

Every Minute Counts: Theda Clark Medical Center Sees Success in Stroke Care

Stroke is the third leading cause of death in Wisconsin and a leading cause of disability. More than 12,000 people are hospitalized for stroke each year in Wisconsin. That equates to more than one person per hour, every day of the year.

Every minute counts when treating a patient afflicted with stroke. When a 68-year-old man arrived in the Emergency Room (ER) at **Theda Clark Medical Center** in Neenah, WI this year, the stroke team was ready at the bedside for him. The Emergency Medical Services (EMS) had notified the hospital in advance that the man had possibly suffered a stroke; Theda Clark Medical Center acted on this advanced notification and called a Code Stroke. The patient arrived at the hospital around an hour after he had experienced symptoms.

Because EMS had notified the hospital ahead of time, the team was ready and had the brain scan completed within 12 minutes. The patient was then taken to the Interventional Suite and by 90 minutes the clot had been retrieved and the patient was admitted to the neurological floor. After IV t-PA, as well as mechanical intervention, the patient's National Institutes of Health Stroke Scale score dropped from 16 on arrival to 0 at time of discharge, an impressive result. After spending five days at the hospital, the patient was able to return home to his wife with only a very minor word-finding deficit.

This successful patient outcome was possible because of the seamless transition of care between EMS and the hospital. Early notification by EMS along with improvements from the Theda Clark Medical Center team has built an efficient system for speedy, high quality stroke care. Theda Clark Medical Center has been a primary stroke center certified by The Joint Commission since 2004. Theda Clark Medical Center also participates in statewide stroke improvement initiatives, including the Wisconsin Coverdell Stroke Program, and the Stroke Coordinators of WI (SCOW) group.

The Wisconsin Coverdell Stroke Program is funded by a grant from the Centers for Disease Control and Prevention. The program provides opportunities for professional education and performance improvement to assist hospitals and EMS providers in delivering the highest standard of stroke care for all residents. The SCOW group is a learning collaborative where participants identify quality improvement needs, share best practices to improve acute stroke care, and monitor changes in performance. Participating in these initiatives, Theda Clark Medical Center has had the opportunity to both learn from and contribute to other stroke programs throughout the state.

What they did


Use advance notification procedures. In 2014, when EMS suspected a person had experienced a stroke, they notified Theda Clark Medical Center 99 percent of the time. This allowed the hospital to initiate a "code stroke," activating their internal team of physicians, nurses and paramedics/EMS techs to prepare for the stroke patient's arrival.

Set up a process improvement committee for stroke. The process improvement committee at Theda Clark Medical Center reviews stroke cases every two months, including discussing before and after computed tomography (CT) brain scans and educating staff on the best evidenced-based care of stroke patients. This multidisciplinary team includes representatives from neurology, ER staff, interventional radiology, the intensive care unit, quality staff, and pulmonary staff.

Establish a stroke champion in the ER. At Theda Clark Medical Center, the neurologist led efforts to improve timely stroke treatment, showing staff the importance of stroke care and assisting with implementing evidence-based practices.

Use a database for stroke. The InStore database used at Theda Clark Medical Center helps the team track interventional times and compare measures with other facilities. In addition, the stroke team utilizes Quintiles' Get With The Guidelines® patient management tool to abstract stroke cases. This allows the hospital to compare and benchmark its practices to other hospitals in Wisconsin and nationally.

Get referring hospitals involved. Over 50 percent of Theda Clark Medical Center's stroke patients arrive from referring smaller, local hospitals. Kristin Randall, the center's Stroke Program Coordinator, develops a relationship with a stroke champion or contact at each referring hospital. She provides feedback to them on stroke cases, shares outcomes, addresses any issues regarding the transition of care during transport, and provides education to their staff.



“Our ER doctors understand we need to get the whole patient story quickly.” - Kristin Randall

What they accomplished

Each year Theda Clark Medical Center sees improvements. Their average (median) door to needle (DTN) time in 2013 was 78 minutes. In 2014, their median DTN time was 53 minutes, an impressive 25 minutes faster! According to research by Atte Meretoja, MD, PhD, MSc, lead author of a study reported on in the American Stroke Association's Stroke Journal, every 15-minute delay in delivering a clot-busting drug after stroke robs survivors of about a month of disability-free life.

Part of their success was due to the stroke team timing each step across the stroke care continuum and finding more efficient ways of delivering evidenced-based care. For instance, the ER team has achieved an average of 16 minutes from the time a suspected stroke patient arrives to the time they receive a CT scan. This multi-disciplinary teamwork helps to achieve speedy restoration of blood flow to a patient's brain, minimizing the loss of brain cells and potential deficits.

Success factors

While many factors go into the success seen at Theda Clark, a couple stand out:

Focus on outcomes. “Our ER staff, nurses, and techs get really excited when they learn about positive outcomes,” Randall said.

Good communications. “Our ER doctors understand we need to get the whole patient story quickly so that we can activate the Code Stroke Team,” Randall said. “With good communication we can provide the patient with rapid assessment and treatment.”

What they learned

Focus on chart review. “Chart review helps keep me on track, and learn from and compare with others,” Randall said. “We look at the outliers, drill down on the times, and talk about how we can make improvements.”

Pay attention to all steps in the process. “Before, the CT scan was not always documented,” Randall said. “After the CT, we would get in a waiting phase, unsure of the next step. We really upped the awareness of different treatment options, and improved getting education to referring hospitals so they understood also.”

Barriers and challenges

Ongoing education, both at Theda Clark Medical Center and at referring hospitals has been important in maintaining speedy teamwork. The staff sometimes do not understand the “why” behind certain practices. With the available technology, staff are able to see if a patient has an area of brain at risk for infarction. Some patients can be taken to the Interventional Suite for a clot retrieval and ideally save the area of the brain that is at risk of having a stroke.

What they are doing now

Theda Clark Medical Center continues to focus on reducing the time to treatment for all patients with acute distress, including those with stroke, a heart attack, or trauma.

“How do we get them from point A to point B and how do we ensure they are getting the best evidence-based care?” Randall said. “For stroke, we are continuing to focus on getting our times down even more.”

References

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