

Condensed Care

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The power of telemedicine to shrink the distance between provider and patient makes it a solid option for healthcare organizations looking to extend their reach.

Telemedicine—or telehealth as some call it—encompasses a wide variety of possibilities, all of which use technology to facilitate patient care. Some hospitals and health networks are employing telemedicine strategies as a means to bring specialized care to rural areas that may otherwise not have access to expert doctors. Others are using remote medical devices that track and transmit patient data to a centralized location even when they're off site. Although adoption barriers remain, it's clear that telemedicine is only going to continue growing.



A Multitude of Uses

Telemedicine can be a more powerful tool in certain specialties compared with others. Psychiatry is a good example, says Justin Sattin, MD, assistant professor of neurology at the University of Wisconsin (UW) School of Medicine and Public Health. "That's a case where most of the evaluation exists on dialogue, so it lends itself well to a video assessment," says Sattin, who also directs the UW telestroke program.

Medical circumstances in which time is critical are also situations that lend themselves to telemedicine. "Any condition where there's an immediate need, when literally every minute counts, such as a stroke or a brain injury trauma, is a condition that makes telemedicine extremely relevant and important," says David C. Hess, MD, chairman of the department of neurology at the Medical College of Georgia (MCG), where he also directs the Telestroke Network. "In these circumstances, it's critical that the patient see an expert, and in that limited time, there isn't always an opportunity to transfer the patient to a hospital that has a consultant. There's really a lack of specialists in the country. And there are entire areas where there are no neurologists available. Telemedicine, through Telestroke, makes sense because you can have a consultant available immediately."

The Telestroke Network at MCG was developed with the idea of overcoming geographic disparities in stroke treatment and extending the facility's state-of-the-art stroke care to regions that may otherwise not have access to its resources. Since its initial implementation in 2003, the network has grown from two rural sites to a total of 11 hospitals throughout the state.

In Wisconsin, the telestroke program is quite similar. The reality that, in many stroke cases, minutes can make the difference between life and death helps drive the program. "In the case of a stroke, time lost can equal brain cells lost," says Sattin. "This [program] will give patients the expertise of a neurologist trained in stroke at their bedside."

This form of telemedicine allows neurologists from UW Hospital's Comprehensive Stroke Center to consult with patients and review their test results from CT scans and other procedures, all via a high-speed Internet connection. The stroke team, which is on call 24 hours per day, offers the expertise of five stroke neurologists who are part of a multidisciplinary team featuring neurosurgeons, neuroradiologists, and other specialties.

How have patients reacted to not having a physician present in the room? Sattin says it hasn't been much of an issue. "Yes, you may lose a little something by not actually being there in person, but considering the alternative is that the patient has no access to a neurology expert at all, it's obviously the best possible outcome," he says.

Citizens Memorial Healthcare (CMH) in Missouri has also been using telemedicine to provide patient access to specialists via video conferencing. "[Initially], two units were placed in rural health clinics so local residents could use the equipment to attend appointments with specialists in other parts of the state," says CMH telehealth coordinator Susan Sanders. "Later, the CMH telehealth network was further developed to maintain 15 sites, five in skilled nursing facilities and 10 in clinics. The intent of this major expansion was to facilitate appointments within the CMH network. Providers at CMH who referred their patients to a specialist could set them up with a telehealth appointment for the first or subsequent visits, helping local residents with transportation barriers and increasing the number of referral appointments that patients actually attended."

While the telestroke programs at UW and MCG are dealing more with emergency care, CMH has approached telemedicine with the idea of facilitating long-term care and preventing treatable conditions. "Transportation to a physician's office is often mentally and physically taxing for many older adults as well as infeasible due to health problems and staff constraints," says Sanders. "As a result, the industry sees a high incidence of admission to emergent care or hospitalization for conditions that could have been treated during office hours through increased access. Telehealth facilitates this access."

Sanders says CMH has found video conferencing to be most successful when treating mental health and skin conditions. "Tele-mental health and teledermatology are both viable options via telehealth due to the nature of the treatment that providers deliver," she says. "Mental health visits between providers at clinics have been very successful with patients, and satisfaction has been expressed on both ends. Treatment of wounds, conditions of the skin, and possible skin cancers have all been diagnosed by CMH physicians as well as a physician from the University of Missouri."

In addition to video conferencing, CMH also uses telemedicine as a "store-and-forward" technology in its home health department. "Homebound patients who qualify for home health services are set up with a monitoring device," explains Sanders. "This device is used to take the patient's vital statistics daily and sends them to the fully integrated medical record. A telehealth nurse watches for results out of preset parameters, contacts the patient with concerns and questions about their health, and contacts the patient's physician as needed. This program was piloted with the intention of reducing the number of nurse visits to the home for treatment, reducing the number of emergent care episodes and readmissions to the hospital through prevention and early detection."

Some hospitals are outsourcing telemedicine services rather than forming a partnership with a local university or a larger regional hospital. Specialists On Call is a network of trained specialists that can consult via video conferencing on cases across the country. CEO Joe Peterson, MD, believes large companies will have the greatest impact on telemedicine, mostly because of their reach. In 2010, Specialists On Call had around 110 hospital clients and conducted 12,000 emergency consults.

