SEEING THE POSSIBILITIES IN TELEHEALTH

Telepresence technologies connect patients to better outcomes

Executive Summary

In this new era of accountable care organizations, patient-centered medical homes and other efficiency-driven, value-based delivery models, a growing number of healthcare organizations looking to improve patient care accessibility, coordination and outcomes see significant advantages in telehealth technology. By connecting patients and clinicians face to face regardless of location, telehealth saves time and money, speeds intervention and treatment, strengthens collaboration and communication between physicians, and provides potentially life-saving remote monitoring.

Changes in reimbursement are further fueling the expansion of telehealth, with most states now requiring some form of Medicaid reimbursement for telehealth services and 19 states requiring coverage by private payers. The Centers for Medicare & Medicaid Services has also proposed a policy change that would expand Medicare payment for telehealth services.

A constant stream of technology advances has made it even easier and more affordable to implement a variety of high-quality mobile and stationary telehealth solutions, making distance no obstacle to speedy diagnosis and quality treatment. Telehealth options range from HIPAA-compliant smartphone video apps to enterprise-wide platforms that integrate high-definition video, audio, medical devices and collaboration tools.
Telehealth Expands Care Boundaries

Moving far beyond its roots as a way to provide care to residents in remote rural areas, telehealth now offers the opportunity to provide time-saving, cost-effective access to clinicians and specialists for routine, chronic and emergency care — no matter where patients or physicians happen to be located locally, nationally or even globally.

Telehealth adoption continues to accelerate as providers and patients alike recognize the many benefits. For example, telehealth technology allows them to:

• Monitor homebound elderly, chronically ill or post-operative patients to improve care and reduce readmissions — without requiring difficult trips to clinics or a physician’s office
• Widen in-hospital and local access to specialist care, from psychiatrists to neurologists to oncologists
• Provide remote triage care to evaluate the severity of illness or injury and determine the best care facility
• Guide provider teams at small hospitals in using emergency procedures, tools and medications
• Help physicians remotely diagnose and treat stroke patients with time-sensitive protocols
• Remotely monitor vital signs of ICU patients
• Provide medication dispensing oversight for pharmacists when required by state
• Reach underserved or challenging populations in prisons, on ships and at military outposts
• Handle routine or follow-up care at corporate and school clinics as a convenience to patients and their families
• Enhance collaboration and communication between physicians, and between hospitals and affiliated practices
• Educate geographically dispersed clinicians on patient care and medical procedures

78% of providers using telehealth today focus on five telehealth disciplines, which they believe offer the best ROI: home monitoring, psychiatry, stroke, neurology and ICU.

Source: KLAS

Technology Requirements

A virtually limitless spectrum of telehealth configurations from simple to advanced can easily be customized to meet the specific objectives and budget of each healthcare enterprise. The three key requirements are: 1) devices to enable viewing, consultation and communication; 2) software to facilitate collaboration and connectivity; and 3) an infrastructure robust enough to support telehealth applications.

Mix and match mobile and stationary options

As technology has evolved, a roomful of complicated equipment is no longer required for video communication. By employing a variety of end-user devices for telehealth services, hospitals can promote flexibility, productivity and efficiency. For example, smartphones and tablets equipped with HIPAA-compliant video apps can be used by physicians and nurses to connect with patients and colleagues, and they can also be used by emergency medical providers at accident scenes.

Within hospitals, mobile carts can be wheeled between patient rooms, conference areas or care delivery departments such as radiology. State-of-the-art versions feature an LCD display monitor, camera, microphone and wireless LAN, bringing interactive, high-definition video and audio to the point of care. Medical and other peripheral devices, including digital stethoscopes, can be connected to allow real-time sharing of images and patient vitals. The carts have a small footprint, an enclosed technology compartment that enhances security and protects against spills, and surfaces that can be easily disinfected, which make them ideal for patient environments.

FDA-approved telemedicine robots are innovative mobile offshoots. Guided by 3D mapping sensors and equipped with cameras, microphones, a video screen and a stethoscope — as well as the ability to connect to other devices such as ultrasound machines — the robots roam hospital floors, enabling doctors to check on, examine and chat with patients remotely. They also allow offsite, on-call specialists to use a tablet or desktop to “visit” patients within a few minutes of being admitted to the hospital.

Stationary options — better suited to conference rooms, nurses’ stations, patient rooms or physician offices — include all-in-one desktop solutions that provide access to browser-based applications like EHRs or PACS, and enable clinicians to control the remote camera for a better view of the patient at the other end. In addition, video phones combine visual capacity with telephone access, while compact table-top systems enable small groups of patients to consult with a remote clinician or with other groups of patients in a different location. Custom solutions can be configured from a wide selection of projectors,
tablets, desktops, digital displays and cameras — including IP video options that enable multi-party video calling and voice-activated switching and offer a variety of pan, tilt and zoom capabilities.

