

eConsult extends specialty care across the miles

eServices help Avera provide quality care, nearby home for rural residents

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On a typical day of providing patient care in the clinic setting, a physician goes from exam room to exam room as the schedule dictates. In one room, a patient waits for the doctor to open the door. In the next room, equipped with a flat-screen monitor and video camera, a patient also waits to see the doctor – only from miles away.

It's called eConsult, and it's just one of several eServices offered through Avera eCARE™, a suite of innovative technology applications which extend specialty medical care to remote locations.

eConsult, formerly known as telemedicine, provides service and treatment to patients across the miles from a host site. Avera has been involved with telehealth since the 1990s, and is now a leader in providing eServices to a rural population. "In fact, no other health system in America is using eServices to the extent that Avera is," says Dr. David Kapaska, regional president and CEO of Avera McKennan Hospital & University Health Center.

eConsult is offered by 64 providers from 20 specialty clinics at 60 Avera rural facilities. Some 5,000 eConsult visits are scheduled each year.

"eConsult allows us to provide specialty services in non-accessible rural locations," said David Flicek, chief administrative officer for Avera Medical Group. "Because it improves accessibility to health care, and saves patients and their families time and money, it's been a real community benefit. This goes hand-in-hand with the Avera mission to make a positive impact in the lives and health of persons and communities, and Avera's goal to provide quality care, nearby home, for all residents of our region."

eConsult is used like any other physician-patient interaction. Yet instead of a face-to-face visit, it involves the use of interactive video and computer



technology, said Mary Hughes, eConsult services manager for Avera Health.

Equipment is often set up in exam rooms of specialty clinic offices, so eConsult visits are naturally a part of a physician's day, and mirror a typical patient-physician encounter as closely as possible.

Paperwork is made available to referring clinics online, and sent to physicians in advance of the visit so they have a chance to review the case. Just like the doctor opens the door to the exam room to see the patient, the doctor connects through the monitor. Instead of opening the door, the doctor opens the camera.

A nurse, therapist or midlevel provider is at the remote site to assist the specialist in assessing the patient. Through monitors at both ends, the physician can see and hear the patient; and the patient can hear and see the physician.

Benefits for patients, physicians

"Patients are 98 percent satisfied with the service," Hughes said. Most patients are

Medicare age. "It would seem like that age range and the latest technology would not be a good match, but it fills such a void that these patients need."

For older patients who live in outlying communities, it can be difficult to drive to Sioux Falls, or find a ride. Family members may need to take a day off work in order to provide transportation. "It's hard on patients, and hard on families," Hughes said.

"The number 1 thing patients love about eConsult is that they don't have to drive. They can go to a facility they are familiar with, and see their nurse and their doctor," Hughes said. It also increases access to care. Thirty percent of patients report that they would not receive specialty care if not for eConsult. Patients are generally referred by a primary care physician or another specialist – the same way that most patients are connected with a specialist.

Physicians also appreciate the service, because it allows them to see more patients, and reduces "windshield time" spent driving to rural locations. Avera

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Other eServices through Avera eCARE:

- **eEmergency** links local emergency rooms to emergency-trained physicians and specialists at a central hub, 24 hours a day, seven days a week
- **ePharmacy** gives rural hospitals around-the-clock access to pharmacists to ensure that every prescription is reviewed and approved prior to being administered to a patient. The result is fewer medication errors and improved patient safety.
- **eLong Term care** connects long-term-care residents to physicians at remote locations using two-way audiovisual telehealth technology to improve access to urgent care services.
- **eNICU** offers care to critical and unstable infants by connecting rural facilities with Avera McKennan's Level IIIB neonatal facility staffed by physicians, nurse practitioners and staff with specific training in high risk neonatal care.



providers still offer outreach services at a number of sites, so eConsult does not replace outreach services or clinics. Rather, eConsult enhances outreach, because patients don't have to wait until the next time the physician has a scheduled outreach visit. Or, in the case of inclement weather, a scheduled outreach visit can take place via eConsult instead.

The reimbursement model for Medicare and third-party payors is similar to a face-to-face visit, although some payors enforce a mileage restriction stating that the rural site must be within a certain number of miles to the specialist's location. Rural facilities generally charge a facility fee, and fees for any ancillary services such as laboratory.

"In a recent poll about the time required for a face-to-face patient visit versus eConsult, physicians responded that eConsult is just as efficient if not more efficient," Hughes said. While there are physicians who prefer a face-to-face visit, eConsult is a good second option when many miles stretch between physician and patient, Flicek added.

Technological innovation

The first rural Avera site to go live with telemedicine was Flandreau, S.D., in 1993. Equipment since then has improved dramatically. "The video connection is great, and the picture quality is amazing," Hughes said. Specialized equipment includes a flat-screen TV monitor, and a camera on a shelf in front of the monitor.

Communication takes place over a private closed network via buried T1 lines. It is not web based, so there are no issues with patient privacy. "Over this closed network, there is no distortion or loss of image," Hughes said.

While the capability of technology has increased, price has decreased. "The first unit cost \$50,000. Now, we're down to \$13,000 per site for the basic equipment," Hughes said. Avera has received USDA grant funding to add or upgrade 37 sites.

Medical equipment such as a stethoscope can be attached to the system. The physician has earphones, and the nurse or midlevel at the remote site places the bulb on the patient. There is also an otoscope,

and an "exam cam" for a close-up view of the skin or a body part – especially helpful for dermatological or infectious disease visits.

