

Final NACMI registry results show lower in-hospital mortality for STEMI patients with COVID-19

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New results from the North American COVID-19 STEMI (NACMI)

registry reported a 25% reduction in early mortality in year 2021 compared to 2020 among patients with ST-segment elevation myocardial infarction (STEMI) and COVID-19 infection and zero deaths for patients vaccinated against SARS-CoV-2. STEMI is a severe heart attack that affects the heart's lower chambers when the artery to the heart is completely blocked.

The NACMI registry is a collaboration between SCAI, the American College of Cardiology (ACC) and the Canadian Association of Interventional Cardiology. The registry was established in 2020 with the aim to define baseline characteristics and [management strategies](#) and outcome data for COVID+ patients presenting with STEMI. Sixty-four medical centers across North America and Canada contributed data to the registry. In the initial findings, it was reported that 33% of North American patients with both COVID-19 and a STEMI died in the hospital.

In the current study, patients who in 2020 were positive for COVID-19 and had experienced a STEMI were compared with patients treated in 2021 who had received vaccination against SARS-CoV-2.

586 patients were examined, 227 who were treated in 2020 before vaccinations were made available and 359 in 2021 after emergency use authorization from the U.S. Food and Drug Administration. Of the patient population, more than 70% were male and nearly 75% were aged 55 and over. Close to 70% had [high blood pressure](#) and nearly 45% were diabetic. Comparative to 2020, the proportion of Caucasian patients was higher, and patients presented more frequently with typical ischemic symptoms.

When looking at outcomes in 2021, the research team found that survival was significantly better when compared to 2020 with mortality dropping from 33% in 2020 to 23% in 2021. Also, patients treated in

2021 who were vaccinated were less likely to experience severe respiratory illness and of significant note, there were no hospital deaths among the population, while patients who were unvaccinated experienced a higher death rate (22%).

"The management and outcomes of STEMI patients with COVID-19 infection during the pandemic is evolving towards that of STEMI patients prior to the pandemic although mortality remains high for unvaccinated patients," stated Santiago Garcia, MD, lead author of the study.

"NACMI is a unique collaboration between SCAI, ACC, and CAIC that has allowed us to develop the largest registry of STEMI in patients with COVID-19 in the world," said Timothy D. Henry, MD, president of SCAI and study chair. "The unique insights from NACMI enable us to improve care for these high-risk [patients](#)."

Dr. Garcia will present the results during the ACC.22 Scientific Sessions and the full study is now available in the *Journal of the American College of Cardiology (JACC)*.

More information: Santiago Garcia et al, Trends in Clinical Characteristics, Management Strategies and Outcomes of STEMI Patients with COVID-19 Original Investigations, *J Am Coll Cardiol.* (2022). [DOI: 10.1016/j.jacc.2022.03.345](https://doi.org/10.1016/j.jacc.2022.03.345)

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