



Bridging the physical and digital gap between patients and care

Kim Lewis, RN, BSN, once worked at a North Carolina hospital with a “remote ICU” (intensive care unit). Cameras were set up inside intensive-care patient rooms so off-site medical experts could engage with nurses. “We had cameras, probes and scopes that allowed specialists to help us see what might be happening with a patient, even though they weren’t at the hospital,” she explained. “This might mean additional lab work and often a faster diagnosis. I think it also improved the overall quality of care.”

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Kim Lewis
Global Clinical
Solution Manager
Lenovo Health

Meantime, in another part of the state, parents of schoolchildren are avoiding unexpected visits to the doctor’s office by having school nurses teleconference with both a parent and a contracted on-call provider. In many cases, the on-demand clinician, though remotely located, can determine if the child has a common childhood illness, such as an ear infection, and then call in a prescription that the parent picks up on the way home from work.

“People are more mobile today, and it can be difficult to get an appointment with a primary care doctor, especially on short notice. Being able to leverage today’s technology to connect with your caregiver gives you more access to healthcare,” said Lewis, who is now the global clinical solution manager for Lenovo Health.

Saving time. Saving money. Saving lives. These are the biggest benefits being realized by healthcare organizations investing in telehealth.

Filling in gaps

Although rural and mobility-impaired patients are among the more obvious beneficiaries of virtual care visits, telemedicine can fill many other gaps in healthcare coverage. Chief among them is access to specialists via video conferencing, saving patients and their families the inconvenience and expense of long drives to receive specialty care. It’s also allowing first responders to consult virtually with an emergency department (ED) team in order to treat the badly injured on scene.

“Telemedicine is still in its infancy,” said Gena Fouke, strategic healthcare consultant for Connection, a national technology solutions provider for advanced IT solutions and services for the healthcare market. “One of the early areas showing promise is in treating stroke victims. When a patient strokes out, every second literally counts. The sooner medical centers can turn to those expert neurologists to diagnose and begin treating a stroke patient, the more of the brain they can save and the more fully the patient may recover.”

Another area benefitting from telehealth technologies is psychiatry, she said. For some patients, engaging in psychiatric services from the comforts of their own home may not only lead to greater compliance of care plans but induce more people to seek mental health services.

In all of these instances, virtual visits, whether with a primary care provider or specialist, takes the burden off families to transport patients to the point of care. To work well, however, certain technologies must be in place on both sides of the virtual exchange.

Creating stronger connections

Using video communications to bring physicians to the point of care digitally requires the means to make strong connections, beginning with reliable and scalable broadband. “It starts with a very strong and stable framework and infrastructure,” Lewis said. “Within the practice of the organization providing the service, they have to invest in having the connectivity they need to support all the devices they have in that ecosystem.”

She also encouraged healthcare centers to consider what is required on the other end of the exchange: patients with high-speed internet or a smart phone. “If we offer all of these services to our patients who don’t have the means to access them, then we aren’t going to be successful,” she said.

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| Kim Lewis

She recommends, whenever possible, that providers or payers supply qualified patients with the devices or kits, such as a tablet or “smart” glucometer that can be used off the shelf. Also, be sure to train or hire staff to set up and test equipment and signals before the first telemedicine session. It will build trust between patient and provider that this novel approach can work. “Practice beforehand so everyone’s comfortable by the time of an appointment, where we’re making medical decisions about your care,” Lewis said.

Beyond high speeds and hardware

For telehealth to work as envisioned, certain challenges must be overcome. Among them: having the tools and capacity for collaboration, expanded network services, streaming video services and security.

Collaboration: Telehealth video conferencing allows stronger collaboration between clinicians and patients and provider to provider. The results of these sessions, however, must integrate with electronic health records so that all providers and payers can access relevant data throughout the continuum of care. It also demands a high level of engagement. This is why interoperability is critical – to allow providers to share overall care plans and easily upload documents as needed.

Network services: It’s important to underscore the need for a reliable, resilient and robust network infrastructure to accommodate these data-intensive sessions – and in a secure manner. This is particularly true for video streaming, which can strain networks as video conferencing becomes more popular, causing disruptions in service and viewing. The first step is to gain a comprehensive understanding of your current network infrastructure and identify any network issues. A cloud-based solution also can ease expected on-premise strains.

Video services: High-resolution video is at the center of any telehealth initiative, so you must ready a network to support the real-time traffic and Quality of Service necessary for these applications. “If you’re making a medical treatment decision for a patient based on something you can see, you have to be confident as a provider – and as a patient – that what you’re seeing is what’s really going on with the patient,” Lewis explained.

Security: To ensure virtual care drives down costs without compromising patient data, it’s important to add multiple levels of control, Lewis said. “In addition to looking at specific policies and guidelines, we also need to look at organizational controls: standards, training, awareness, education, audits,” she added. Encryption is important for data collection, as is using HTTPS protocols during data transmissions. Additionally, limited access helps keep telehealth-related data safe and organizations compliant with patient privacy regulations.



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Government gives a nod

The U.S. government wants the healthcare industry to improve patient populations and the patient experience while also decreasing the cost of care – what is referred to in the Institute for Healthcare Improvement as the Triple AIM framework. As such, health agencies have pushed for stronger patient engagement, getting patients to be more responsible for their own care. “By leveraging telemedicine technologies, we have a defined path in achieving that goal,” Fouke said. Virtual urgent care visits, for instance, whether conducted on a smartphone, laptop or tablet, can come at lower cost for both patient and provider, depending on location and the medical issue.

The Centers for Medicare and Medicaid Services now cover real-time telehealth visits between Medicare patients and providers beyond their location. The omnibus 21st Century Cures Act enacted in late 2016 also is seen as a way to improve telehealth services’ outreach to non-rural Medicare beneficiaries, such as those with conditions that do not require on-site observation or treatment.

“I think we’re going to see more telehealth in underserved and underprivileged areas,” Fouke predicted. “The government has studied it and realizes that not only does it improve care, but it decreases costs.”

However, it remains unclear when and if other payers now, or will, cover virtual care. “Until patients know their virtual visits are paid for, they are going to keep coming into the office because they can’t afford for the telehealth session to not be paid for,” Lewis said. “Same with providers: If they know the patient has to pay for it out of pocket, they aren’t going to be as successful because patients often determine their care based on what their insurer will pay for.”

Achieving more convenient care at a lower cost

With government incentives, an increasingly tech savvy and connected patient population, and greater buy-in among hospital leaderships, telehealth has the potential to create a major shift in the healthcare industry. Physicians can work with more patients in the field, especially when using thin, lightweight tablets or laptops with Mil-SPEC durability and a long battery life like those offered by Lenovo. Patients, too, can adhere better to care plans by using similar mobile devices to check in with their providers.

Telemedicine data can be used for population health projects and, as a practice, reduce hospital readmissions or ED visits. Hospitals also can access experts well outside their regions and beyond their buildings’ four walls.

“We’re going to see an explosion in telehealth in the next five years,” Fouke said. “We’re going to see a different healthcare industry. Patients are going to be treated more quickly by experts or specialties, at any time and any day. When that happens, you have better clinical outcomes.”

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