



IMAGING PARTNERSHIP

VISION CARE

Nurture. Educate. Advance.

Telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve a patient's clinical health status. IP Healthcare includes a growing variety of applications and services using two-way video, email, smart phones, wireless tools and other forms of telecommunications technology.

Telemedicine is not a separate medical specialty. Products and services related to telemedicine are often part of a larger investment by healthcare institutions in either information technology or the delivery of clinical care.

What Services Can Be Provided By Telemedicine?

IP Healthcare is best understood in terms of the services provided and the mechanisms used to provide those services. Here are some examples:

- **School care and specialist referral services** may involve a primary care or certified health professional providing a consultation with a child or a specialist assisting the primary care physician in rendering a diagnosis. This may involve the use of live interactive video or the use of store and forward transmission of diagnostic images, vital signs and/or video clips along with patient data for later review.
- **Consumer medical and health information** includes the use of the Internet and wireless devices for consumers to obtain specialized health information and on-line discussion groups to provide peer-to-peer support.
- **Medical education** provides continuing medical education credits for health professionals and special medical education seminars for targeted groups in remote locations.
- **Web-based e-health patient service sites** provide direct consumer outreach and services over the Internet. Under telemedicine, these include those sites that provide direct patient care.

What Are the Benefits of Telehealth?

Telehealth has been growing rapidly because it offers four fundamental benefits:

- **Improved Access** – For over 40 years, telemedicine has been used to bring healthcare services to patients in distant locations. Not only does telemedicine improve access to patients but it also allows physicians and health facilities to expand their reach, beyond their own offices. Given the provider shortages throughout the world--in both rural and urban areas--telemedicine has a unique capacity to increase service to millions of new patients.
- **Cost Efficiencies** – Reducing or containing the cost of healthcare is one of the most important reasons for funding and adopting telehealth technologies. Telemedicine has been shown to reduce the cost of healthcare and increase efficiency through better management of chronic diseases, shared health professional staffing, reduced travel times, and fewer or shorter hospital stays.
- **Improved Quality** – Studies have consistently shown that the quality of healthcare services delivered via telemedicine are as good those given in traditional in-person consultations.
- **Patient Demand** – Consumers want telemedicine. The greatest impact of telemedicine is on the patient, their family and their community. Using telemedicine technologies reduces travel time and related stresses for the patient. Over the past 15 years, study after study has documented patient satisfaction and support for telemedical services. Such services offer patients the access to providers that might not be available otherwise, as well as medical services without the need to travel long distances.

IP Healthcare. An alternative approach to telehealth

Is your kid too sick for school? Take our quiz! (Our own quiz)

"I'll phone in a prescription."

"We can often get a child seen by a doctor and treated within an hour"

Increasingly, schools are using telemedicine as a way to diagnose and treat mental-health issues like ADHD and autism, says Ryan Spaulding, Ph.D., director of the Center for Telemedicine & Telehealth at the University of Chester. This is largely because there's a shortage of child psychiatrists, psychologists, and autism-spectrum experts in the United States. "It can be hard for parents to find an expert close enough to them. Often they have to take a day off for psychological testing," explains Dr. Spaulding.

More on Telemedicine in Schools

Telemedicine is also a gentle way to let moms and dads know their child needs professional help. "Parents are often unaware or in denial that there's a behavioral or developmental issue," says Garrett. "If a teacher has concerns, she suggests to parents that we set up a consult with a specialist via telemedicine." Because the school nurse is the one to make the appointment and handle any other clerical issues, the parent is less likely to put it off. The child can be seen faster this way, too, since specialists hold a certain number of spots open for telemedicine visits. After the doctor conducts diagnostic testing, parents--along with the school nurse, the teacher, and other professionals such as the school psychologist--are able to sit in and listen to the results. "It's helpful for the teachers, because they hear firsthand what the doctor is saying," says Garrett. "They often bring up points or concerns the doctors or parents may not have thought of."

Research shows that telemedicine may help keep chronic conditions in check. A Journal of Pediatrics study, for example, found that children with type 1 diabetes who participated in a school-based telemedicine program had better blood-sugar control and fewer visits to the hospital than those who were treated traditionally.

When chronic conditions are better controlled, children are less likely to miss school.

In fact, our research shows that child absences due to illness plummeted by an average of 63 percent at child-care centers that use telemedicine. Telemedicine can also be used for routine matters such as dental or vision screening.

