

State's doctors expand care with telemedicine

BY CAROLYNE PARK ARKANSAS DEMOCRAT-GAZETTE

Three women dressed in colorful saris talk with Little Rock doctors from a video screen at the front of a conference room at the University of Arkansas for Medical Sciences.

The women are doctors at the CARE Institute of Medical Sciences, a hospital more than 8,700 miles away in Hyderabad, India.

Each Thursday, videoconferencing technology allows them to participate in sessions on treating high-risk pregnancies hosted by Dr. Curtis Lowery, UAMS director of obstetrics.

"We can have an exchange of ideas," said Dr. V. Shanthi, an obstetrician at the private Hyderabad hospital.

The health-care industry is increasingly turning to modern communications technology to bridge geographical barriers between doctors, and between patients and doctors.

Telemedicine — sometimes called telehealth — can be anything from patients calling or e-mailing their doctor for advice, to a surgeon using a remote-controlled robot to operate on a patient thousands of miles away, said Devon Herrick, health economist and senior fellow with the National Center for Policy Analysis, a Dallas-based nonprofit research group.

"It's the use of information technology to increase access to care and improve productivity," Herrick said.

St. Vincent Health System uses telemedicine technology to monitor home health patients, and Baptist Health uses it as an "extra set of eyes" to watch intensive-care patients 24 hours a day, seven days a week.

Telemedicine has tremendous potential to cut rising healthcare costs and improve access to medical care, health-care officials said. But there are obstacles to extending services, such as medical licensing requirements and the United States system of paying for medical services.

There will always be a need for people to visit doctors' offices in person, Herrick said.

"Face-to-face meetings are the optimal way to have a physician visit," he said. "The physician can respond to how you look, talk and act, and they can ask follow-up questions.

"Telemedicine will never replace the face-to-face physician visit."

But telemedicine could be used in a large number of cases in which face-to-face contact isn't necessary, such as prescription renewals and lab tests.

Overall, the health-care industry has been slow to utilize communications technology used in other industries for decades, Herrick said. Lawyers, accountants and other professionals talk to clients via telephone and e-mail, but many doctors are just beginning the practice.

"Telemedicine is increasingly becoming an acceptable way to interact with physicians," Herrick said.

One problem is that insurance companies traditionally have no system to pay a physician for a phone or e-mail consultation, although some companies are starting to provide some reimbursement for such services, Herrick said.

Health-insurance companies are increasing telemedicine services. Kaiser Permanente, for example, has a secure Web site where patients can post questions and get direct doctor responses. Medical liability insurers are also beginning to offer coverage for telemedicine.

Medical licensing is another major barrier to expanding telemedicine services, Herrick said.

Physicians have to be licensed in each state where they wish to practice. That makes it difficult for doctors wanting to provide services across state lines.

The Arkansas State Medical Board provides medical licenses for out-of-state doctors but doesn't track the number of doctors providing telemedicine services in Arkansas.

ANGELS

ANGELS, or Antenatal and Neonatal Guidelines, Education and Learning System, at UAMS has linked doctors at Arkansas hospitals and clinics since 2003 with the goal of reducing premature births.

The system expanded to the Hyderabad hospital about two months ago, said Lowery, the system's director.

Officials hope to expand the overseas exchange to other countries, such as Russia, Australia, South Korea and China.

"I think there is a huge possibility for a great virtual-medical university," Lowery said.

UAMS made the Hyderabad link during a February 2007 visit with former Indian President A.P.J. Abdul Kalam, said Dr. Hari Eswaran, UAMS associate professor of international medicine.

Prasad Sistla, chief of telemedicine at the CARE Institute in Hyderabad, said the hospital has had videoconferencing technology since October 2001, and is part of a telemedicine network of 12 hospitals in India and South Asia.

UAMS is the hospital's first contact overseas, Sistla said.

ANGELS is one of 200 telemedicine networks linking 3,200 health-care facilities in the U.S., said Jonathan Linkous, chief executive officer of the American Telemedicine Association.

Doctors in Arkansas use ANGELS to communicate between hospitals.

Dr. John Mesko is an obstetrician-gynecologist at Mena Regional Health System, a 65-bed community hospital. He said he uses the system to consult with specialists in Little Rock on highrisk pregnancy patients, including sending ultrasound images.

