COOPER UNIVERSITY HEALTH CARE ADVANCES DIGITAL HEALTH SERVICES

WITH COMCAST BUSINESS ETHERNET

SITUATION

- New Jersey-based healthcare organization with 5,700 employees, 751 physicians and 500,000+ patients

CHALLENGE

- Legacy network unable to support transition to EMR and other digital healthcare initiatives
- Network downtime impacting patient care
- Radiologists struggling with slow image downloads
- IT staff consumed by fixing network issues

SOLUTION

- Comcast Business Ethernet Network Service
- Comcast Business Ethernet Virtual Private Line
- Comcast Business Ethernet Dedicated Internet
- Comcast Business Ethernet @Home

RESULTS

- Reliable access to EMRs across locations
- Private connectivity speeds radiology analyses
- Rolled out videoconferencing, telemedicine and distance learning
- IT staff focused on new initiatives
- Awarded Best Application of the Year in Health by MEF

NEW JERSEY HEALTHCARE PROVIDER CONNECTS MORE THAN 50 LOCATIONS, SUPPORTS TRANSITION TO ELECTRONIC MEDICAL RECORDS AND ADOPTION OF TELEMEDICINE WITH HIGH-PERFORMANCE WIDE AREA NETWORK

ESTABLISHED HEALTHCARE PROVIDER HAS LARGE SERVICE FOOTPRINT

Cooper University Health Care has been a vital institution in Camden, New Jersey for the past 127 years. Originally opened as a 30-bed hospital to serve the population of Camden, N.J., the institution has grown over the years into a premier healthcare provider serving southern New Jersey.

Dedicated to world-class care, medical education and research, the organization has more than 5,700 employees – including 751 physicians in over 75 specialties – and a network of more than 100 outpatient offices throughout the region. Each year, Cooper averages 26,400 hospital admissions, 76,700 emergency room visits and nearly 500,000 outpatient visits. It is also the clinical campus of Cooper Medical School of Rowan University and recently opened the MD Anderson Cancer Center at Cooper, both located on the Health Sciences Campus in Camden.

HIGH-PERFORMANCE CONNECTIVITY ESSENTIAL FOR RESPONSIVE PATIENT CARE

As Cooper looked to roll out an Electronic Medical Records (EMR) system, it quickly realized that its existing wide area network (WAN) would not be able to support its needs. Cooper's patchwork of legacy T1s and broadband connections from various providers posed major availability concerns.

"We were struggling with a mish-mash of services and providers, the connectivity could be sporadic, and we experienced some downtime. It was not a sustainable model and our patients were paying the price," said Doug Tracy, Infrastructure Manager, Cooper.

When the network went down, physicians and clinicians could not access the patient data they needed, which meant a huge inconvenience. Network downtime was also forcing the IT team to spend an inordinate amount of time resolving trouble tickets, isolating incidents and traveling between offices to address network outages, a situation that was exacerbated by the fact that it relied on multiple service providers to deliver connectivity.

In addition, radiologists working remotely were logging in to create a virtual connection over the public Internet to review MRIs, CT scans, X-ray images and 3D images. With files up to 100-200 MBs, downloads were often painfully slow, impeding the radiologists' ability to respond quickly to physicians with consultations. Further, Cooper was unable to take advantage of the latest communication tools such as videoconferencing, telemedicine and distance learning because the existing network couldn't support them.

COMCAST BUSINESS B4B BUILT FOR BUSINESS™

"As we've expanded the network over time, it's become clear that another benefit of working with Comcast Business is its extensive network reach and ability to provision new sites faster, often doing it in weeks rather than months. When you are trying to connect a growing healthcare system on one network, that makes a big difference."

Doug Tracy
Infrastructure Manager
Cooper University

"In healthcare, the network is crucial. Patients do not want to go to a doctor's office and find out that the computer system is down. A key role of healthcare IT is to ensure that clinicians have uninterrupted access to Electronic Medical Records and images to care for patients when and where they need it," said Jayashree Raman, Senior VP and CIO, Cooper University Healthcare.

COMCAST BUSINESS DELIVERS HIGH-PERFORMANCE WAN, RELIABLE CONNECTIVITY AND TOP-NOTCH CUSTOMER SERVICE

Recognizing the need for a high-performance WAN to connect more than 50 locations across a large geographic area that ranged from downtown Camden to suburban medical offices and even home offices, Cooper issued an RFP to incumbent, competitive and dark fiber providers with an emphasis on availability, bandwidth and customer support. Cooper ultimately selected Comcast Business because its network enabled Cooper to connect *all* of its locations faster and more cost-effectively. In fact, its footprint was large enough to support Cooper's range of dispersed locations.

Tracy added: "As we've expanded the network over time, it's become clear that another benefit of working with Comcast Business is its extensive network reach and ability to provision new sites faster, often doing it in weeks rather than months. When you are trying to connect a growing healthcare system on one network, that makes a big difference."

Given the urgency of healthcare and that nurses, physicians and specialists need constant access to patient data to communicate with each other, Comcast Business installed an Ethernet Network Service (ENS) with primary and back-up connections to 43 locations at speeds up to 600 Megabits per second (Mbps). This provides redundancy to ensure network availability and enables Cooper's IT team to load balance traffic across the two connections. The network uses multiple classes of service and diverse access technologies, including fiber and Ethernet over Hybrid Fiber Coax (HFC).

Comcast Business also installed Ethernet Virtual Private Line (EPVL) connection at 1 Gigabit per second (Gbps) at its main campus in Camden to aggregate the remote EVPL sites and an Ethernet Dedicated Internet (EDI) connection at 200 Mbps at the Cooper University Hospital for Internet access. The remote EVPL sites are 6 Mbps "Ethernet @ Home" connections from the homes of radiologists to the Cooper network that provide a private, secure, highly-available means to view medical images any time of day or night and a simpler user experience that eliminates the need to log-on through virtual connections.

Today, Cooper's state-of-the-art WAN lets hospital staff exchange data and images quickly. Physicians can instantly access patient information from any of the Cooper facilities, and oncologists can videoconference with peers from other cancer centers to review and collaborate on patient cases, research, and treatment options. Additionally, Cooper can now roll out new applications, including distance learning for medical students and telemedicine options. The new network allows Cooper to maximize IT resources as well – staff can now monitor their network centrally, instead of having to travel out to individual sites to make system updates or troubleshoot, which is saving considerable time as well as gas and toll expenses.

"Comcast Business provides us with dependable connectivity, scalable bandwidth to accommodate our growing traffic needs, and proactive and responsive customer service. We've been extremely pleased with them. The reliability factor is no match to what we had before," said Tracy.

In addition, due to its design, scale and patient-focused benefits, Cooper Health's Ethernet network was awarded the prestigious Best Application of the Year in Health in the Metro Ethernet Forum's (MEF) 2014 Ethernet Excellence Awards.

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