

New study shows updated stroke evaluation protocols increase patient access to lifesaving stroke treatment

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Changing standard procedures for evaluating and treating patients with suspected stroke has led to improved access to lifesaving stroke surgery

across the state of Delaware and should inform triage and treatment nationwide, according to research released today at the Society of NeuroInterventional Surgery's (SNIS) [21st Annual Meeting](#).

In "Direct From the Field Bypass to CSC Improves Timeliness and Likelihood of Thrombectomy for Patients with Emergent Large Vessel Occlusion," the members of the Delaware Stroke System worked with the state's emergency medical services (EMS) director to change the way that paramedics in Delaware evaluated individuals for suspected large vessel occlusion, increasing the number of patients who were immediately flown to [comprehensive stroke centers](#) for thrombectomy.

These changes were implemented across the state in 2023. During the first full year of implementation, 100 patients were flown directly to a comprehensive stroke center (CSC), hospitals with certified neurointerventional specialists on staff who can perform thrombectomies, bypassing the local primary stroke center (PSC). Of those patients confirmed to have a target vessel occlusion on imaging, 79% underwent thrombectomy. In prior years, that percentage was just 52% when patients arrived via inter-facility transfer. These patients also received thrombectomy an estimated 2–3 hours earlier than if they had presented to the local PSC first.

Strokes are often caused by a large vessel occlusion (LVO), a blood clot that blocks a large blood [vessel](#), cutting off significant blood flow to the brain. Nearly two million [brain cells](#) die every minute a stroke goes untreated. Therefore, the faster patients with this kind of stroke receive [thrombectomy](#)—a minimally invasive procedure that uses a catheter to reopen blocked arteries in the brain—the better their chances are to survive and to live a life of limited or no disability.

Many patients live far from comprehensive stroke centers. Therefore, stroke patients are sent to primary stroke centers first, which have fewer

stroke resources. If these patients are experiencing a [severe stroke](#), they are often then rerouted to a comprehensive stroke center. This delay in treatment can put patients at risk for long-term disability or death from stroke.

"Implementing this new evidence-based screening and routing patients straight to comprehensive stroke centers has saved lives," says Thinesh Sivapatham, MD, an interventional neuroradiologist and associate director of the Comprehensive Stroke Program at Delaware's Christiana Care health system. "Every stroke patient deserves access to lifesaving treatment, no matter where they are. We're thrilled these procedures are allowing more people in Delaware to thrive after stroke and hope further systems across the U.S. will follow suit."

Provided by Society of NeuroInterventional Surgery

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