In many cases, it prevents the patients from having to drive to Little Rock to see the specialist directly, Mesko said.

The educational opportunities allow him to keep up with the latest techniques.

"I'm hearing the newest, latest stuff every week," Mesko said. "As a little hospital in a rural town to be doing things the same way as they're doing in Little Rock is pretty awesome."

Lowery said UAMS is expanding telemedicine services to other specialties. ANGELS holds a weekly teleconference for Arkansas pediatricians, in which doctors from two Hyderabad hospitals also participate. Future offerings will include broadcasting of grand rounds for residents practicing statewide and conferences on subjects such as cervical cancer.

Within the next six months, UAMS will start a statewide telestroke program by which doctors treating patients with symptoms of stroke in rural emergency rooms can consult with neurologists elsewhere in Arkansas.

Of course, there are costs involved. Lowery said line charges for the network can be \$500 to \$800 per month. The federal government currently pays for the lines in Arkansas, but smaller hospitals might not be able to afford the technology without the help.

"By doing this we are able to meet needs that are just not possible through traditional medicine," Lowery said. "As we show the benefits of working together, people will do more and more."

NO BARRIERS

At Baptist Health Medical Center-Little Rock, registered nurses sit at six stations in the electronic intensive care unit, or eICU, monitoring patients in Baptist Health's intensive-care units in Arkadelphia, Heber Springs, North Little Rock and Little Rock.

The nurses complement those treating patients in the hospitals. From their stations, they can check patients' vital signs and medical records. They can see and talk directly with patients, family members, nurses and doctors in the hospital rooms. Cameras mounted in the rooms allow them to zoom in to check small details, such as the dilation of a patient's pupils.

"We're here as an extra set of eyes," said eICU director Vicki Norman. "Our goal is to look for all the tiny little details to make sure that nothing's being missed."

There are more than 35 eICUs at hospitals nationwide, with technology provided by Baltimore-based VISICU, Inc.

Since Baptist started its eICU three years ago, it has expanded monitoring from 53 beds to 142 beds.

The eICU is staffed 24 hours a day, seven days a week by registered nurses with an average of 19 years of experience. Physicians, including critical-care internists, cardiologists and a thoracic surgeon, are there from 7 a.m. to 7 p.m. on weekdays and 24 hours a day on weekends.

"That way there is never a missed beat," Norman said. "It has really transformed the way we do critical care. Geography is not a barrier."

At St. Vincent Health System, homebound patients in the 11 counties served by the system's Visiting Nurse Association of Arkansas use computerized devices to check their vital signs, said Denise Looker, the association's home health administrator. The information is sent through a secure Internet connection for review by nurses, allowing them to monitor chronically ill patients from afar.

"It allows us to monitor the patient every day without having to be in the home every day," Looker said.

They check things like weight, blood pressure and heart rate. Some patients have machines that prompt them to take their medicine and answer routine questions, such as how well they slept or whether they have any swelling.

Similar devices are used to monitor home health patients in 63 of Arkansas' 75 counties. Patients in about 80,000 homes nationwide have such devices, said Linkous, of the American Telemedicine Association.

Looker said the technology has helped St. Vincent reduce hospital visits for chronically ill patients. Nationally, about 37 percent of former heart attack patients end up returning to the hospital. At St. Vincent, 4.5 percent of heart attack patients were rehospitalized last year.

Linkous said corner drugstores will soon begin stocking such self-monitoring devices.

"The technology is already developed; it's just a matter of getting it out into the market," he said.

Herrick said telemedicine will become more prominent as insurance companies, medical boards and other regulatory agencies make

it easier to practice.

"I think it will be like a snowball effect," Herrick said.

Lowery of UAMS said the health-care system will have to adjust.

"Right now health care is one size fits all, and that's a problem," he said. "[Telemedicine] allows you to match needs with resources.

"In three to 10 years, I think this will be the way medicine is practiced. It will be an integral part of what we do."



Arkansas Democrat-Gazette/STEVE KEESEE Dr. Curtis Lowery at the University of Arkansas for Medical Sciences moderates a weekly medical teleconference with Arkansas doctors and hospital staff in Hyderabad, India.



Arkansas Democrat-Gazette/STEVE KEESEE Dr. Curtis Lowery (standing, background) at the University of Arkansas for Medical Sciences confers with hospital staff in Hyderabad, India, on high-risk pregnancy cases.