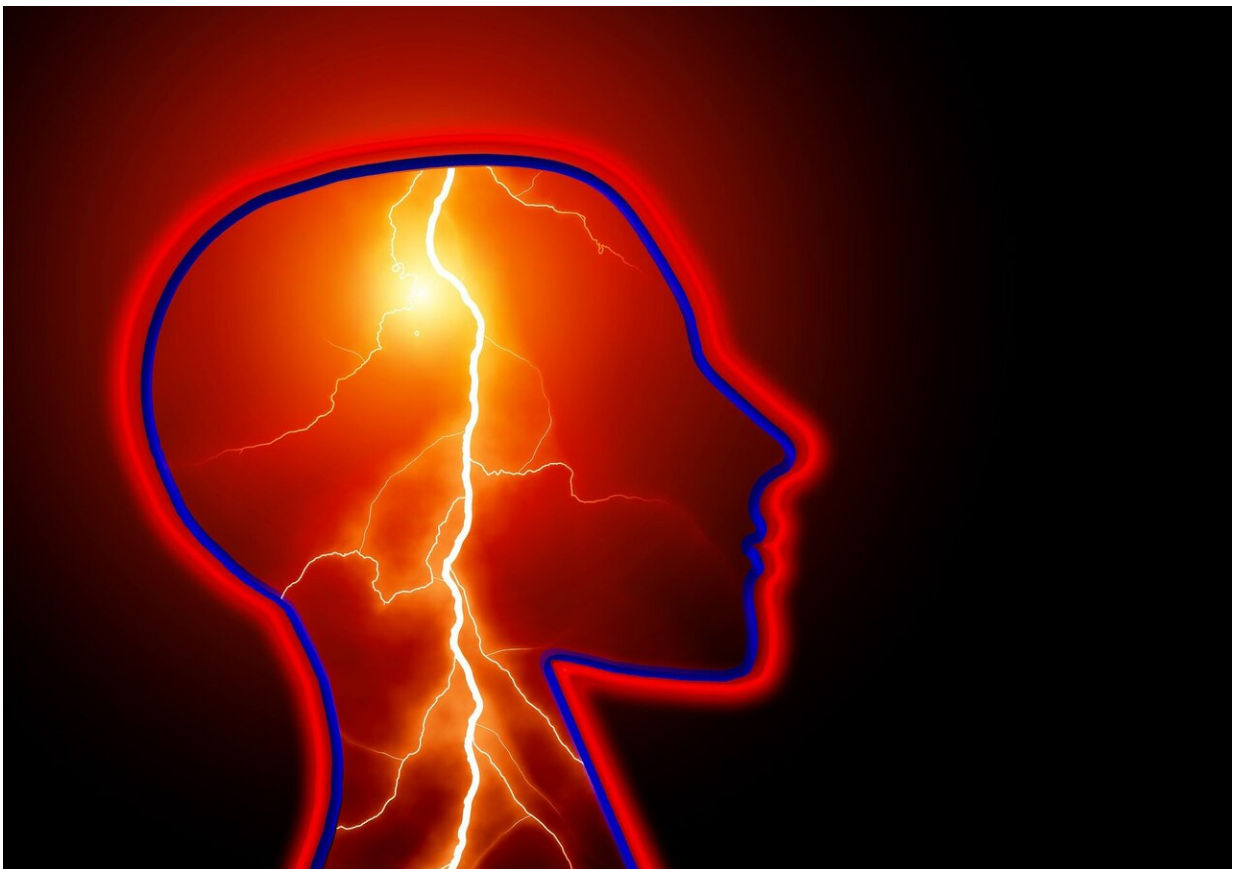


New study shows triaging stroke patients directly to Level 1 (comprehensive) stroke centers reduces time to treatment

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Implementing severity-based field triage leads to faster treatment and

less disability for stroke patients. The research presented today at the Society of NeuroInterventional Surgery's (SNIS) 19th Annual Meeting, and now published online in the *Journal of NeuroInterventional Surgery*, shows that states that use field-based stroke severity triage as part of their Emergency Medical Systems (EMS) transport protocols give severe stroke patients more rapid access to specially trained neuroendovascular care teams and lifesaving thrombectomy.

In the study, "Long Term Effect of Field Triage on Times to Endovascular Treatment for Emergent Large Vessel Occlusion," researchers compared [stroke patients](#) in two adjacent states over 5 1/2 years. Both states were served by a single Level 1 (comprehensive) stroke center. After matching the patients from the two regions based on distance to the Level 1 center, time to treatment decreased by 55 minutes after implementation of severity-based [triage](#). In contrast, there was no change in time to treatment in the adjacent region with traditional EMS protocols over 5 1/2 years, despite extensive efforts to improve workflow at referring hospitals. As a result, clinical outcomes at 90 days were significantly better in those patients who resided in the state with severity-based triage, compared with traditional EMS protocols.

"The time lost in transfer from the nearest hospital to the best-equipped facility clearly jeopardizes a patient's chance of recovery," said Mahesh Jayaraman, MD, lead author of the study, a neurointerventional radiologist and professor of diagnostic imaging, neurology and neurosurgery at Brown University, and director of the Neurovascular Center at Rhode Island Hospital. "We hope this [research](#) persuades state governments to take a close look at their stroke care protocols and implement changes to improve triage and transport."

Like trauma, stroke is time sensitive. Previous studies have shown that when patients are taken to a slightly more distant facility that is better equipped to treat them (a Level 1 stroke center), rather than simply

going to the closest facility, they have been found to undergo the appropriate care more quickly and have less disability at 90 days after their stroke. This new study confirms the previous results and shows just how critical changing EMS protocols are to a patient's survival.

By quickly assessing a patient's ability to squeeze and release a hand or make [facial expressions](#)—physical indicators of a serious stroke known as an emergent large vessel occlusion—EMS professionals can predict the level of care that is commensurate with the severity of the stroke, and transport patients directly to the most appropriate facility. Currently, however, less than half of the 50 states have clear protocols to ensure a person who is having a severe stroke is transported directly the right facility. This is critical, because a patient's access to appropriate care in a timely manner can make a huge difference in outcomes. Nearly two million [brain cells](#) die every minute a severe [stroke](#) goes untreated.

More information: Mahesh V Jayaraman et al, Long-term effect of field triage on times to endovascular treatment for emergent large vessel occlusion, *Journal of NeuroInterventional Surgery* (2022). [DOI: 10.1136/jnis-2022-019250](#)

Provided by Society of NeuroInterventional Surgery

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