The Kids Are All Right

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By Dava Stewart
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Three health care organizations have employed telepediatrics to make care more accessible.

Telemedicine has been alternately hailed as the best way to reduce costs and improve outcomes and the quickest way to lower standards. Practicing clinicians may resist the move, citing the need for gold-standard, in-person care, and patients may be uncertain of exactly what telemedicine is. In the meantime, administrators continue to look for ways to drive down costs and deliver outstanding care.

Three telepediatric programs offer a glimpse of how the best interests of all parties can be served. These forward-thinking organizations believe they're making a huge difference in the lives of many families and look forward to taking technology to new heights.

UC Davis Children's Hospital
The University of California, Davis (UC Davis) has one of the oldest and largest telepediatrics programs in the country. It began offering telehealth services to pediatric patients in 2000. Current Director James Marcin, MD, MPH, was instrumental in implementing the program. As a pediatric ICU physician, Marcin saw a desperate need to improve remote emergency departments. Candace Sadorra, manager of the pediatric telemedicine program, says the primary goal during the initial phase was to help reduce the disparity in the quality of care being provided to rural areas as compared with that given to those living near urban centers where quality specialty care is more easily available.

In the program's early days, obtaining provider buy-in at both ends was a challenge. There were some extra steps involved, both for the specialists and for the clinicians at the remote sites. Clinicians at the remote sites were concerned about appearing less competent in front of their patients. As a result, UC Davis decided it best to tread lightly in an effort to build a solid partnership. "We didn't want to step on toes, but we did want to be available," Sadorra says.

Eventually, physicians at the remote sites found that having support from a large reputable organization actually improved how patients and families perceived them.

The cost of equipment represented an enormous obstacle to getting the program up and running, with a single unit costing as much as $25,000. Sadorra says that because the rural providers didn't have the money to purchase the equipment, grants were critical. At the eight initial sites, grant funding supported the start-up cost and the maintenance of equipment.

Today, long after the grant funding has expired, there are more than 35 remote sites. As the program has evolved and grown, the telepediatrics staff has encountered new challenges and found unexpected benefits. For example, Marcin recently published research showing the environmental benefits of telepediatrics. When the program began 17 years ago, no one was thinking much about reducing the carbon footprint, but that has turned out to be an interesting outcome.

One of the key components of the success of the UC Davis program has been having a dedicated telemedicine team, along with strong support from leadership. For example, a singular technical team is devoted to providing support to the remote sites.

Over the years, several challenges have emerged, not the least of which have occurred on the technical side. As a result, technical support is crucial to the program, not only to provide assistance should difficulties arise but also to maintain and troubleshoot the technology.

To ensure that equipment and the connection are ready to go at a moment's notice, the team implemented routine test calls both internally and externally. The test calls had the additional benefit of allowing remote site staff to gain valuable experience with using the equipment. Today, technical support is available to the remote sites 24/7. At first the team did test calls to remote sites once per week during the day shift. However, this did not provide the night shift staff with enough exposure to the technology. Now, the technical team makes test calls at various times.

The relationships between UC Davis and the remote sites represent another critical element of the program's success. Sadorra credits Marcin with doing much of the work to build those relationships. "Dr. Marcin strongly believes in outreach and devotes time to drive to sites to meet with providers and staff," she says, adding that those meetings typically include some teaching moments. "He always tries to offer education with his outreach. This is an important offering and adds value to the outreach effort for our partner sites."

As with almost any successful program, there are growing pains. Sadorra says one big issue is deciding how to expand the team's capacity. "Although the field is exploding and there are many opportunities, we must be very thoughtful in how we move forward to best meet

the needs of our community partners while aligning with our organization's mission," she says.

Evaluating workflows, smoothing the billing process through the EHR, and continued work with payers are all issues the team is currently working on with an eye to the future.

Oregon Health & Science University

Located in Portland, Oregon Health & Science University (OHSU) began conducting pediatric ICU consultations with patients and physicians in a Eugene hospital in 2007. One of the challenges for pediatricians in Eugene (located about two hours from Portland) and other parts of the state is that all of the hospitals with pediatric ICUs are located in Portland.

Miles Ellenby, MD, an associate professor of pediatrics at OHSU's School of Medicine and medical director of the OHSU Telemedicine Network, says that before OHSU began a telepediatric program, clinicians were making decisions about whether patients should be transported to Portland or remain where they were based on information gathered in phone calls. "Transport is risky and expensive, and when we do it, we are disrupting the family's life—and we were doing it way too often," Ellenby says.

With a camera in the local emergency department, specialists can see patients and talk to family members before making a transportation recommendation. Ellenby describes it as "better data collection."

Although avoiding unnecessary, costly transports has been a huge benefit, the telepediatrics program, more importantly, has also saved lives. For example, the experts at OHSU have provided support to remote sites where clinicians are rarely called upon to perform resuscitations.

