



## Hospital to share stroke expertise around state via robots

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By Sarah Karush, The Associated Press

PONTIAC, Mich. — When a patient arrives at an emergency room with symptoms of a stroke, doctors must act fast. But the crucial decisions that can prevent death or severe disability are harder to make without a neurologist, and not every hospital has one on call.

Starting next month, however, 21 Michigan hospitals will have what is being touted as the next best thing: a robot on call.



By Paul Sancya, AP  
Neurosurgeon Richard Fesler is shown on the monitor of the RP-7 remote presence robotic system at St. Joseph Mercy Hospital in Pontiac, Mich. Doctors use a laptop and the Net to connect to the robot.

Spearheaded by [St. Joseph Mercy Oakland Hospital](#), the project is one of several around the country in which stroke specialists from one hospital are using technology to share their expertise with smaller facilities. Experts say it's a trend that could greatly improve patients' chances of recovery.

St. Joseph Mercy Oakland is one of 13 certified primary stroke centers in the state and offers some of the most advanced treatment for the disease, which occurs when a blood vessel in the brain becomes blocked or bursts.

The new program, dubbed the Michigan Stroke Network and scheduled to be unveiled Thursday, will make the Pontiac hospital's specialists available around the clock to any hospital in the state that joins. The on-call specialist will use a laptop and the Internet to connect to a robot in the participating hospital to join the attending physician at the patient's bedside.

"When they're on call, from any Starbucks or library or in their home, through Internet connectivity, we can in fact have a physician here be in the Thumb of Michigan at a rural, critical-access hospital, providing bedside assistance to the emergency room physician in the diagnosis and development of a treatment plan for a stroke patient," SJMO Chief Executive Jack Weiner said in an interview.

That's a better option than immediately putting the patient in an ambulance or a helicopter to travel to a better-equipped hospital, Weiner said. Such travel could significantly delay vital treatment, in addition to being costly.

Under the new program, some patients will be transferred to SJMO, but only if they do not respond to the clot-busting drug tPA or have passed the three-hour window in which tPA can be safely administered. SJMO staff can use other techniques to try to remove a blockage even after three hours. Weiner estimates transfers will be necessary in only 3% of cases.

Similar telemedicine programs for stroke treatment are being developed or piloted in Alaska, Colorado, Georgia, Illinois, Kansas, Missouri, Nevada, New Mexico, New York, Tennessee and Washington, said Katy Bandemer, a spokeswoman for the American Heart Association, which operates the [American Stroke Association](#). Boston's Brigham and Women's Hospital and Massachusetts General Hospital operate a network that includes 14 other hospitals.

"There's a tremendous potential advantage that more people will receive tPA" through such programs, said Dr. Gregory Albers, a neurologist who heads the stroke center at Stanford University.

But Albers, whose center does not run a telemedicine program, said he would want to see the results of ongoing studies before jumping on the bandwagon. Among his questions: Is a patient's brain scan clearly readable over the system? Are onsite physicians able to adequately care for the patient after the medication is given?

The Michigan Stroke Network currently reaches 21 hospitals, the majority of which are part of Novi-based Trinity Health, as is SJMO. However, the program is available to any hospital in the state, and SJMO officials say they are anticipating a quick expansion.

There is no cost to participating hospitals. SJMO spent \$2.5 million up front on internal technology to create the network and will incur annual costs of \$2 million — half to rent and maintain the robots and half for program-specific salary costs, said Pamela Henderson, SJMO's chief marketing officer.

The program also includes training for doctors at participating hospitals, with the goal of improving their own ability to treat stroke patients.

The RP-7 robots, made by Santa Barbara, Calif.-based [InTouch Health](#), are about 5 feet tall and have a screen for a head, on which the doctor operating it on the other end is seen. A camera is mounted on top, transmitting video and audio back the other way. The doctor uses a joystick to move the robot.

While many telemedicine programs rely on stationary video conferencing equipment, SJMO opted to use robots because their mobility makes them more user-friendly, said Dr. Richard Fessler, a neurosurgeon who helped develop the stroke network.

The robots are already widely used within hospitals — for example, to help doctors make their rounds more efficiently or for urgent emergency room consultations, said Tim Wright, vice president of strategic marketing at InTouch. The Detroit Medical Center showed off its own fleet last year.

Wright said the robots are a superior technology for telemedicine than traditional video conferencing rooms.

"It changes the nature of the interaction from one which is passive, to one which is active, and you have the ability to go and discover things," Wright said. "You can examine the patient from the left side, then go over and see the fluid bag, turn around and talk to a family member."

Dr. Douglas Slater, chief medical officer at Mercy Hospital in Grayling, which is part of the network, said it will provide a big benefit to patients at his facility, which has no neurologist on call. Non-specialists there have successfully given tPA to patients in consultation with neurologists or neurosurgeons elsewhere in about half a dozen cases a year, but the new program will improve that process, he said.

With the technology already in place, Slater predicted the network will soon be used for other specialties as well.

"This is absolutely the wave of the future," he said.