

# COVID-19 pandemic lockdowns sharply increased bicycle-related injuries; gun-related injuries rose too

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COVID-19 pandemic lockdowns brought sharp increase in bicycle- and gun-related injuries

27,652 trauma cases at four Level I trauma centers (2019–2020)



Bicycle-related injuries

↑ 100%



Firearm-related injuries

↑ 23.5%



Motor-vehicle crash-related injuries

↓ 12.7%

Study findings may provide a roadmap for allocating trauma resources in the next pandemic

The Effect of Coronavirus Shutdowns on Nationwide Trauma Patterns. Scientific Forum. American College of Surgeons Clinical Congress 2021.

The Effect of Coronavirus Shutdowns on Nationwide Trauma Patterns. Scientific Forum Presentation. American College of Surgeons Clinical Congress. Credit: American College of Surgeons

Despite regional variations in COVID-19-related restrictions last year during the lockdown phase of the pandemic, similar trends emerged in activity at Level I trauma centers in four different cities from the

Southeast to the Northwest, according to research presented at the virtual American College of Surgeons (ACS) Clinical Congress 2021.

The data could help inform public policy decision-making for the next pandemic, study authors said.

A [retrospective review](#) of 27,652 [trauma](#) cases from 2019 to 2020 at four Level I trauma centers in Orange County, California; Portland, Oregon; Miami, Florida; and Tulsa, Oklahoma, found that overall activity followed similar patterns in these locations, with cases for [motor vehicle collisions](#) declining while those for gunshot wounds and bicycle accidents increased significantly.

"We were trying to assess if the different variations in COVID-19 shutdowns across the country affected trends," said presenter Leonardo Alaniz, a third-year medical student at the University of California, Irvine. The findings bore out the study hypothesis—that trauma centers in four different cities with different levels of pandemic restrictions demonstrated similar trauma case patterns.

"Overall, what we discovered is that there was a substantial increase in bicycle-related trauma rates of about 100 percent," he said (*p* gunshot wounds (GSW) by about 23.5 percent. However, we did see a substantial reduction in motor vehicle crash (MVC)-related trauma rates, about 12.7 percent." (*p* values for both GSW and MVC-related trauma are

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