trends. The race variable indicates a disparity that would benefit from further research, and the time-of-day variable indicates an additional potential time frame to focus pedestrian safety efforts.







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NEMSIS Public V3 MVC Activations Dashboard

* In 2017, NEMSIS updated the national data collection to Version 3 data. This presents only the data from Version 3.