The Joint Commission considers effective communication an essential component of quality care and patient safety. As the industry becomes more complex, healthcare organizations can integrate communications with other vital technologies to better support day-to-day operations, enable better care delivery and improve patient outcomes.

Virtua is the largest healthcare system in southern New Jersey. The organization’s mission is to deliver an outstanding patient experience through the highest quality care. To support its mission and growth, Virtua partnered with NEC to enhance and integrate its voice and data infrastructures for quicker access to information, improved clinician communication and enhanced patient care.

Virtua is a large, complex healthcare system with four hospitals, two nursing homes, two ambulatory-care centers, a home healthcare agency and 19 physician-services sites. The fast-growing organization has more than 8400 employees at 62 locations across three counties in New Jersey. Technology plays an important role at Virtua; and, IT is viewed as the fundamental enabler of service capabilities. “An organization can have the best strategy, the best processes, the best people,” says Nifna Saunders, president and chief operation officer, Virtua Healthcare System. “But if they do not communicate and convert data into information for greater utility, nothing happens.” The organization sought to transform its IT infrastructure to provide users with faster access to accurate, more complete information.

Virtua’s leaders see communications as a very important part of technology. Mark Van Kooy, MD, medical director of informatics for Virtua, said the role of communications in delivering care is indispensable. “Our need to communicate is unparalleled compared to the past,” says Van Kooy. “The days of leaving a phone number or even carrying a beeper are over.”

Virtua sought a communications solution that integrated with the organization’s data systems. “Voice communication is the most efficient way to communicate, so, it was very important we incorporate communications and voice data into our technology framework,” adds Campanella.
The solution would also improve communication among clinicians. “Communication is extremely important in day-to-day operations of the hospital among clinicians--those folks who deliver the bedside care,” says Campanella. What we really need is instant person-to-person communication that is reliable, effective and really helps support the delivery of safe, efficient patient care, adds Van Kooy.

Virtua sought a solutions partner who could integrate its voice and data technologies. With nearly every aspect of Virtua’s buildings, back-office functions and healthcare delivery involving technology, the partner would need to be capable of implementing a large-scale project with minimal disruption to Virtua’s normal, 24/7 operations.

**Solution**

Virtua first expanded its wide area network (WAN) to all 62 buildings. The organization also built two new datacenters to run approximately 250 software applications and more than 25 different systems, including an upgrade to electronic medical records.

Campanella and his team then turned to NEC to design a robust unified communications system and integrate it into Virtua’s IT infrastructure. A project manager from NEC and Virtua worked collaboratively to coordinate every step of the process.

“NEC understands the mission of healthcare and our unique needs,” says Campanella. “The people they brought to the table throughout the planning and implementation processes obviously understood what is important to us and were able to adapt to our particular needs.”

Virtua deployed unified communications features phases, starting with unified messaging so that physicians and nurses receive voice messages via email. Since the organization is also using wireless technology, staff can access email while mobile, using a VoIP wireless phone.

“The ability to get my voicemail through my email has changed my work flow significantly—in the past, I’d have to call into my phone or stop at my desk to check messages,” says Van Kooy. “Now, I just check my email to retrieve voicemail on the spot and respond immediately.”

The integrated environment provides clinicians with patient data in real-time to support safe and more effective care. “If a nurse is at the bedside and needs to check the patient’s lab results before administering medication, they can immediately access the information on their wireless phone,” says Kelly Beach, nursing director at Virtua’s hospital in Voorhees. “There is no wait—everything is at the nurses’ fingertips, so it closes the loop for patient care.”

Other advanced, integrated UC features enable Virtua’s call centers to use on-screen navigation and follow-me feature gives patients the same phone number when they move to other rooms. “We like the various features of NEC’s UC software as well as its integration capabilities,” says Campanella. “We are embarking on integrating it with other clinical applications.”

The UC system is managed by both Virtua IT employees and several of NEC’s on-site support professionals. Campanella said Virtua has had a great relationship with NEC. “They really understand our environment, facilities, culture and desire for quality, not just in healthcare but also in terms of delivering 24/7 IT services that are very reliable,” he adds.

**Results**

Virtua’s enhanced, newly integrated IT environment improves the organization’s ability to communicate and share patient information in real time.

Physicians can access patient information and diagnostics faster, which in turn, leads to speedier treatment and better patient health. “The ability to have information with us as we move through the system has been a tremendous advantage,” says Van Kooy. “The use of mobile technology and VoIP wireless phones allows me to reach nurses and colleagues directly and has really given me the ability to extend my reach a great deal farther and yet remain in touch at all times.”

The end result is outstanding patient care. “We now have accurate, accessible and interoperative data for clinicians at the right time and place for the right patient. Our hope is that through technology, we can position Virtua as the best place for an outstanding patient experience,” Saunders says.

In early 2011 Virtua will open a new 650,000 square foot hospital in Voorhees. “The new hospital will have the latest technologies, so we wanted the UC system in place in our old facility to get a good understanding of how it works and how we will use the various features,” says Campanella. “We are ready to move that system to the new facility for its opening.”

Campanella credits NEC as an integral part of the project’s success. “NEC has been very solicitous of our needs and very responsive with any issues or concerns. It has really been easy. I work with more than 200 different technology vendors and NEC is in the top five in terms of ease of dealing with them,” Campanella concludes.