Perhaps the biggest champions of telemedicine are the school nurses themselves. "I overheard a mother tell a secretary in our principal's office that her 8-year-old daughter's asthma had flared up, so she was keeping her home," recalls Penny Harding, a headteacher from St. Edwards Primary School in Berkshire. "I told her about our telemedicine service and we got her to bring her daughter in to be seen by a physician that afternoon. He quickly realized she had pneumonia and needed to be hospitalized. If we hadn't caught it, the pupil could have died."

Telehealth in schools may be the answer to limited resources and a need to increase health care access for children. Telehealth refers to the use of information and communications technology to deliver a broad range of health care services remotely, including clinical care, health education and counseling. Based on our experience, the telecommunications equipment needed in a school clinic can be as simple as a computer, Web cam, encrypted software, electronic stethoscope and video otoscope. Therefore, the cost of setting up a telehealth system can be relatively small.

Telehealth in school could maximize the benefits of a school nurse program, while also permit access to physicians or mental health providers, as needed. The latter component, accessing higher licensure providers, has been the emphasis of other school telehealth programs around the country. These programs were primarily designed to increase student access to physicians or mental health providers, with little focus on addressing the issue of limited school nurses in the district.

However, maximizing access to school nurses is a more cost-effective model for keeping children healthy and in school. School nurses engage in a number of preventative health services, triage acute illnesses and manage chronic conditions, which are the majority of services needed in a school setting. Instead of creating a telehealth model focused on accessing physicians, a telehealth model that increases access to school nurses may produce similar outcomes and be less expensive — and students could still access outside physicians as needed via the telehealth equipment, and those physicians could be reimbursed through the students' health insurance. Limited budgets for school nurses would continue to remain a problem, but telehealth could optimize the nurses currently employed by school districts by permitting greater access.

Telehealth may be a viable option to, at the very least, provide children with access to a health care professional in school, which has been shown to reduce absenteeism and improve management of chronic illnesses in children.

Telehealth enables collaboration of healthcare professionals to provide healthcare services across a variety of settings. The registered professional school nurse (hereinafter referred to as a school nurse) uses clinical knowledge and judgment to provide health care to students and staff, perform health screenings and coordinate referrals to the medical home or private healthcare provider (Wolfe, 2013). The school nurse serves in a pivotal role to provide expertise and oversight for the provision of school health services, promotion of health education, and connection between the academic setting and healthcare settings. Therefore, the school nurse is a critical link to the successful implementation and use of telehealth technology.

School-based telehealth includes using telephones, teleconferences, or web cameras in the school to connect to a distant healthcare provider. More sophisticated electronic monitoring equipment can be used in telehealth, such as an otoscope that transmits the image to a remote provider or stethoscope that transmits sounds with the goal of connecting a student with a distant health provider.

The use of telehealth is “increasing access to acute and specialty care for children; helping children and families manage chronic conditions; facilitating health education for children, families and school personnel; and increasing the capacity of school nurses and school-based health centers to meet the healthcare needs of

students”.

Telehealth includes a wide range of services delivered, managed, and coordinated by all health-related disciplines via exchange of electronic information and telecommunications technologies. The goal is that “telehealth (a term that has largely replaced telemedicine) will provide health care beyond diagnosis and treatment to include services that focus on health maintenance, disease prevention, and education”. Telehealth includes both clinical and non-clinical uses. Examples of clinical telehealth are transmission of medical images for diagnoses, remote monitoring, and health advice by telephones such as telerriage.

Telehealth clearly has the potential to enhance health care of all students. Families in rural or low-income areas often face barriers and challenges in obtaining healthcare services for youth because of “travel distances, lack of transportation, inability to finance care, and limited access to physicians. The use of telehealth in schools mitigates some of these difficulties and allows students access to medical care”.

The challenges related to telehealth technology include quality of service, confidentiality, standards, documentation process, protocols, follow-up, parental rights, liability, jurisdiction, and cost to implement and access equipment, school policies, and coordination of services. Therefore, school nurses must partner with the regulatory and professional agencies to implement, develop and use standards for safe and effective telehealth practice. Telehealth is emerging as

a valuable way to “complement and expand the capacity of schools to meet the healthcare needs of children, particularly those who are low-income and living in medically underserved areas, while keeping them in school and their parents at work”.