**Invest in versatile software platforms**

Unified communications (UC) software runs the video and voice applications on the hospital network, displays and manages visual content, and authenticates users. Advanced telepresence platforms that utilize standards-based, scalable and open systems approaches provide the resiliency, versatility and reliability essential to extended video networks. These HIPAA-compliant platforms support live point-to-point and multi-point video calls, recording and archiving; ensure interoperability with healthcare and UC applications; provide connectivity to various video endpoints and medical devices; and can be integrated with EMR systems as well as other workflow and productivity tools.

By 2017, an estimated 1.8 million people worldwide will be monitored via remote patient monitoring (RPM).

*Source: InMedica*

**Build a strong, secure backbone**

Telehealth solutions also require a robust infrastructure to ensure seamless consultation, collaboration and communication. Key components usually include:

- **Power over Ethernet (POE) switches.** Allow hospitals to prioritize traffic so the network can efficiently and securely transmit the bandwidth-intensive data, voice, video and wireless applications critical to telehealth, ensuring critical information is always accessible.

- **Bridge multi-point control units (MCU).** Make it possible to video conference simultaneously among three or more remote points.

- **Servers.** Must meet the requirements of the selected telepresence platform. As with other apps, hospitals are increasingly relying on virtualized servers or cloud computing in order to more tightly control telehealth apps in addition to security patches, disaster recovery and other key functions.

Before mapping out a telehealth strategy, hospitals should assess the types of traffic on their network, how the network is accessed and routed, and where bottlenecks occur. It is also wise to conduct a wireless network site survey to ensure the network incorporates sufficient numbers of wireless access points, as well as evaluate whether the size and type of existing Internet connections can provide the desired speed and bandwidth for telehealth services. To optimize their networks and reduce or eliminate the need for bandwidth upgrades, hospitals can take advantage of telecommunications services that provide access to audio, video and Internet communications, and/or implement wide area network and data solutions.

Always a top priority, protecting patient data takes on even more critical importance in telehealth and remote monitoring applications. A data loss prevention (DLP) strategy, including encryption and data leakage products, should be developed and rigorously adhered to as part of a comprehensive security solution that encompasses mobile security, endpoint security, risk assessment and compliance/threat prevention.

**Match solutions to needs**

As pressure intensifies for healthcare providers to cost-efficiently care for larger volumes of patients in the face of rising costs and physician shortages, growing numbers of hospitals are likely to launch telehealth initiatives designed to remotely deliver routine and specialized healthcare services — wherever patients or physicians happen to be located. The key to success is to develop and implement scalable telehealth solutions that provide the interoperability and flexibility necessary to keep pace with the expanding needs of the communities the hospitals serve.

**Looking to expand into telehealth?**

Build success by planning strategically:

- **Think big but start small.** Pick a particular patient population or a specific region and select a solution with minimal initial up-front expenses so you can begin demonstrating ROI quickly.

- **Keep the technology non-intrusive.** Make sure the solution is user-friendly and avoids creating barriers between the provider and patient.

- **Invest in a scalable network.** Carefully evaluate workflow needs, where clinicians will be located and the mix of devices that will be used.

- **Integrate solutions with existing technology.** The ability to use a familiar interface will encourage adoption as well as optimize the value of telehealth services.

- **Partner with a trusted I.T. expert** to help you evaluate your needs and select, deploy and support the right mobile and stationary telehealth solutions.
CDW Healthcare: A Technology Partner that Gets IT

Hospitals need a trusted partner that understands how to efficiently and securely capitalize on telehealth to improve the quality of care by connecting patients and providers — no matter where they’re located. CDW Healthcare’s knowledgeable experts understand your I.T. infrastructure and leverage strategic technology partnerships to enable you to select, implement and support the telehealth solutions that best meet your organization’s needs. We provide the expertise, services and telepresence technology to help you improve communication, collaboration and cooperation between patients, physicians, specialists and affiliates.

To learn more about how CDW Healthcare can help your hospital take advantage of telehealth solutions to connect patients to better outcomes, contact your account manager, call 800.500.4239 or visit CDW.com/commuIT.

Stay on top of the latest industry trends and updates.

Keep on top of industry trends at CDW.com/view

Follow us on Twitter @CDW_Healthcare

Polycom

Healthcare organizations the world over are turning to Polycom video collaboration solutions to improve care and reduce cost. Collaborative healthcare solutions from Polycom enable patient-centered care, multi-disciplinary team support, reduction of unnecessary re-hospitalizations and collaboration across the entire healthcare team independent of physical barriers.