

Cherokee Health Systems' S.M.A.R.T. Telemedicine Program

School-Based Telehealth in Action



Children are absent from school for a variety of reasons, but the most common reason is the common cold. It is also not uncommon for a student to miss an extra day or two waiting for a doctor's appointment and for the parent to miss time from work. In many communities, especially rural and mountainous regions, there is also the compounding difficulty of a shortage of medical professionals, as well as lack of transportation options for parents, and a number of people without adequate health insurance.



Patricia Hess, a nurse, is working at Seymour Middle School under an agreement between Sevier County Schools and Cherokee Health Systems to provide medical services to students. The telemedicine program is linked via two-way camera to a physician's assist in Knoxville for instant evaluation of the patient.

In Sevier County, Tennessee, in the shadows of the Great Smokey Mountains, all of these scenarios apply.

Recently, the Sevier County School Corporation and Knoxville-based Cherokee Health Systems partnered on an innovative project labeled S.M.A.R.T. (Student Medical Assistance Response Team). At the heart of the project is a school-based medical clinic equipped with the latest remote technology that lets an on-site nurse assist in a health examination administered by a medical professional - typically a pediatric or family nurse practitioner- at another location miles away.

The S.M.A.R.T. technology allows a student to be screened, examined, diagnosed and even treated utilizing AMD devices and a two-way secure Polycom video link. The on-site nurse uses AMD's General

Exam Camera, AMD's 400s Camera and Illumination System with exam scopes and AMD's 3700 Telephonic Stethoscope.

"It doesn't make sense to pull a child out of the school setting so they could see a physician, when in many cases, the problem could be resolved through technology," said Joel Hornberger, Cherokee Health Systems' Chief Operating Officer. "Telemedicine seemed to be the obvious alternative to help keep students in school and parents at work."

The partnership allows students to access a higher level of healthcare than what a school nurse is typically able to provide. "During the telephonic visit, the medical provider can with amazing clarity and precision examine the eyes, ears, nose and throat, as well as listen to the lungs and closely examine the skin," Hornberger said. With parental permission, the medical provider may also treat minor cuts and abrasions, rashes, strep throat, earaches and flu symptoms. Laboratory testing for strep throat and influenza is also available.



A registered nurse examines a student's ear with a special instrument that allows the nurse practitioner to see it on the screen.

In fact, Cherokee Health Systems medical professionals claim that the equipment in many cases helps provide a better examination because of the ability to amplify sounds and review and zoom in on targeted areas. Once the examination is complete, the medical professional will phone the student's parent to discuss their findings and to offer any recommendations.

Cherokee Health Systems is able to bill the telemedicine services to insurance and TennCare (Tennessee's Medicaid administrator). For those without insurance, Cherokee provides an affordable sliding fee scale for the visit and any lab work that may be needed.



As the nurse examines a student's throat, the image can be seen on the screen.

School administrators, parents and even the students have provided rave reviews of the project, now entering its third academic year of use. Administrators are pleased that the S.M.A.R.T. project has decreased the amount of time students are absent; parents love the convenience and the students think the technology is neat.

AMD Global Telemedicine and Cherokee collaborated to launch the S.M.A.R.T. system in all 17 elementary and middle schools in Sevier County.

"Cherokee Health Systems' S.M.A.R.T. telemedicine program is an exemplary model of how a school-based telehealth program can work," said Steve Normandin, President of AMD Global Telemedicine, Inc. "There is a great deal of potential for the use of telemedicine within school systems," he said.

“Schools are the perfect setting for utilizing the conveniences and simplicity that telemedicine offers.

“School systems know that to improve the students overall performance that it is vital to have access to quality medical services,” Normandin said. “It’s about looking out for the best interest of the students, and telemedicine is the ideal alternative.”



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