

Samsung and Vivify Health Get Pediatric Transplant Patients Back Home to Heal



Overview

Customer Need

Children's Health in Dallas treats kids and adolescents with some of the most complex medical needs in the state of Texas, including pediatric heart, kidney and liver transplant patients. To ensure these and other critical patients get the ongoing medical supervision and educational resources they need, Children's Health is investing in virtual health technology that lets care providers watch out for patients while they heal at home.

Samsung Solution

In 2015, Children's Health launched its comprehensive pediatric remote patient monitoring program. After considering several options, Children's Health chose a solution combining Vivify Health remote care management platform and services, and Samsung Galaxy tablets — providing an intuitive mobile experience for young patients and their parents to track their medical conditions. For the program's first phase, Children's Health is rolling out these devices to two patient populations: recent liver transplant patients and adolescents who have had kidney transplants in the past.

Results

Children's Health staff and patients have embraced the remote patient monitoring program. Not only are patients getting back home sooner, but staff appreciate the ability to conduct virtual visits, see patients in their own environments and provide ongoing education via videoconferencing. Children's Health has also begun gathering data on the three objectives it set for the program, and will publish those results in 2016.



Children's Health in Dallas (formerly known by the name of its flagship hospital, Children's Medical Center) is the nation's seventh-largest pediatric healthcare network and the only academic healthcare facility in North Texas dedicated exclusively to the comprehensive care of children from birth to age 18. The nonprofit healthcare system includes two full-service hospitals licensed for 595 beds and eight outpatient specialty centers. Together, these campuses cover more than 2.2 million square feet and 193 acres, and bring \$1.6 billion to the regional economy.

Along with providing routine wellness care and specialized medical treatment, Children's Health performs more organ transplants for children under age five than any other hospital in the state. In addition to being accredited by the Joint Commission, Children's Health is a Magnet designated hospital, the highest national recognition for nursing excellence. It has also been ranked by U.S. News & World Report as one of the country's top pediatric providers and one of the most connected hospitals.

The Customer Need: Little Patients, Big Challenges

As one of the nation's largest and most esteemed pediatric hospitals, Children's Health in Dallas treats kids and adolescents with some of the most complex medical needs in the state of Texas. Along with providing advanced comprehensive treatment for the most acute and complex cases, such as heart disease, cancer and cystic fibrosis, the surgical team specializes in pediatric transplants.

Since the early 1980s, pediatric surgeons at Children's Health have performed more than 150 heart transplants, 400 kidney transplants, 480 liver transplants and the state's first combined heart-liver transplant. These patients need intensive medical supervision immediately following surgery as well as ongoing education and medication management to stay healthy.

To help these and other critical care patients get the medical oversight and resources they need, Children's

Health is investing in new technology that connects care providers with patients from the comfort of their own homes.

By combining remote patient monitoring with telemedicine, Children's Health hopes to achieve three objectives: increased patient and family satisfaction, improved patient adherence to medication and treatment plans, and decreased emergency room visits and hospital readmissions.

"For the first time ever, we are able to view important patient data in real time to help improve coordination of care and decision making across multiple specialties," says Julie Hall-Barrow, vice president of virtual health and innovation at Children's Health. "This technology will help pave the way for higher-quality patient interactions, decreasing costs through early intervention and all-around better care management."

The Samsung Solution: Connected Healthcare, Protected Patients

In March 2015, Children's Health officially launched its comprehensive pediatric remote patient monitoring program — the first of its kind for a pediatric hospital in the U.S. After considering several options, Children's Health chose a solution combining Vivify Health's remote care management platform and Samsung Galaxy tablets, providing an intuitive mobile experience for young patients and their parents to track their medical conditions. The tablets are connected to AT&T's 4G network, enabling data to be transferred wherever the patient goes.

For the program's first phase, Children's Health is rolling out the solution to two patient populations: recent liver transplant patients and adolescents who have had kidney transplants at some point in their lives.

For recent liver transplant patients, many of whom are very young children, families leave the hospital with a Vivify/Samsung kit that includes the Galaxy tablet with Bluetooth-enabled biometric devices, such as blood pressure monitors, weight scales and pulse oximeters. Parents use these devices to capture daily biometric data and transmit it to the child's care team. They also answer a series of daily questions on the tablet that enables physicians and nurse practitioners to ensure patients are stable.

Care providers also use the tablets to make virtual house calls with liver transplant patients. In the past, these children came back to the hospital twice a week for four weeks after surgery for follow-up appointments. Now, one of those visits has been replaced with a video call.

The program works a bit differently for post-kidney-transplant adolescents, who receive a kit during their regularly scheduled checkups. With this group, Children's Health is focusing on compliance with medication management, providing education and oversight to help patients take responsibility for their own care.

For adolescents who have undergone kidney transplants, the medication management training and oversight is vitally important. "One of the main reasons adolescents lose their organs or have to have second transplants is because of medication non-adherence," says Dr. Dev Desai, chief of pediatric transplant at Children's Health. "The RPM program will teach our patients how to be active in the ongoing management and monitoring of their health as they grow into adolescents and even adults, and it will hopefully help prevent unnecessary complications down the road."

Quick Profile:

Samsung Galaxy Tab E



Display: 9.6" WXGA
1280x800 TFT

Operating System: Android
Lollipop 5.1.1

Processor: 1.2 GHz Quad Core

Cameras: 5MP back/2MP front

Connectivity: 802.11 a/b/g/n
and 4G LTE

Security: KNOX 2.4; premium
features require license fee



The Results: Healing at Home

Children's Health has begun gathering data on the three objectives it set for the program, and will publish those results in 2016. In the meantime, patients and medical providers are already noting some important benefits.

For post-liver-transplant patients, medical providers have real-time access to vital patient data. The remote patient appointments via Samsung devices also enable physicians and nurse practitioners to interact with children and their families where they're most comfortable — at home. Patients don't have to miss additional days of school, and parents don't have to take more days off from work. And for those who live outside the Dallas area, families don't have to be separated while one parent travels with the sick child and the other cares for siblings at home.

"After transplant, sometimes the families have to sort of split up," says Dr. Desai. "The patient and the mother

may stay in Dallas for one to two months in either a hotel or Ronald McDonald house ... [and this] creates a hardship for these families being split apart like that." The Samsung/Vivify solution enables families to spend more time together.

According to Vivify, Children's Health is reporting 100 percent staff satisfaction and 95 percent patient satisfaction. Kristy Carlton, the Vivify Health clinical consultant for Children's Health, has received excellent feedback from the client about the program's success thus far. "Physicians have even sent patients home early due to the fact they were enrolled in the program," she says, "which decreased the length of the hospital stay."

For kidney transplant patients, video conferencing has also played a major role in behavior modification, says Carlton. "For example, in one situation, the patient was unable to give accurate medication information to the nurse, who wanted to ensure he was taking

the correct anti-rejection medication. When he got home, the nurse was able to do a video visit, view all medicine bottles and tablets, and confirm he had the correct medication. This was huge because it eliminated the need for the patient to go back to the clinic and meet with the nurse."

After a successful first run with these transplant patients, Children's Health will add two new patient populations to the program. The IT staff is also integrating the platform with the organization's electronic health record (EHR) so providers can access all patient data in one place.

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– Kristy Carlton,
Clinical Consultant
Vivify Health



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