



Advances in Technology Make Virtual Health a Reality

Part of the Driving Digital Agility content series: Insights and strategies to pivot to digital business, navigate new work environments, and manage changing customer expectations.

Gone are the days when seeing the family physician in person was the primary way to get quality healthcare. Healthcare consumers are more in touch with their care these days, and at the same time, they demand convenience and speed in their care as well as transparency with their medical records.

Virtual health, otherwise known as telehealth, has gained popularity over the last few years. Even before the COVID-19 pandemic saw a massive jump in people using video conferencing to see a physician, the trend was gaining traction as a way in which patients could get their healthcare from the convenience of home.

“Telehealth 2.0” has now grown into much more than just a video chat with a physician on a cell phone. As technologies have matured, virtual health has emerged as a viable and seamless extension—and even a replacement—of in-person health services.

Soon, patients will be likely to engage with doctors, get diagnostic results, and handle scheduling and payments all in one intuitive app. Providers will have the ability to collaborate with team members online, and payers will get access to patients’ clinical and financial data to make quicker reimbursement decisions.

“COVID-19 will radically change healthcare more than the 2008 financial crisis changed the financial sector”

— Amit Verma, Vice President of Solution Engineering and Technology, Comcast Business

The Challenges of Virtual Health

While there is no doubt that virtual technologies will change the healthcare landscape, it's less clear whether networks, individuals, and organizations are prepared for the shift.

“COVID-19 will radically change healthcare more than the 2008 financial crisis changed the financial sector,” said Amit Verma, Vice President of Solution Engineering and Technology, Comcast Business, during a [recent webinar](#).

The success of a completely online patient care coordination experience relies on a network of systems that work together, along with proper education and support for those who need it.

Consider the following:

- **Wearable technology and connected devices present new opportunities.** Connected personal devices and medical instruments have increased the amount of data being collected, a good thing for consumers who want more access to their information, as well as physicians that want pools of data to turn into actionable information. The Centers for Medicare and Medicaid Services (CMS) recently passed a new rule requiring providers and payers to share patient data with API-enabled third-party applications. This will lead to more access to patient data and an explosion of third-party apps to create more patient-centered experiences. The challenge is to collect useful information that can be turned into actionable information, while keeping sensitive data secure.
- **Demand for patient empowerment drives the need for interoperability.** Patients are seeking simplicity. Telehealth will not work if they need to download several apps to connect to the doctor, their insurance company, specialists for ongoing care, and the pharmacy. In a perfect world, customers will be able to shop for care, access, schedule, pay, and see their data all in one place. The pressure will be on for healthcare organizations to partner with technology companies that unite patient data and create all-in-one digital patient experiences.
- **Accessibility and digital literacy present challenges.** Not everyone has access to high-speed Internet. The digital divide continues, especially affecting those from certain rural and urban communities without the connectivity necessary to easily utilize telehealth services. Without improvements, certain populations may not be able to fully leverage advancements in virtual care.
- **There are security and reliability issues.** Telehealth doesn't just happen on provider-owned networks. Patients will be accessing those services from their home WiFi, or even public networks. Care providers will need to ensure that, given the uncertain levels of security on the patient end, their network and software defenses are ironclad.

Technology Steps Up to Meet Healthcare Needs

Promising new technologies are coming on to the market to help healthcare organizations move from a face-to-face patient experience to a remote experience—or at least a hybrid of the two.

To reap the benefits promised by these tools, healthcare organizations—from hospitals to doctor's offices to insurance providers—need sufficient bandwidth and smart, software-defined architecture to move data quickly and securely.

Comcast's SD-WAN solution enables the use of widely available and affordable broadband that eliminates bandwidth constraints and empowers smooth online patient experiences, unhindered cloud and inter-office communications, and crystal-clear transmissions of X-rays, video, and other critical imagery.

The success of telehealth must also take into account the following technological considerations:

- **The need for human support.** Despite advances in technology, there will always be a need for humans that understand technology and can help guide users of telehealth. This will open new roles such as “navigators” who can help get patients comfortable with new technology, as well as translators who will be able to reduce language barriers in real time.
- **Secure network infrastructure.** Devices connected to the “Internet of Medical Things” as well as Electronic Health Records (EHRs) and data analytics tools will continue to expose sensitive data to the vulnerabilities of the Internet. Networks will need robust firewalls to prevent cybercriminal activity such as malware attacks that threaten patient data. Some investment will need to be made in medical devices that have built-in connectivity and security, as well as technologies such as blockchain to secure digital signatures and sensitive information.
- **Increased connectivity and availability.** In a single month this spring, telehealth usage [increased by 2,000%](#), according to Forbes. To meet this demand in the future, healthcare organizations will need a technology partner that can provide secure VPN access at scale, SD-WAN, and emergency backup services such as Comcast's [managed network services](#) to handle disruptions in data, voice, and video communications in the event of a network breakdown.
- **Scalability.** To meet the needs of telehealth, healthcare organizations must have the ability to access increased bandwidth whenever they need it, as needs change. SD-WAN technology can quickly and affordably address the biggest concerns in digital healthcare, from EHRs to the ability to get satellite urgent health locations onto the network quickly. SD-WAN can also prioritize critical traffic and apps over non-critical uses, and has more than enough bandwidth to handle spikes in demand.

Virtual Healthcare Looks Ahead

While it's hard to imagine all facets of healthcare being delivered virtually, technology will continue to play a bigger role in healthcare services. And certainly, telehealth can replace some of the more rote and routine administrative tasks that don't involve an office visit.

The future looks bright for virtual healthcare, but the success of telehealth is only as good as the network it sits atop. Accessibility, connectivity, reliability, and security will continue to be pillars that telehealth will stand on—especially in an industry that relies on privacy and security of sensitive information. The right technology partner can help ensure that telehealth will remain stable.

For more information on how businesses can use technology to navigate new work environments and expectations, explore the rest of our "Driving Digital Agility" blog series.

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