

University Hospitals system-approach to stroke care increases the use of tPA therapy by 13.5-fold

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University Hospitals (UH) Stroke and Cerebrovascular Center recently reported that it has increased the use of tPA or "clot busting therapy" for ischemic stroke by 13.5 times throughout UH system hospitals since implementing the System Stroke Program (SSP). Launched in 2008, SSP sought to increase access to the lifesaving treatment for acute (urgent) ischemic stroke patients in the 15 counties surrounding Cleveland.

tPA is Tissue Plasminogen Activator, a drug that dissolves blood clots and must be administered intravenously within 4.5 hours of the onset of stroke symptoms to be effective. tPA is the only drug approved by the U.S. [Food and Drug Administration](#) for the acute treatment of stroke and although tPA was approved for use in 1995, many hospitals did not have systems in place to evaluate or treat patients with this therapy.

Nationally, administration for stroke has increased in recent years through the development of Stroke Centers. However, the overall rate of use remains very low. According to a recently published study, the use of tPA increased nationally from less than 1 percent in 2001 to 2.4 percent in 2006.

When UH launched the SSP, the rate among UH hospitals was similar to the national rate, about 2 percent. Through the SSP efforts, that rate has increased dramatically to 27 percent.

According to Dr. Cathy Sila, director of the UH Stroke and Cerebrovascular Center, UH used its "hub and spoke" model, with UH Case Medical Center at the center offering stroke specialty teams around the clock, and the community hospitals acting as spokes off that hub. The stroke specialist doctors and nurses provided community hospital staff in the UH health system with education to accurately identify, assess, and treat patients who present with stroke symptoms and standard protocols to ensure that any patient coming to any UH hospital would receive the same high quality, evidence-based stroke care. Community hospital emergency medicine teams were trained to evaluate stroke patients for tPA eligibility, conduct urgent brain imaging scans and consult with the UH Case Medical Center stroke service to coordinate appropriate treatment plans.

"As rapid tPA treatment is associated with better patient outcomes, patients need to receive treatment as soon as possible. Empowered by training and supported by the stroke specialists at UH Case Medical Center, our community hospitals have done a tremendous job in identifying eligible patients for tPA treatment and initiating that treatment without delay," said Dr. Sila. "Patients are then transferred to UH Case Medical Center with trained critical care transport which is called 'drip and ship' therapy. The stroke team is waiting for them on arrival and if the patient has not responded to the tPA therapy, they are rapidly evaluated for other treatment options such as angiography.

The success of the SSP program was recently presented at the International [Stroke](#) Conference in Los Angeles.

Provided by University Hospitals Case Medical Center

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