Telemedicine Project Connects, Kids, Doctors for Better Care

For many parents, it's an all-too-common scenario: A call from the school nurse in the middle of the day. Their child is complaining of an earache and needs to be picked up from school. The parents scramble to leave work, pick up their child and bring him or her into the doctor's office. In some cases, parents end up taking their children to the emergency department if they cannot get an appointment with a doctor that day.

But it doesn't have to play out this way. A project in Rochester, N.Y., is using telemedicine to connect child care centers and elementary schools to physician offices, allowing a child to be diagnosed remotely by his or her primary care physician. Using telemedicine, the doctor can diagnose the patient on the spot and, if needed, call in a prescription to a pharmacy.

With the help of a grant from the Agency for Healthcare Research and Quality (AHRQ), Kenneth McConnochie, M.D., and colleagues at the University of Rochester Medical Center have established the first telemedicine network that's integrated into daily primary care medical practice. Health-e-Access, as the network is called, connects children in 23 schools and child care programs to 10 primary care practices. The program, which began in May 2001 in five inner-city Rochester child care programs, has shown a 63 percent reduction in absences from child care due to illness.

"This is about access to your primary care physician," McConnochie says. "It's both convenience -- health care when and where you need it -- and continuity -- by people you trust. Who couldn't use more of that from health care?"

The Health-e-Access project uses store-and-forward as well as real-time, interactive technology to connect child care centers to pediatric practices. At the child care center, a trained telehealth assistant collects information, including video images and audio files, about the child's condition and medical history. A digital camera with special attachments allows the telehealth assistant to take detailed eye, mouth, ear drum, and skin images or collect information from an electronic stethoscope.

The information is then sent to the child's primary care practice, where a clinician can use the information to diagnose or treat the patient. If necessary, the clinician can conduct a live video conference with the patient, staff, and parents to better determine the child's condition. Parents initially participated via videoconference in the visits about 20 percent of the time, but this has fallen to less than 10 percent as parents have gained confidence in telemedicine care.

If a prescription is appropriate, the physician can instantly fax it in to the pharmacy for delivery to the child care center or school. Once the telehealth visit is complete, an assistant at the child's site prints a personalized letter about the visit, which is generated from the clinician's documentation in the Health-e-Access record, and any diagnosis-specific handouts chosen by the clinician.

Reaction to the technology has been positive, says McConnochie. Initially, some parents were skeptical of using telehealth to treat their children remotely. But surveys of parents have shown that the project has allayed their concerns and that they are very happy with the results, he says. Parents indicate that almost all illness episodes evaluated by telemedicine would have resulted in time lost from work and a doctor's appointment or emergency department visit. Yet for more than 96 percent of these visits, the clinician is confident completing the visit without supplementary laboratory evaluation or an in-person examination, McConnochie says. To date, more than 5,000 visits between the child care centers and physician offices have been conducted using telemedicine.

In the future, McConnochie believes the technology could be used in many additional settings, such as group homes, assisted living facilities and summer camps to enhance patient access to care. For now, researchers are evaluating the technology's impact on health care quality, utilization and cost.

Insurer reimbursement is a major issue for the project, as it commonly is for telemedicine initiatives. But McConnochie says he is optimistic that an analysis of the impact on utilization and cost in the project's final year will show that the telemedicine model is cost-effective and that local insurance organizations will continue reimbursement after the AHRQ funding ends.

"With the support of AHRQ, this project has demonstrated the potential for telemedicine to enable high-quality health care that is readily available," McConnochie says. "The biggest lesson learned is that this really works."

Last Modified: August 2010