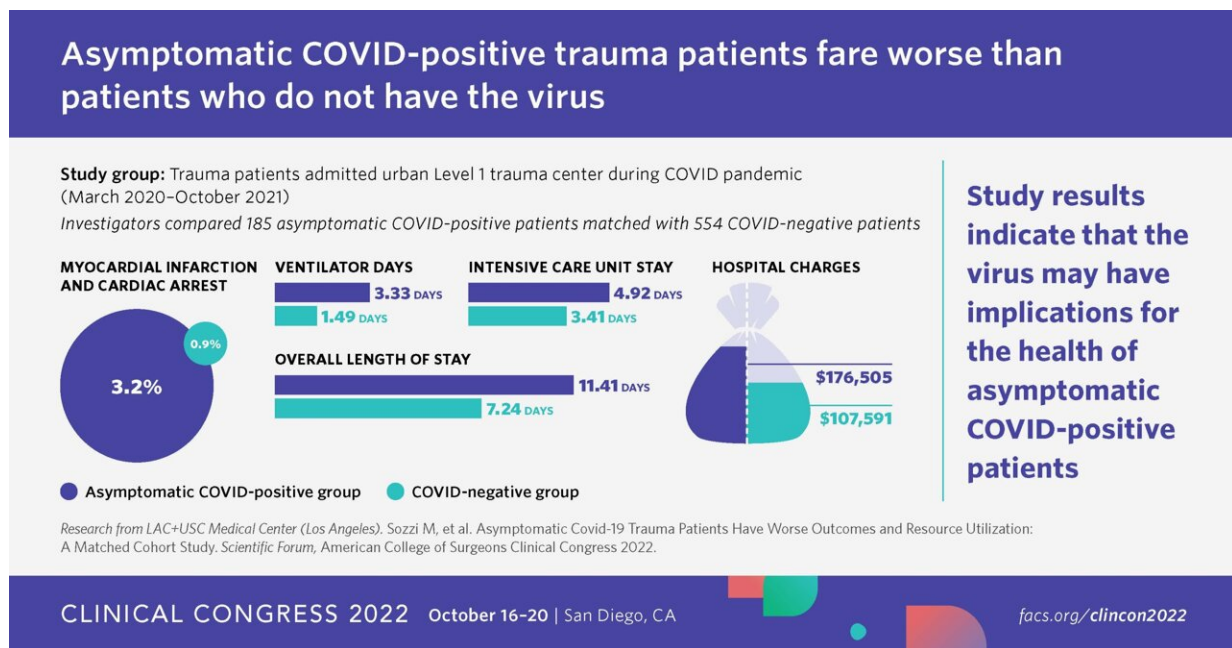


Asymptomatic trauma patients who test positive for COVID fare worse than comparable patients who do not have the virus

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Asymptomatic COVID-positive trauma patients fare worse than patients who do not have the virus. Credit: American College of Surgeons

Trauma patients who show no symptoms for COVID, yet test positive for the virus, have significantly higher rates of cardiac events, stay in the hospital longer, and incur higher hospital charges than do similar trauma

patients who test negative for COVID, according to study results presented at the Scientific Forum of the American College of Surgeons (ACS) Clinical Congress 2022.

"I found it shocking that just having the virus in the body could potentially cause more complications in trauma patients," said study coauthor, Lydia Lam, MD, FACS, a general surgeon at LAC+USC Medical Center (Los Angeles). When it comes to COVID positive patients, no symptoms do not necessarily mean no health consequences, she explained.

Dr. Lam and colleagues at LAC+USC Medical Center reviewed the COVID status of all trauma patients admitted to their urban Level 1 [trauma center](#) during the initial wave of the pandemic (March 2020 to October 2021), excluding all positive patients with symptoms. They matched the positive, [asymptomatic patients](#) with negative COVID patients based on type and severity of injury, demographics, and comorbidities. They concluded that even though they were without symptoms, patients who tested positive for COVID fared significantly worse than comparable patients who did not have the virus.

"This is the one of the first studies to look at the impact of COVID in trauma patients with no clinical or radiological signs of infection, and we demonstrated higher incidence of cardiac events, longer length of stay and increased costs in positive trauma patients compared with a matched population of similar negative patients," said lead author and research fellow, Marco Sozzi, MD.

"Simply put, you don't have to have symptoms for the virus to potentially affect your body. Further studies will need to look at further indicators that may put patients at risk," he said.

Although we know very little about the relationship between virus and

the [human host](#), the study does indicate that the virus may have implications for the health of even COVID patients who are asymptomatic, Dr. Lam said. The study also reinforces the need to screen all trauma patients for COVID so that positive patients can be isolated to prevent spreading the virus to other patients, according to Dr. Sozzi.

Study details

Using a propensity score model, each trauma patient who tested positive for COVID was matched to three COVID-negative trauma patients based on the mechanism of injury, severity of injury, demographic characteristics, and various comorbidities. A total of 185 asymptomatic COVID-positive patients were matched with 554 COVID-negative patients. The researchers looked at death rate, complications, and use of hospital resources for each population group.

Key findings

- Compared with similar trauma patients who tested negative for COVID, positive, asymptomatic COVID trauma patients had:
- Higher rates of myocardial infarction and [cardiac arrest](#) (3.2% vs 0.9%)
- More ventilator days (3.33 vs 1.49 days)
- Longer stay in the [intensive care unit](#) (4.92 vs 3.41 days)
- Longer overall length of stay (11.41 vs 7.24 days)
- Higher hospital charges (\$176,505 vs \$107,591)

Future research opportunities

At LAC+USC Medical Center, Dr. Lam said she plans to more closely examine and monitor [trauma patients](#) who test positive for COVID. "At the minimum, I have a heightened awareness about those patients that

tested positive for cardiac events," she said.

The authors also plan to conduct prospectively designed studies to explore the reasons behind the correlation of positive, asymptomatic COVID patients and other complications besides myocardial infarction and cardiac arrest, which were the only complications their study detected. They will also try to determine what type of injuries put these patients at greater risk for complications.

"We need more studies to understand the reason for this relationship between COVID-positive patients and the higher incidence of cardiac and other complications after a trauma," Dr. Sozzi said.

More information: Sozzi M, et al. Asymptomatic Covid-19 Trauma Patients Have Worse Outcomes and Resource Utilization: A Matched Cohort Study. *Scientific Forum*, American College of Surgeons Clinical Congress 2022.

Provided by American College of Surgeons

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