Healthcare Solutions - Nicklaus Children's Hospital - Case study

Nicklaus Children’s Hospital enables global telehealth with cloud technology

Founded in 1950, Nicklaus Children's Hospital (NCH) is renowned for excellence in all aspects of pediatric medicine with several specialty programs ranked among the best in the nation by U.S. News & World Report.

The Challenge: Getting the right information to the right clinicians at the right time

As a world-class pediatric hospital, NCH has unrivaled expertise and information to guide the care it provides to patients. The challenge is to make this content, from patient data and lab reports to surgical best practices, available when and where it's needed. “In the past, information about patients was extremely difficult to get: call a hospital, get a secretary to pick up, get the nurse, have the nurse pull the most recent laboratory reports and read them to me,” says Dr. Redmond Burke, Director of Cardiovascular Surgery at NCH and the founder of its Congenital Heart Institute. “Lives could get lost in those few minutes.” The same challenge applies on a global level; access to specialized pediatric care is severely constrained in the U.S. and around the world. “Our goal is to create a model where NCH can provide care to any child, at any time, anywhere,” says Ed Martinez, senior vice president and chief information officer of NCH.

The Solution: Building a telehealth platform on Citrix virtualization and collaboration solutions

NCH has built a telehealth infrastructure which helps doctors access, share and collaborate around patient and medical information wherever they are. Citrix XenDesktop and Citrix XenApp make virtual desktops and applications available securely on any device, including electronic medical records (EMRs) powered by Cerner, with single sign-on via Citrix Receiver. Citrix XenMobile MDM mobile device management (MDM) software ensures the security of corporate email and patient consent forms on mobile devices. Citrix GoToMeeting enables clinicians to collaborate from anywhere via high-definition video conferencing. Integrated Cisco unified communications technologies and Vidyo telepresence capabilities complete the platform. “Our Citrix-powered telehealth platform has seamlessly integrated and operationalized capabilities to enable doctors to consult with, diagnose and prescribe treatment for remote patients as if they were in the same room,” says Martinez.

Key Benefits

Clinicians at NCH can log into desktops and apps quickly and securely on any device to access to the information they need to guide the care they provide. “Having high-definition technology makes all of our information, imaging and teaching materials, as well as our clinical materials, much more usable, and our clinicians can make better decisions,” says Martinez. “More accurate diagnoses also help lower the cost of care.”
Doctors working at NCH use high-definition images to help diagnose patients, prepare for surgery and communicate with care teams. Digital images of every pediatric surgery are captured and stored alongside real-time post-operative metrics in the patient’s EMR, and are also used in teaching materials. Once a patient's surgery is complete, the doctor can share images with teammates to improve post-operative care. The same capabilities help parents understand and gain confidence in their children's procedures. “I know they're going through the most stressful moment of their lives,” says Burke. “I can show them on a computer screen my hands doing that operation, and then my patients recovering afterwards. That's really empowering for a patient and very reassuring for a family.”

NCH’s doctors use their telehealth platform to consult remotely with hospitals around the world, making its advanced expertise to patients who may be hundreds of miles from the nearest subspecialists. Burke and other surgeons share videos of their operations through social media sites to help others put their innovations to work for their patients. “I could never go and speak to the surgeons in every country in the world, but I can communicate with them using information technology and social networking,” says Burke. “That global element will drive the future of innovation in medicine.”

Looking Ahead

As new technologies are approved by the FDA and come onto the market, NCH works to bring them into its system—for example, a new brain scanner application now available for the iPhone. The platform will continue to evolve and push the leading edge of telehealth and healthcare IT. NCH is currently developing a call center and mobile apps which will make one-to-one medical expertise available even when people can't see a doctor in person.