Using Telehealth for Chronic Care Management and Coordination

The path to creating a telehealth platform for chronic care management is often long and winding. But as more and more health systems assume risk for their patients, it's becoming a necessity.

That's the advice given by Joseph Kvedar, MD, Vice President of Connected Health for Boston-based Partners HealthCare, one of the largest health systems in New England.

An author and blogger who has long led well-known digital health and telehealth efforts at Partners, Kvedar described the health system's ongoing remote patient monitoring efforts during a recent mHealthIntelligence.com webcast.

Partners is now assuming risk for a one-quarter of its patient population and will see that number grow with the launch of a Medicaid ACO. While this leaves the health system “with one foot in two canoes,” there's a growing interest and investment in population health programs that fit neatly into chronic care management.

According to Kvedar, it's all part of the “one-to-many care model.” Most or all of the health system's primary care providers are now involved in patient-centered medical homes, focusing on patient engagement and health and wellness. The goal is to get out in front of those patients with chronic conditions and to steer them away from the costly health concerns that lead to hospitalization and drive up the cost of care.

And that's where remote patient monitoring comes in. The oldest and most successful of those programs is the telemonitoring program for patients with congestive heart failure, run through home care division of Partners. Key to the program’s success has been identifying the right candidates.

“It's the best use case that I know of,” Kvedar maintained. “The easiest way to pick up people who need to be monitored in the outpatient setting and prevent a readmission is to pick them up when they're in the hospital.”

Patients identified for the program in the hospital are issued a scale, blood pressure cuff, and touchscreen monitor at home. Additionally, they are asked to upload their data every morning and answer a few questions. If the data isn't received or it falls outside of the patient's parameters (i.e., CHF patients who suddenly gain weight), a nurse makes a phone call.

The program has cut readmissions by half and improved mortality rates. In addition, patients learn about the relationship between lifestyle and symptoms in their daily routines as well as the value of interactions with nurses capable of spotting trends and intervening before symptoms get worse. “They feel very, very safe,” said Kvedar.

While the program has proven successful—particularly during the first 30 days after discharge—it remains costly and requires frequent interactions between patients and nurses.
Another Partners program focuses on high blood pressure. With the Blood Pressure Connect program, patients are sent home with wireless blood pressure cuffs and Qualcomm's 2net hub, a plug-in device that would automatically send data back to the provider. “That no-user interface or no-user friction part is really, really valuable,” Kvedar pointed out.

But while a pilot project saw improvement in clinical outcomes, the program’s effectiveness hovered at around 21 percent—good but not great according Kvedar.

The program has proved problematic in many ways. For one, primary care providers chose which patients would take part in the program with some seeing this as a reward for patients who were already doing well. That skewed the population away from those who would most benefit from remote patient monitoring. In fact, some 72.1 percent of those in the program were already managing their blood pressure well.

Combined with the cost of the equipment, that meant that Partners would have to either enroll thousands more patients into the program or reduce the per-patient cost from around $200 to about $20 to see success. Neither option was attainable. “We were humbled by that. We just didn’t get it right,” Kvedar admitted.

Partners is now launching a third program: Connected Health Integrated Pathway (CHIP). The program enables patients to choose their own devices and use them to send health data to their doctor, which is enabled by an application programming interface (API) developed by Validic, “It has the potential to really be powerful for us,” said Kvedar, who sees CHIP as “more of a democratized effort.”

Partners has some equipment on hand for those who don’t have devices or smartphones, but the majority of patients in the program are using their own devices and data.

Through the program, providers and patients work together to determine what to track and how to track it. The patient is invited by the provider to log on via a portal to send data. The data is then reviewed by the provider before it’s entered into the medical record. “It’s unrealistic to think that we should just be letting patients just randomly upload stuff to their medical record,” Kvedar noted. “We’re just not there yet.”

Will the program prove successful? Kvedar isn’t sure yet, but he’s hopeful. Much depends on whether patients and providers embrace the bring-your-own-device concept and whether providers want to fit this into their daily workflow. Provider adoption may be further influenced by the Centers for Medicare & Medicaid Services and the American Medical Association, which are working to develop more CPT codes that allow reimbursement for remote patient monitoring programs.

Looking ahead, Partners is now experimenting with two programs that focus on automated messaging rather than clinician interventions. Two applications—Text2Move (designed for patients with Type 2 diabetes) and ePAL (a self-management platform for cancer patients)—offer information and personalized advice but leave the provider out of the loop unless the user wants a consult.

The health system’s strategy for using telehealth to monitor chronic care populations involves plenty of mixing and matching. Aside from choosing the right technology for each population, providers must think carefully about selecting patients to participate in the program, equipping those patients with the necessary devices, collecting and analyzing the data coming in, and communicating with patients to reinforce care management.

“There’s more than just technology. There’s a culture change at hand,” Kvedar concluded.