

COMCAST
BUSINESS

Healthcare Relocated

The Network Tech Needed to Support
Patient Care from Anywhere



Traditionally, technology in healthcare has been used to advance care and improve patient outcomes, as well as to create efficiencies in the administrative back-office and comply with government regulations regarding the privacy and portability of patient information. The pandemic pushed many of the traditionally in-office functions and services to remote locations or telehealth. And due to more dispersed patient and healthcare provider scenarios, increased bandwidth for data intensive applications, cybersecurity, network segmentation, and failover and backup for availability have become the heart of what healthcare workers need to provide fast, accurate care.

Comcast Business works with a growing number of healthcare providers to determine the best solutions to support their ever-changing healthcare and network needs — whether it's a sprawling campus of buildings, small clinical offices, or the growing number of remote offices located in physician and clinician's homes. Their business needs continue to shift and our team of solution architects are working with them to create the network technology they need to support new ways of serving patients.



Business needs

During the pandemic, hospital administrative and clinical staff were focused on providing consistency of care in the safest way possible. For many doctors this required making the shift to telehealth, but for others, they decided to bring their offices home with them. For services such as radiology, this meant much more than simply bringing a laptop and a monitor home to work from their kitchen table. To meet the needs of their patients, they would need to relocate their entire practice to a home office — radiology equipment and all. In addition to relocating heavy equipment, healthcare professionals would need to have a secure VPN connection to exchange large data files over a secure network.

With these types of remote work setups, patient data would likely need to be securely transferred from the home office to the hospital system over the corporate network, requiring that all medical equipment be connected to the main hospital network, connected to a central controller, and then the controller connected to the central network directly. All of the diagnostic equipment connected to the network from home offices also needs to be managed remotely. And because of HIPPA regulations, these machines are not allowed to be used through WiFi, therefore, they need to be networked in through a secure, wired connection.

70%

Fueled by COVID-19, digitally enabled remote care and clinical trials will drive 70% growth in spending on connected health technologies by providers and life science companies by 2023

Source: IDC





Solution

In order to support these evolving needs, healthcare IT teams need to consider high bandwidth for data intensive applications, managed security, segmentation, failover and backup for high availability. Many healthcare systems work on a tiered network based on the sensitivity of the data exchanged. This segmentation may include patient care workers like doctors/nurses/clinicians; C-suite administration; and general administrative — all prioritized based on the sensitivity of the data being accessed and exchanged.

To manage all of this, IT teams can optimize SD-WAN architecture to best support branch locations, like home doctor's offices. The segmentation that SD-WAN provides is application-specific, providing end-to-end segmentation that isn't possible with a LAN. And in order to support all of this, home offices might require [business-grade internet](#).

Results

Through close collaboration with IT teams, the Comcast Business solutions architect team has worked with healthcare organizations to address the pain points of speed, security, agility, reliability and scalability to help create a seamless patient care experience. With the help of a trusted managed services partner, healthcare IT teams can provide the connectivity to support digital healthcare for advanced patient experiences; drive automation to help improve efficiency; and make real-time data decisions through network enhancements.

By implementing SD-WAN network segmentation, increased bandwidth, and security, remote and on-site healthcare teams are able to:

01. **Review patient vitals and health data remotely**
02. **Securely access electronic health records (EHR) hosted securely from their private cloud**
03. **Message patients from a portal**
04. **Conduct two-way video and audio calls with patients, with photo sharing from patient to provider**
05. **Customize settings for threshold breaches of vital signs**



SD-WAN for healthcare providers

The technologies necessary to drive exceptional patient experiences require a robust network designed to handle data-intensive requirements. A slow or unreliable network can lead to a poor experience and low satisfaction.

For healthcare organizations, the impact of data-intensive applications and increased connectivity demands are changing the way networks are being built. SD-WAN helps to ease the complexity of network management. These benefits include:



Centralized network provisioning and management

SD-WAN separates the intelligence of the network from the data, enabling network administrators to manage the devices on a network from one central site. Using an SDN controller, healthcare organizations can provision all of their network resources in all locations, saving time and resources by reducing the amount of staff needed at each facility. In addition, updates to the network can be delivered to all network devices with the tap of a finger.



Enhanced security through improved control

Centralized management also benefits the security of the network, with SDN controllers providing a central point of control to implement policies consistently. Healthcare organizations can centralize the management of security for all devices on the network as well as increasing the number of devices connected to them. Another benefit? Administrators can segment network environments.



Application performance control

Centralized management also gives organizations control over data traffic, which can help ensure that applications perform as expected. More critical data can be prioritized for immediate delivery over applications that are not considered mission-critical. The ability to shape and control data traffic enables the right services are delivered first.



Managed network operating costs

Because many routine network administration issues can be centralized and automated with SDN, healthcare organizations that adopt it can manage staffing costs. Central management can mean tasks are completed more quickly, especially in organizations with multiple locations.



Managed network hardware costs

The open-source nature of SDN enables organizations to reduce reliance on their existing hardware, as all the network intelligence lives at the controller. This not only helps organizations manage money, but also provides a smooth path for migration.

Learn more about how Comcast Business can help healthcare organizations improve care with better technology.

See how Comcast Business can help

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