Ontario Hospital Organization Benefits from Simplified Operations

The Niagara Health System improves patient service with secure and scalable Cisco Medical-Grade Network backed by TELUS Managed Services

Executive Summary

The Niagara Health System (NHS) is Ontario's largest multi-site hospital amalgamation, consisting of six hospital sites and an ambulatory care centre serving 434,000 residents across 12 municipalities. The NHS has approximately 4200 employees, including 1,800 nurses, and is supported by about 650 physicians. Care provided is wide-ranging, and includes approximately 186,000 patient visits annually at the NHS Emergency Departments and Prompt Care Centre, and more than 184,000 ambulatory clinic and community program visits.

Business Challenge

The NHS, a recognized leader in the healthcare industry, needed a way to enhance employee communications across its seven, geographically-dispersed sites. The NHS is also dedicated to the continuous improvement of its patient services and was looking for innovative technology solutions that would enable the organization to meet this goal while achieving operational cost savings.

Network Solution

The NHS underwent a thorough review of its technology and communications systems and quickly realized that it needed to replace its seven private branch exchange (PBX) phone systems that had become outdated and very costly to maintain. One of the biggest concerns about the PBX systems was that they lacked redundancy or fail-over protection, making it difficult for the organization to help ensure business continuity in the event of a blackout or other unpredictable event. Additionally, because there was no centralized call management centre, patients and customers often had to call multiple numbers and sites before reaching their desired destination, costing them time and, in some cases, long distance charges.

After considering numerous vendors, the NHS chose TELUS Communications Inc. to implement, integrate and manage a Cisco Medical-Grade Network across the entire organization. Bala Kathiresan, chief operating officer for the Niagara Health System, says, “We initiated an RFI (request for information), to which we received multiple responses. Cisco® stood out against the
competition because of its extensive technology expertise, but it was the significant features and benefits of the Cisco Medical-Grade Network that really made us choose them as our solution provider.”

The Cisco Medical-Grade Network is a healthcare-specific architecture that enables organizations to converge voice, video, data, and wireless on a single system and dynamically connect in-house and remote staff to one another, strengthening communication and allowing for higher-quality patient care. The solution was perfect for the NHS, which was using disparate PBXs, call centres, and voicemail systems across its seven locations, making it difficult to broadly and consistently communicate to staff and clients in a cost-effective and efficient manner.

“The Cisco Medical-Grade Network gives us the confidence to roll out new applications that are mission-critical to our organization.”
—Bala Kathiresan, Chief Operating Officer, Niagara Health System

“The NHS had a vision of a single enterprise-wide network infrastructure that could support all aspects of their business – data, voice, and video communications, mobility, and clinical applications. With the Cisco Medical-Grade Network, we were able to help them make that goal a reality,” says Steve Lawrence, healthcare business development manager for Cisco Canada. “All of the features of the solution – from having access to patient data from any location, to the ability to add applications and new capabilities, such as diagnostic imaging, greatly appealed to the NHS’ vision.”

In 2005, solution integrator TELUS began implementing the Cisco Medical-Grade Network across each of the seven sites, starting with St. Catharines General Site. “TELUS had considerable expertise in replacing PBX systems and did an excellent job with the implementation. The rollout was a very transparent process,” says Kathiresan. Greg Haliburton, director of engineering for TELUS, says, “We were very excited about the opportunity to implement a consolidated system that could run video, voice, data, and wireless. The infrastructure provides a foundation on which new technologies can be continuously added, and we were glad to be part of something so innovative and progressive in the healthcare field.”

Within a year, the last site – the Douglas Memorial Hospital Site in Fort Erie – was up and running, making the NHS the first multi-hospital organization in Canada running a complete, end-to-end Cisco Medical-Grade Network.

Business Results

The Cisco Medical-Grade Network has provided significant benefits to the NHS, as well as its staff and patients. The NHS was able to greatly reduce expenses by outsourcing the management of its IP telephony system to TELUS. Says Haliburton, “Having TELUS as its sole service provider enables the NHS to effectively streamline operations. The network’s redundant architecture provides fail-over protection, ensures business continuity and eliminates costs incurred by previous network outages.”

The organization was also able to reduce costs associated with its call centre operations. “Before implementing the Cisco Medical-Grade Network, we had seven call centres. Now, we have been
able to consolidate that operation, making communications between sites more efficient, customer service-oriented, and reliable," says Kathiresan.

For the organization’s employees, one of the most notable benefits is five-digit dialing between all the NHS sites. “Before, we always had to dial the 10-digit telephone number of anyone we called internally. Now, we just dial their five-digit extension, even if they are located at another hospital, or use the voice-activated system. We can also transfer voicemails between sites, which means that we no longer have to transcribe voice messages into an e-mail – a huge time saver,” says Kathiresan.

Clinical staff is taking advantage of the video conferencing capabilities deployed at three of the seven sites by using the system to collaborate about patient case loads, share expertise, and participate in training.

Most importantly, the benefits of the Cisco Medical-Grade Network extend to patients of the NHS. Outside callers now dial a single phone number and are easily and quickly directed to their destination, without the need for hanging up and having to call another site. As a result, they incur fewer long distance charges. Kathiresan says, “Having callers reach their destination faster translates to increased patient care and customer service. This is a priceless outcome of implementing the Cisco Medical-Grade Network.”

“The Cisco Medical-Grade Network has enabled the NHS to achieve significant cost savings and efficiencies, and we look forward to helping them continue to reap these benefits as they add new features and capabilities to the system,” says Lawrence.

Next Steps
The NHS is executing its plans to build on and enhance its Cisco Medical Grade-Network, placing the organization on the forefront of delivering advanced healthcare services. “Our options are wide open. In addition to adding video conferencing to the remaining four sites, we are also going to be deploying wireless access and location-based services in all of our locations,” says Kathiresan. Most notably, the organization has recently deployed a Picture Archival Communications System (PACS) to help specialists working remotely easily transfer, access and store medical images.

Kathiresan says, “The Cisco Medical-Grade Network gives us the confidence to roll out new applications that are mission-critical to our organization. Cisco and TELUS are there every step of the way, allowing us to focus on what is strategic to our business and important to our patients.”
For More Information

To find out more about Cisco healthcare solutions and the Cisco Medical-Grade Network, go to: http://www.cisco.com/web/strategy/healthcare/index.html

Connect with TELUS today for business solutions. Contact your TELUS Account Executive, call 1-866-GO-TELUS or visit http://www.telus.com