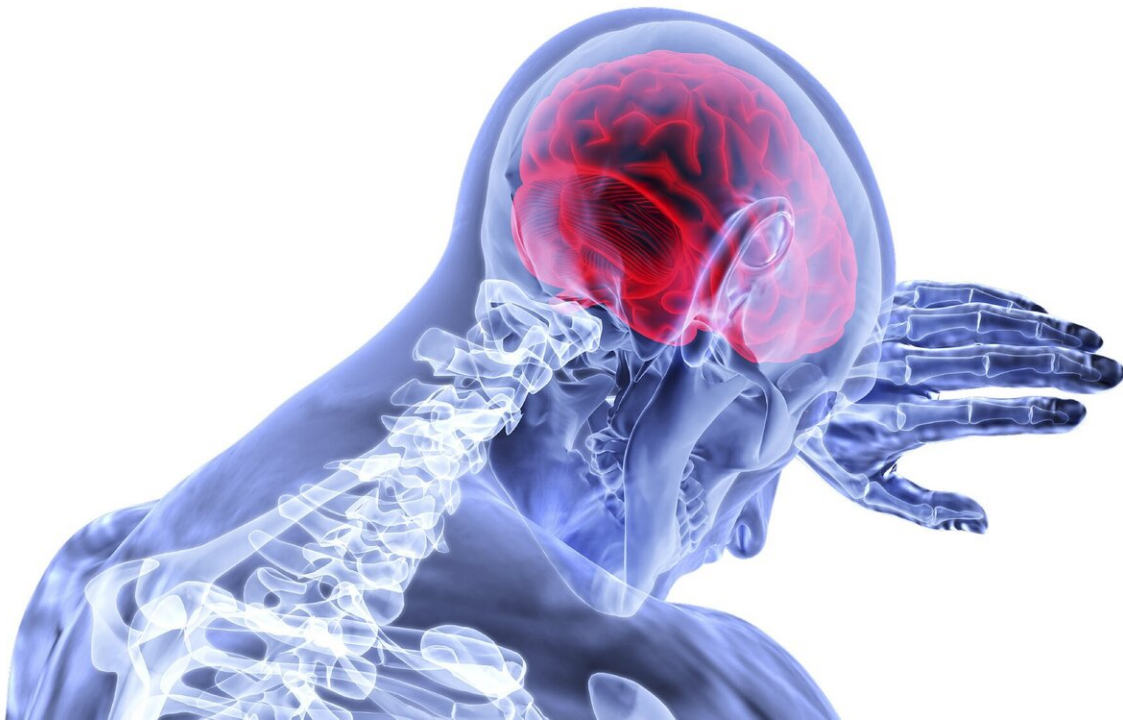


Stroke care declined globally during COVID-19 pandemic despite stroke-related COVID complications

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While there has been an increase in stroke-related illness reported with COVID-19, a new study finds that there was a global decline in the volume of stroke hospitalizations, the administration of clot-busting

drugs (intravenous thrombolysis/IVT), and inter-facility IVT transfers between primary and comprehensive stroke centers. Further, medical centers with higher COVID19 inpatient volumes experienced steeper declines.

"While recovery of [stroke](#) hospitalization was noted in the later [pandemic](#) months, our analysis of more than 254,000 stroke hospitalizations worldwide, found an 11.5 percent decrease in stroke admissions, a 13.2 percent decrease in intravenous thrombolysis and an 11.9 percent decrease in IVT transfers during the first four pandemic months, compared to the immediately preceding period," explained co-corresponding author Thanh N. Nguyen, MD, professor of neurology, neurosurgery and radiology at Boston University School of Medicine (BUSM), and Director of the Neurointerventional Service at Boston Medical Center.

The researchers conducted a cross-sectional, observational, retrospective study across six continents, 70 countries and 457 stroke centers. They found there were 91,373 stroke admissions in the four months immediately before compared to 80,894 admissions during the pandemic months. There were 13,334 IVT therapies in the four months preceding compared to 11,570 procedures during the pandemic. Inter-facility IVT transfers decreased from 1,337 to 1,178. "These reductions were observed regardless of COVID-19 hospitalization burden, pre-pandemic stroke and IVT volumes," added lead author Raul Nogueira, professor of Neurology at Emory University School of Medicine, and Director of Interventional Neurology/ Neuroradiology at Grady.

The researchers also found recovery of stroke hospitalization volume (an increase of 9.5 percent) was noted in the two subsequent months versus the two initial months of the pandemic, with greater recovery in hospitals with lower COVID-19 hospitalization volume, high volume stroke center and comprehensive stroke centers. These results were

similar with other [recent reports](#) on the collateral effects of the COVID-19 pandemic on stroke systems of care including studies from China, Italy, Spain, France, Germany, Brazil, Canada and the United States.

The researchers learned that as of 2020, many countries in Africa still do not have the ability to administer intravenous thrombolysis as part of their routine stroke care. The authors highlight this disparity in global stroke care, given the data in favor of IVT therapy from the NINDs studies from more than 20 years ago.

The researchers hope the findings of this study can inform future studies, preparedness and local policies in the event of a second COVID-19 surge or future pandemic.

These findings appear online in the journal *Neurology*.

Provided by Boston University School of Medicine

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