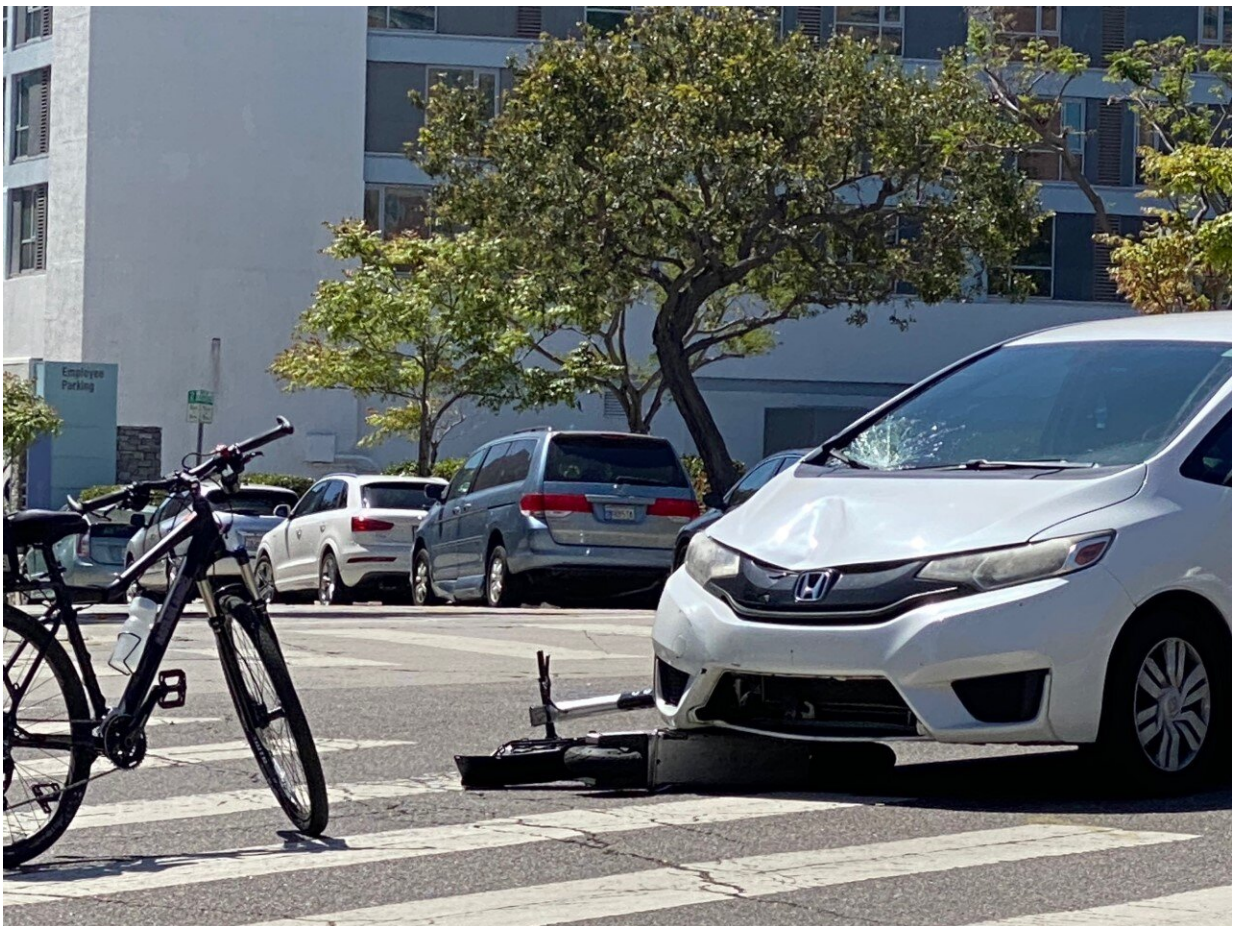


Hospitalizations for scooter injuries nearly tripled in the US between 2016 and 2020, research finds

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Scooter injuries nearly tripled across the U.S. from 2016 to 2020, with a concurrent increase in severe injuries requiring orthopedic and plastic surgery over the same period. Credit: Joann Elmore

UCLA-led research finds that scooter injuries nearly tripled across the U.S. from 2016 to 2020, with a concurrent increase in severe injuries requiring orthopedic and plastic surgery over the same period.

The study, which compared national trends in scooter and bicycle injuries during the period, also found that costs to treat those injuries rose five-fold, highlighting the financial strain these injuries pose to the health care system—a finding that "underscores a critical juncture for discerning the underlying causes of injuries and informing policies for [injury prevention](#)," the researchers note.

The study is [published](#) January 9 in the *Journal of the American College of Surgeons*.

"Considering the rise in the number of hospitalizations and major operations for scooter-related injuries, it's crucial to elevate [safety standards](#) for riders," said lead author Nam Yong Cho, a third-year [medical student](#) at UCLA and a research associate at the UCLA Cardiovascular Outcomes Research Laboratories. "Advocating for improved infrastructure, including enforced [speed limits](#) and dedicated lanes, is also vital to minimize risks for vehicles, scooter riders, and pedestrians alike."

The researchers used the 2016-2020 National Inpatient Sample, a database maintained by the Agency for Health Care Research and Quality, to compare trends and outcomes for scooter-related and bicycle-related injuries. The database does not, however, differentiate between electric and non-electric scooters. Of nearly 93,000 patients who were hospitalized for injuries, about 6,100 (6.6%) resulted from scooter injuries.

About 27% of people in the scooter cohort were under age 18, compared with 16% for the bicycle group. In addition, injuries were most frequent

in the winter months (24% vs. 20%), patients were insured by Medicaid (27% vs. 24%), and scooter injuries led to more major operative interventions (56% vs. 48%), which mainly included orthopedic and plastic surgery (89% vs. 85%) and operations to the head (5% vs. 4%).

Scooter riders also had higher odds of experiencing long bone fractures and paralysis than their bicycle-riding counterparts, though both groups were similarly likely to suffer traumatic brain injuries.

Finally, the annual health care burden of treating scooter-related injuries jumped from about \$6.6 million in 2016 to \$35.5 million in 2020. For bicycle injuries, the price tag increased from \$307 million to \$434 million.

The study has some limitations. They include a limited amount of granular data such as helmet use, presence of multiple riders on the vehicles, and use of intoxicants; and an inability to account for objects and other vehicles that might have been involved in the injury incidents, or to determine the kind of terrain where they happened, and speed, time of day and total distance traveled when they occurred.

The researchers also could not ascertain the type of scooter or bicycle models involved in the injuries.

Still, the findings indicate a worrisome increase in patient injury, hospitalization, and [financial burden](#), the researchers note.

"The progressive exacerbation of injury severity in scooter-related incidents manifested in a substantial proportion of patients necessitating [surgical intervention](#) and potentially having long-term morbidity," the researchers write. "Our findings are a call to action for health care leaders to empower themselves in promoting scooter-related [injury](#) prevention and greater safety in the community."

More information: Nam Yong Cho et al, National Trends and Clinical Outcomes after Scooter Injury in the US: 2016-2020, *Journal of the American College of Surgeons* (2024). [DOI: 10.1097/XCS.0000000000000918](https://doi.org/10.1097/XCS.0000000000000918)

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