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## Telemedicine brings doctor to patient

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When someone suddenly becomes weak, dizzy or confused, physicians in the emergency room need to know fast whether it's a stroke and how best to treat it.

But what if there's no neurologist on staff?

That kind of scenario is playing out in many South Carolina hospitals, whether they're in rural areas, inner cities or simply suffering a shortage of specialists, said Dr. David Garr, executive director of the South Carolina Area Health Education Consortium.

And a telemedicine network where specialists in one location consult on patients in another using information technology could be a way to fill the gap.

"People who live in under-served communities have difficulty accessing specialty care," he said. "Now we have the ability with technology to provide services to those under-served populations. It permits specialists to go to communities without having to be there physically."

South Carolina is in the early stages of planning such a network, said Garr. And a new survey shows that along with neurology, the state could use it for psychiatry, rheumatology, dermatology, vascular surgery, cardiology, gastroenterology, orthopedics and emergency medicine — all specialties in short supply.

The technology is already being used at some hospitals to help mentally ill patients, who often spend days waiting to be treated or for psychiatric placement, Garr said.

And research shows that outcomes are similar to office visits, he said. Dr. Rick Foster, vice president of the South Carolina Hospital Association, said that program has been well received by hospitals around the state.

"Many of our hospitals do not have psychiatrists on staff," he said. "This gives them the capability of real-time assessments to assist with treatment of a patient in ER."

The technology can be used for real-time remote examination of a patient, viewing skin lesions, for example, and to transmit tests, such as CT scans, for review by the consulting specialist. And Foster said hospitals also could benefit from long-distance infectious disease, endocrinology and critical care consultations to identify the cause of an outbreak, manage hard-to-treat diabetics, and cover intensive care units.

Garr, who is on the faculty of the Medical University of South Carolina, said telemedicine is used in many states as well as by the military and could help improve access in South Carolina, too.

"I think telemedicine will open opportunities that only now are being considered in terms of revolutionizing the delivery of health care," he said.

MUSC has launched a program to provide remote neurology consultations for patients showing signs of stroke at Lowcountry hospitals, Garr said.

"Studies show the first three hours are critical," he said. "You link to the hospital using the telemedicine connection, and the physician can see the patient and review the studies to see if he is a candidate for clot busting medicine. And it doesn't require transferring the patient."

Greenville Hospital System University Medical Center is linking up with MUSC's stroke program, said

Dr. Jerry Youkey, vice president for medical and academic services. He hopes it also can be used for other neurological conditions.

Bon Secours St. Francis Health System also hopes to join the stroke network.

"The technology offers so many innovative concepts for patient care," said chief nursing officer Teri Ficichy. "It's very exciting for St. Francis to be a partner in these pioneering projects."

The downside? Some patients and physicians may reject remote consultation, Foster said. Youkey sees that as a potential obstacle as well.

"One of the biggest complaints about health care is the impersonal nature of it; that the physician doesn't spend enough time with you," he said. "I wonder how satisfied patients will be with an indirect mode of health care. But there may not be any choice. We don't have enough physicians."

Another potential problem is a system failure, though backups should be built in, Foster said. There's also the cost of the technology — about \$15,000 to \$20,000 per hospital, he said.

Foster said a statewide telemedicine network could be operational in a couple of years.

The state Department of Health and Human Services said Medicaid pays for telepsychiatry at ERs now and is looking at reimbursing other specialties in the future.

In other states, Medicare, Medicaid and private insurance reimburse for a remote consultation as though it were an office visit, said Nancy E. Brown-Connolly, a telemedicine consultant.

"Telemedicine works," she said. "And there is tremendous potential to bring equity to health care throughout South Carolina and improve the quality of care."

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