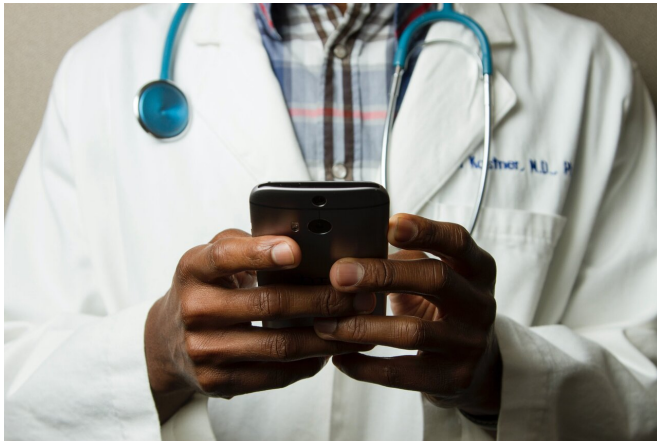


# Telemedicine for stroke improves patient outcomes, saves lives

2 March 2021, by Jake Miller



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Patients who go to the hospital with symptoms suggestive of a stroke need rapid expert assessment and treatment to halt brain damage, which could mean the difference between life and death. Yet many hospitals do not have round-the-clock stroke care teams. To make up for this deficiency, many U.S. hospitals offer telemedicine consults with stroke specialists who may be located hundreds of miles away.

A newly published study shows that individuals who receive [stroke](#) care at facilities that offer consults via stroke telemedicine, known as telestroke, fare better than [patients](#) who get [stroke care](#) at places without such services, according to researchers in the Blavatnik Institute at Harvard Medical School and colleagues.

The study, published online March 1 in *JAMA Neurology*, represents the first national analysis of telestroke [patient outcomes](#). It shows that those who get care at hospitals that offer telemedicine for stroke assessment receive superior care and are more likely to survive strokes than patients who went to similar hospitals without telestroke

services.

The telestroke services evaluated in this study allow hospitals without local expertise in treating stroke to connect patients to neurologists who specialize in treating stroke. Using video, off-site experts can virtually examine an individual with symptoms suggestive of stroke, review radiology tests, and make recommendations about the best course of treatment.

The use of remote stroke assessments is becoming more widespread. Telestroke is now in use in almost one third of U.S. hospitals, but evaluations of its impact across a broad range of hospitals has been limited.

"Our findings provide important evidence that telestroke improves care and can save lives," said study senior author Ateev Mehrotra, associate professor of health care policy and of medicine at HMS and a hospitalist at Beth Israel Deaconess Medical Center.

For the study, the researchers compared outcomes and 30-day survival among 150,000 patients with stroke treated at more than 1,200 U.S. hospitals, half of which offered telestroke consults and half of which didn't.

One outcome the study looked at was whether patients received reperfusion treatment, which restores blood flow to regions of the brain affected by the stroke before irreparable damage occurs.

Compared with patients who received care at non-telestroke hospitals, patients who received care at telestroke hospitals had relative rates of reperfusion treatment that were 13 percent higher and relative rates of 30-day mortality that were 4 percent lower. The researchers saw the largest positive benefits at hospitals with the lowest patient volume and hospitals in rural areas.

"The benefits from telestroke appear to be the greatest at small rural hospitals—the very facilities that were also the least likely to have telestroke capacity," said first author Andrew Wilcock, assistant professor at the University of Vermont Larner College of Medicine and a visiting fellow in health care policy at HMS. "These findings emphasize the need to address the financial barriers these smaller hospitals face in introducing telestroke."

**More information:** Andrew D. Wilcock et al. Reperfusion Treatment and Stroke Outcomes in Hospitals With Telestroke Capacity, *JAMA Neurology* (2021). DOI: [10.1001/jamaneurol.2021.0023](https://doi.org/10.1001/jamaneurol.2021.0023)

Provided by Harvard University

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