The pilot program in Eugene led to expansion into a total of 16 other hospitals, one of which is in the neighboring state of Washington. Ellenby points out that not every hospital necessarily needs the telepediatric program, but that in some instances it's just a more effective way to provide care. OHSU's services include pediatric ICU and neonatal consultations and a comprehensive telestroke program.

Convincing providers that telemedicine is a viable option can be difficult, with regulations regarding licensure and credentialing posing significant barriers. However, there may be good news on the reimbursement front, a problem many telehealth providers face. Issues concerning the definitions of urban and rural at the federal level remain, but overall the regulatory barriers appear to be improving.

Medical licensure is a state matter. For clinicians to provide care, even virtually, they must be licensed in the state where the patient resides. For example, OHSU clinicians who work with the remote site in Washington must be licensed in Washington as well as in Oregon.

Credentialing poses a large obstacle for OHSU's telemedicine efforts in that telepediatrics staff members must be credentialed at each of the 14 remote facilities. "When you are on the phone, you don't have to be credentialed, but the minute you are face to face, you do," Ellenby says.

The credentialing problem is not insurmountable—some hospitals accept credentialing by proxy, that is, the remote sites agree to accept OHSU's credentialing. However, Ellenby is doubtful any additional sites will follow suit. "I'm not really sure it's going to change—it's one of those things like states' rights. Medical staffs want to maintain control," he says.

Another hurdle to telemedicine acceptance is the tendency of some health care professionals to compare in-person care with telemedicine, a comparison Ellenby deems to be unfair, noting that a more apt comparison would be telemedicine and what he calls "telephone care."

Despite these barriers, telemedicine is gaining favor with providers. Change comes slowly, but no matter how reluctant providers may be, Ellenby says, "once they do a consult or two, they are on board."

In fact, OHSU hopes to expand its telemedicine efforts into specialty care. For example, Ellenby envisions a day when a child with diabetes who needs to see an endocrinologist once every three months will be able to do so from home. This will eliminate long car trips and the possibility of parents needing to take a day off from work and children missing a day of school for what turns out to be a 20-minute appointment.

"[In these cases], people get care at great personal expense or they don't get care as they are supposed to," Ellenby says, adding that providing telehealth services can remedy such situations.

Nemours Children's Health System

According to Shayan Vyas, MD, director of telemedicine at Nemours Children's Health System, the goal of the telepediatric program is to provide care where the kids are, whether on a cruise ship, at home, or in school. The program, dubbed Nemours CareConnect, debuted in 2014, just two years after the children's hospital opened its doors in Orlando, Florida. The cost for the direct-to-consumer version is $49 for each virtual visit.

Despite being a newcomer on the scene, Nemours successfully recruited in-demand specialists to the state-of-the-art facility. "Families from all over Florida were trying to access care," Vyas recalls.

Three years later, Nemours CareConnect is connecting pediatricians with patients on cruise ships, in schools, and other hospitals. The administrators and providers are especially excited about the possibilities inherent in providing telepediatrics services in schools. The pilot program occurred in a single school where a grant from a charitable foundation helped

offset the cost. Nemours is in advanced talks with other districts and entities about expanding the program across central Florida in the upcoming year.

Nemours CareConnect faces familiar challenges: reimbursement, credentialing, and licensing. In addition to those concerns, clinician education and engagement have also been problematic, according to telehealth administrator Carey Officer. Vyas agrees, noting that telemedicine "is not something taught in med school and is not something providers learn in a residency or fellowship."

This learning curve applies to families as well as providers. However, telepediatrics differs slightly from other types of telemedicine in that many of the parents are part of the millennial generation who have grown up using technology. "Most of our patients and families are very adaptive to using their phones and tablets, and we are encouraged by that," Officer says.

The prospects for further expansion of the Nemours CareConnect program are promising, but the organization will take a measured approach. "We don't necessarily look at any kind of partnership just to expand the telehealth program," Vyas says. "We look to see if it's the right thing to do to keep the medical home intact."

Ensuring that patients' primary care physicians are aware of any episode involving the telemedicine team at Nemours is "near and dear to our heart," Officer says. It's not always a simple process, but whether through Epic—the EHR in use at Nemours—or through some other method, the telehealth team wants to be sure that primary care physicians are aware a visit has occurred and have access to a record of the encounter.

In addition to patient care, Nemours CareConnect has been used as a prescreening tool for clinical trials. For example, Nemours CareConnect was an important tool for recruiting participants in an open-label, phase 2 clinical study that assessed the safety and efficacy of nusinersen, a drug used to treat spinal muscular atrophy.

Officer says telehealth is reaching a turning point as costs continue to decrease, new technology is developed, and families, patients, and caregivers learn more about its capabilities. "Payment streams are changing, incentives are changing, and hopefully we can reduce the cost of care and impact care by taking it to where the patient is. I think we are just scratching the surface," she says.

— Dava Stewart is a freelance writer based in Tennessee.