



# Sparks

## Regional Medical Center

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### **Regional Stroke Response Team Saves Lives**

FORT SMITH, AR (July 27, 2009) – Leslie D. Blades never imagined how her day would change on July 15, 2009. A 66-year-old active resident of Sallisaw, Oklahoma, she went about her normal morning routine. But when she felt a strange sensation she had never felt before, she worried.

“You don’t think, gosh, I think I’m having a stroke. Something just didn’t feel right. My entire left side was suddenly weak,” said Blades. Her husband recognized her symptoms as a possible stroke and rushed her to Sequoyah Memorial Hospital in Sallisaw. She continued, “at that point, things were in God’s hands.”

Upon arriving at the hospital, a series of rapid events occurred and a newly implemented program went into effect changing the family’s life.

Physicians and staff at Sequoyah Memorial Hospital Emergency Department in Sallisaw, Oklahoma, had just completed training with a Regional TeleStroke Program and saw an opportunity to put their knowledge to the test. Acting quickly to diagnose and stabilize the stroke victim, the team immediately contacted Sparks Regional Medical Center in Fort Smith, Arkansas, and was soon speaking with Dr. Margaret Tremwel, Sparks neurologist. Dr. Tremwel was able to work with the Sequoyah Memorial Emergency Department staff to implement the new stroke protocols that ultimately saved Ms. Blades life, including treatment with t-PA, a potent blood-clot dissolving agent. The total time elapsed from activating the TeleStroke System to the patient receiving the life-saving medication was under 20 minutes.

The goal of the initiative is to raise the region’s near last place national ranking in stroke-related deaths. At its core, the program allows rural hospitals and physicians access to specialists and the ability to share patient data in real time, maximizing a patient’s chances for survival and reducing the potential for permanent loss of function.

Margaret Tremwel, M.D., neurologist at Sparks, is one of the key figures in the rollout and development of the program. Sparks’ commitment and focus to preventing and treating stroke-related illness has placed the hospital among the American Heart Association’s Top Stroke Centers in the entire country. Sparks recently received this recognition from the American Heart Association for sustained excellence in stroke care for the past three years. In addition, Sparks was only the eleventh hospital in the United States to receive recognition

as a primary stroke care center from the nationally recognized Joint Commission for the Accreditation of Hospitals. For the past five years, Sparks has maintained this Gold Seal of recognition. This reputation for excellence in stroke care was one of the primary reasons that these Oklahoma hospitals selected Sparks as the hub hospital for the Regional TeleStroke Program.

“What I like the most about this program is that it’s local communities coming together to improve health in our region. With this technology, we can make a real difference in lives,” said Dr. Tremwel. Debbie Knoke, CEO of Sequoyah Memorial stated “Dr. Tremwel has been instrumental in providing crucial training for physicians, nurses and EMS personnel affiliated with Sequoyah Memorial Hospital in Sallisaw.” This training has also been provided to emergency health personnel affiliated with Eastern Oklahoma Medical Center in Poteau, Haskell County Healthcare System in Stigler, and the Choctaw Nation Health Care Center, located in Talihina. Stroke protocol and telemedicine training is also planned for emergency health personnel serving Memorial Hospital in Stilwell. The emergency health personnel include emergency room nurses, physicians and emergency medicine services technicians. Ms. Knoke stated “We are very proud that Sequoyah Memorial Hospital was the first rural hospital in eastern Oklahoma to “go live” with the Regional TeleStroke Program. However, I know the other four hospitals are expected to be ready to “go live” within the next couple of months.”

The program follows stroke protocols already in place at Sparks and allows the smaller, rural facilities to follow the exact same treatment methodologies. Now, where time and distance may have acted as a burden for patients and providers, they now have access to the identical treatment methodology from these smaller hospitals as that used at the larger medical center.

“Having Sparks serve as the hub for this program is exciting,” said Tremwel. “We now have the ability to reach out and help patients in real time. Once we help with the initial assessment, the treatment plan can begin in earnest and the patient benefits exponentially. The standardization of care will prove vital to reducing the number of stroke-related deaths”

The program uses a high-tech, video communications system to help provide immediate, life-saving treatments to stroke victims 24 hours a day. The program was established with equipment provided to the hospitals by the OSU Center for Health Sciences.

"OSU Center for Health Sciences is proud to partner with Sparks to provide telemedicine equipment for TeleStroke services to eastern Oklahoma hospitals, changing patients lives for the better in rural Oklahoma," said Jason Bray, Chief Medical Informatics Officer and Director of Telemedicine at the OSU Center for Health Sciences. “Our mission is to provide specialty physicians and services to rural Oklahomans. One method of fulfilling that mission is through offering these services through interactive video sessions to provide TeleStroke consultations in rural hospital Emergency Departments, in partnership with Sparks."

Sparks also serves as the pilot hospital for a similar program in Arkansas. Called Arkansas SAVES (Stroke Assistance Through Virtual Emergency Support), the program began November 1, 2008, as a partnership between the UAMS Center for Distance Health, the state Health Department, Sparks Regional Medical Center, Booneville Community Hospital,

Johnson Regional Medical Center and Mena Regional Health System.

Statistics from the national Centers for Disease Control and Prevention show that Arkansas had 1,948 stroke-related deaths in 2004 alone, making it one of the leading causes of death in the state. In addition, the direct and indirect cost of medical and institutional care of permanently disabled stroke victims was \$57.9 billion in 2006.

Both programs are expected to save lives and money because many stroke victims survive without major disability if they receive appropriate treatment within three hours. While many stroke patients are rushed to their local hospital emergency room, they still are at high risk of death or permanent disability. Why? Smaller, rural emergency rooms aren't likely to be staffed by a neurologist who can diagnose the type of stroke and whether to treat it with t-PA, the blood-clot dissolving agent used for ischemic stroke.

As part of the program, first responders have been trained by Tremwel to perform a stroke assessment so that they can alert emergency room doctors before they arrive. Emergency room doctors and nurses also have been trained as part of the program to do a more in-depth stroke assessment upon arrival. The attending physician will call a special hotline that activates the TeleStroke System. The call goes to a nurse staffing the Call Center who then links, via the video connection, the on-call neurologist with the patient's attending physician. Further evaluation continues after sending the patient for a battery of tests, including a CT scan. The neurologist will have immediate access to lab results, the CT brain image and a real-time, high-definition video/audio connection with the attending physician and patient. Together they can determine the appropriate treatment, such as whether to administer the TPA agent and the correct dosage.

After spending two days at Sparks Regional Medical Center in observation, Ms. Blades was back home, already walking and enjoying her second chance at life. She'll continue follow-up with her primary care physician in Sallisaw and participate in outpatient physical therapy through Sequoyah Memorial Hospital to help her overcome any residual effects of the stroke.

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