
Telemedicine Technology Enhances Pediatric Telehealth Program

Without ever leaving the nursery, babies born at Ohio's Chillicothe's Adena Regional Medical Center are receiving clinical assessments from specialists an hour away at Columbus' Nationwide Children's Hospital. High-definition videoconferencing capabilities are making the assessments possible via the Ohio Supercomputer Center.

The project enables specialists in Columbus to view distressed newborns with exceptional clarity, examine detailed X-rays, view lab results and consult with attending physicians in Chillicothe in real time.

"Telemedicine dramatically increases the care of our youngest patients," said Dr. John Fortney, medical director for Adena Health System. "If we're looking for help with a diagnosis, someone from Children's -- whether it's a neonatologist or a sub-specialist, such as a pediatric cardiologist -- will see the patient and speak to the attending physician in real time.

"Currently, information is relayed by telephone, which means it's subject to interpretation," Dr. Fortney explained. "With high-definition videoconferencing, specialists can make a more thorough evaluation."

Adena Regional Medical Center was selected for the pilot because the hospital sends more pediatric patients to Nationwide Children's than any other outside of the Columbus metropolitan area. In the center's first year of operation with telemedicine, physicians were able to make quicker and more accurate clinical assessments via videoconferencing, especially regarding the need to transfer these critical care newborns.

"If a baby needs to be moved to our facility, doctors have seen the child, reviewed their diagnostic images and can prepare for the infant's care as soon as he or she arrives," said Stephen Welty, MD, chief of neonatology, Nationwide Children's Hospital. "Just as importantly, we also use this as a tool to determine if a baby doesn't need to be transferred. Then, the child can stay with family and avoid unnecessary stress."

Recently, the Federal Communications Commission's Rural Health Care Pilot Program awarded \$417 million to 69 projects around the nation to "significantly increase access to acute, primary and preventative health care in rural America." Three of those projects serve Ohioans by providing high-speed connections to health care facilities in nearly half of Ohio's 88 counties.

Those three regional telehealth networks will connect to Broadband Ohio's backbone to transport data traffic between regions in Ohio, as well as to use OSCnet to access Internet2, the primary national research and education network in the country. This fulfills a key requirement of the grant -- that the health care traffic be able to flow across the country from Ohio.

"Just as OSCnet provides the higher education community with a backbone that allows it to share critical education material around the state of Ohio, it will provide a network infrastructure to help make the Broadband Ohio initiative a reality for state-supported hospitals to access advanced telemedicine applications," said Stan Ahalt, executive director of the Ohio Supercomputer Center.

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