"Part of what we set out to do is to be an industrial strength provider of services vs. what you typically see in telemedicine, which is a small regional effort," Peterson says. "We view telemedicine as a large-scale solution. It brings efficiency to the provider's part, and we want to offer widespread distribution. We're not a connector; we provide the service. It started with an emergency neurology service to hospitals on a 24/7 basis about four years ago. We take a model that you can treat neurology patients

from a distance, and we're putting appropriate resources by it. Last year, we grew to include telepsychiatry and will continue to add more specialties as telemedicine grows."

Adoption Barriers

Although telemedicine is becoming more accepted, there are still hurdles to overcome. Hess says one obstacle has been the requirement to become licensed in each and every state in which a physician is consulting. It's a chore that requires physicians to make time that many don't have. "I'm currently credentialed at 17 or 18 hospitals, so we're talking a lot of paperwork," says Hess. "The idea of creating some sort of national telestroke paperwork [to be filled out once] has been discussed, since it's redundant to fill it out each time."

Funding is also an issue, especially the question of who pays. Smaller rural hospitals need to raise money to purchase equipment, including a computer system with a monitor and camera, to be able to connect with larger hospitals. Consulting specialists also charge for their time.

"It can be a challenge for a small local hospital to have to come up with that money," says Sattin. "This is a good example of where the fragmentation of our healthcare system gets in the way. We know that treating stroke patients appropriately and quickly saves money in the big picture because people are less likely to have severe disabilities or wind up in a nursing home. But the problem is that the long-term picture isn't helping the local hospital. A patient that does great with stroke recovery who doesn't wind up in a nursing home is saving the public money, not the hospital. Still, we're asking local hospitals to invest in the technology and physicians' services. While it definitely saves money in the long run, who pays and who saves isn't lining up."

Billing for telemedicine services can be tricky, although some say that's improving. Federal regulations pertaining to telemedicine payments can be confusing. For Medicare, it's required that patients fall in a rural health professional shortage area. However, what constitutes such an area can get tricky, physicians argue.

Sattin adds that physicians cannot bill a virtual consultation with a stroke patient as critical care because the regulations say a physician must be physically present. Even though a stroke patient is critically ill by definition, the consultation cannot be billed as such, which makes a big difference in how much the doctor is reimbursed.

Without fair compensation, Sattin wonders how much time physicians will be willing to devote to telemedicine. "It's not clear yet that if telemedicine were to extend far beyond the reach of academic hospitals if the doctors would be equally as willing to be on call 24/7 for a telemedicine consult when they'll only be picking up a couple hundred extra bucks here and there," he says. "Being on call around the clock can mean they couldn't spend time out with their family because they may need to be near a high-speed Internet computer at a moment's notice. That's certainly a barrier and means giving the doctors enough incentive to get on board."

Peterson agrees that it can be a hard sell for doctors who are already working long hours to start performing telemedicine consults. "It's almost never a technology issue that's the barrier; it's the people," he says. "The whole point is how can this be integrated not only into the patient's life but into the practitioner's daily life? That's the problem with adoption. A lot of physicians don't like being on call, not just because they don't feel like going into the hospital but also because their time away from work is important to them. If you give them the equipment to take the call from home, you're still not solving the problem. The problem is that being on call is taxing, no matter where you are."

On the other hand, reports indicate that patients appreciate what telemedicine can do for their care and have embraced the technology. "They're getting the type of specialized care that perhaps only a big university hospital would be able to offer," says Sattin. "And they may not even have to be transferred but still get the benefit of a specialist on their case. It's not a hard sell for the patient."

"Patients love this," adds Peterson. "In an ordinary situation, the most common patient complaint is that the doctor didn't spend enough time with them. With our service, it's the opposite."

Once CMH adopted telemedicine, physicians and staff came to appreciate all it had to offer. "Care is improved for the patients in the CMH service area, and physicians are given tools to increase the level of information and interaction they use to order treatment on a timelier basis," Sanders says.

"Transportation costs incurred when sending long-term care patients to physicians' offices have been reduced substantially and also the facility where the patient is presented may bill a facility fee for each visit. And staff time previously spent escorting patients to physician appointments may now be used for patient care at the facility."

In addition, telemedicine works well with an EMR system. "Special notes for the long-term care nurses and special appointment types with corresponding telehealth practice notes are used to document the specific requirements of telehealth," says Sanders. "Billing codes and modifiers can be directly tied to appointments and notes and documentation is visible to both sides after appointments are finished. The provider seeing patients via video puts in orders and medication changes electronically with no verbal orders over video accepted. Results from the home-health units flow directly to the EMR, and interventions and notes are documented by the telehealth nurse, the patient's assigned nurse, and the provider."

It's Takes More Than Technology

Behind all the equipment and high-tech gadgets, telemedicine still comes down to providing quality care just as in any other setting.

"The technology is terrific, but there's a lot more to this than technology," Peterson says.

"Telemedicine has a lot of possibility, but I find it disappointing that everyone just tosses equipment forward as though it's the solution. There's so much more to it than that. The technology needs to have resources behind it to be successful—things like quality and communication. And people need to be on board with where the technology is headed if it's going to go anywhere."