In addition to clinics, rural hospitals are also equipped with eConsult technology, in case a specialty consult is needed while a patient is hospitalized.

Avera has created an internal certification process for consistency across the system. All specialty providers as well as personnel who are involved at rural sites receive the same training. Certification is renewed every two years. "Specialists know that if they have a visit at any rural site, they can have confidence that the caregivers involved know the protocols and processes," she said.

"eConsult can apply to any type of patient care that doesn't require manual palpation," Hughes said, including primary care visits and home care. "The possibilities are endless."

Physicians and patients alike are fans of eConsult

eConsult is a win-win concept which works to the advantage of patients, referring physicians and specialty physicians.

For patients, the technology allows them to receive specialty and subspecialty care, right in their hometown, said Dr. Aristides Assimacopoulos with Infectious Disease Specialists.

Infectious disease is the specialty which provides the highest percentage of eConsult visits – 35 percent of Avera’s total 5,000 visits. Other specialties frequently accessed through eConsult include behavioral health, oncology, pulmonology, cardiology and pediatrics.

Dr. Assimacopoulos said physicians prefer eConsults to phone consults, for which they don’t receive any reimbursement for their time and they may not be able to gather all the information they need to make an informed recommendation. At the same time, patients do not get the full benefit of the specialist’s expertise and attention over the phone.



Dr. Assimacopoulos has been providing telemedicine visits for the past 10 years. “Aside from the fact that one is electronic and one is face-to-face, I don’t distinguish in my mind between the two types of visits, which was our goal – to provide the same type of care,” he said. “We do virtually everything by eConsult that we can do in person. Throughout our service area, we can offer the same subspecialty attention that patients receive in Sioux Falls.”

Over the past decade, Dr. Assimacopoulos has only seen the technology improve, in terms of reliability, resolution and image quality.

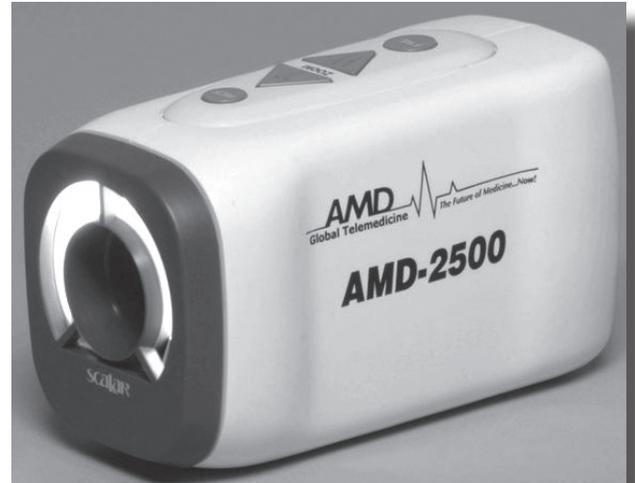
Dr. Anthony Hericks with Avera Medical Group Pulmonary and Sleep Medicine, agreed that the interactive video technology is to the point that there’s virtually no difference between eConsult and a face-to-face visit, as far as seeing or hearing the patient is concerned. He said he relies on nurses or midlevels in the referring facility for their opinion on any visible signs or symptoms, for example, swollen ankles which may indicate edema.

“Many of our patients are scattered throughout the region. We try to reach people so they don’t have to drive all the way to Sioux Falls for a 20-minute appointment,” Dr. Hericks said.

eConsult visits may complement other modes of care delivery. For example, Dr. Hericks says he does an initial screening with patients via eConsult before a sleep study. Then, patients undergo the sleep study at the hospital in their home community. “We then use eConsult to talk to them about the results afterward, and any recommended treatment,” Dr. Hericks said.

“Patients seem appreciative of it – especially if it saves them from having to get up early to make a long drive to Sioux Falls, and perhaps even spend the night,” Dr. Hericks said. “We also do a number of consultations for older patients who are difficult to transport, who may be in assisted living centers or nursing homes.”

“It’s great – I love eConsult,” said Dr. Hesham Elgouhari, hepatologist with Avera Medical Group Liver Disease. “It saves everybody time and effort – physicians, patients and families.” Dr. Elgouhari said that while he prefers to do his own physical exams, he’s been satisfied with the exams carried out long distance, by the nurse or midlevel at the remote site. As the only hepatologists in the state



of South Dakota, Dr. Elgouhari and his colleagues do consults at numerous sites, including Aberdeen, Pierre, Mitchell, Gregory and Marshall, Minn. “I think this technology still achieves the benefit. If it wasn’t available, I think a lot of people would not drive to get the specialty care they need.”

Dr. Philip Meyer, internist with Avera Medical Group Pierre, refers patients for eConsult visits just as he would otherwise refer patients to specialists in Sioux Falls. “Yet instead of driving several hours, patients can just walk down the hallway and have a consultation through telemedicine technology.”

Dr. Meyer commonly uses eConsult for specialty consults in pulmonology and sleep medicine, hepatology, hematology, infectious disease, and also for diabetes education.

While some patients prefer a face-to-face visit with a specialist, some 90 to 95 percent would rather have the eConsult visit than travel, Dr. Meyer said. “That has been surprising to me. I’m a big fan of this program, and I think we can expand it.”

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