

Telemedicine cost-effective, Mayo reports

By Ken Alltucker

The Arizona Republic

Rural hospitals that do not employ a full-time neurologist or stroke expert can use telemedicine in a cost-effective way to care for patients who suffer strokes, a new study reports.

Doctors at Mayo Clinic in Phoenix and at the University of Utah Health System in Salt Lake City compared patients who were treated at rural hospitals via telemedicine to those in rural emergency departments without access to a stroke expert. The researchers concluded it's worth the up-front expense of establishing a telemedicine program when all costs and quality-of-life factors are measured.

Study backers also said the report should provide new ammunition as telemedicine programs seek reimbursement from insurers.

"It is really about providing optimal care for the patient," said Dr. Bart Demaerschalk, director of Mayo Clinic Telestroke Program in Arizona and a co-author of the study that appeared online Wednesday in the journal *Neurology*.

"We hope this will be informative and there will be material change in how government and non-government insurers provide reimbursement for such work," he said.

Mayo Clinic provides telemedicine con-

Telemedicine

Continued from D1

sulting to 10 hospitals located in rural settings outside metro Phoenix and Tucson. When these rural hospitals get a patient in an emergency room who shows signs of a stroke, they connect with the Mayo Clinic neurologists using a two-way audio and visual connection. The Mayo neurologist consults with the emergency-room physician and nurses to determine whether the patient has suffered a stroke.

Patients who show signs of stroke can get a clot-busting drug known as a tissue plasminogen activator within 4.5 hours after symptoms begin.

Demaerschalk said the telemedicine program is critical in treating such patients because they would otherwise be sent to a Phoenix- or Tucson-area hospital via medical helicopter or ambulance. If the patient doesn't get timely medical care, they may require long-term rehabilitation.

"It really cuts down on the cost, time and resources that would be required from an air-ambulance trip from Flagstaff to Phoenix," Demaerschalk said.

The researchers said that telemedicine used to treat stroke patients costs \$2,500 per "quality adjusted" life year, a ratio that seeks to calculate the cost of medical care vs. the payoff in a patient's long-term quality of life. Estimates vary on when a

medical procedure is considered cost-effective, but the study's authors said that medical care is generally considered cost-effective if it is less than \$50,000 per life year.

Demaerschalk said the Mayo Clinic telemedicine program for stroke patients at the rural Arizona hospitals was funded by the Arizona Department of Health Services from 2007 through 2010. That state funding expired, but the rural hospitals have agreed to pay Mayo Clinic a small fee to continue the telemedicine program.

With the study completed, Demaerschalk said he will urge the hospitals to negotiate with insurers to extend coverage for the telemedicine program.