

Standardized stroke protocol can ensure ELVO stroke patients are treated within 60 minutes

24 July 2018



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A new study shows that developing a standardized stroke protocol of having neurointerventional teams meet suspected emergent large vessel occlusion (ELVO) stroke patients upon their arrival at the hospital achieves a median door-to-recanalization time of less than 60 minutes. The study was presented at the Society of NeuroInterventional Surgery's (SNIS) 15th Annual Meeting.

Door to Revascularization in Less than 60 Minutes: A Cost and Benefit Analysis mentions that while standardized protocols for imaging and transport to the angiography suite, as well as a standardization of the thrombectomy procedure, help save time, the most important time savings comes from having a neurointerventional team meet the patient when they arrive in the emergency room. The five-person team includes one registered nurse (RN), two technologists, one anesthesiologist, and one neurointerventionalist.

"Level 1 trauma centers require trauma surgeons

and anesthesiologists to be in-house 24/7. By requiring Level 1 [stroke](#) centers to do the same, we could potentially help more ELVO patients make full recoveries," said Dr. Donald Frei, lead author of the study and a neurointerventionalist based in Colorado.

Rapid endovascular thrombectomy helps patients with ELVO achieve the best outcomes, but standardizing stroke protocols to ensure timely and safe care does come at a cost. The study considered 1,162 ELVO alerts met by the neurointerventional team. Of these, 314 patients (27 percent) received a thrombectomy. In cases in which a thrombectomy was not performed, the RN and technologists are paid two hours each of overtime pay, averaging to a total cost of more than \$200,000 in overtime pay annually for the salaried staff. This does not include physician time spent.

"This study shows that stroke systems of care can and should be streamlined to ensure the best possible outcomes for patients," said Dr. Frei. "The associated costs also suggest that in-house neurointerventional teams at hospitals may be the most effective option for rapid and safe care. The additional annual cost in overtime pay for the team is far outweighed by the huge benefit in decreasing the costs of lifelong disability because many more patients can return to independence."

Provided by Society of NeuroInterventional Surgery

APA citation: Standardized stroke protocol can ensure ELVO stroke patients are treated within 60 minutes (2018, July 24) retrieved 30 June 2022 from <https://medicalxpress.com/news/2018-07-standardized-protocol-elvo-patients-minutes.html>

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