The Value Initiative

Members in Action: Redesigning the Delivery System

University of Mississippi Medical Center – Jackson
Remote Patient Monitoring Program

In the *Members in Action* series, AHA will highlight how hospitals and health systems are implementing new value-based strategies to improve health care affordability. This includes work to redesign the delivery system, manage risk and new payment models, improve quality and outcomes and implement operational solutions.

Overview

To reach the many rural and underserved communities in Mississippi, the University of Mississippi Medical Center (UMMC) created its Center for Telehealth in 2003. Initially, the Center only provided specialized care and other public health services. But as Mississippi's rate of Type 2 diabetes became the highest in the nation, UMMC was compelled to address the growing chronic care crisis.

In early 2014, UMMC initiated its Diabetes Telehealth Network pilot program. Supported by a public-private partnership, the pilot targeted patients in the Mississippi Delta region, one of the most impoverished areas in the country. Pilot participants were treated remotely through the use of tablet computers (provided at no cost) and other tools. Patients took and reported their own vital signs daily. If patients failed to check in or their vitals landed outside of an acceptable range, a health practitioner would contact them.

In addition, the Center created educational content based on the American Diabetes Association guidelines and evidence-based practice. "When patients are given sheets of information during discharge, they

Impact

The Diabetes Telehealth Network has succeeded in achieving its goals of improving clinical outcomes and care coordination for managing diabetes, increasing access to care, and bringing health care resources into patients' homes. After the first 100 patients completed six months in the pilot, the Center analyzed the data they had collected. The results were stunning. "We had hoped that on average the patients who had completed the pilot could reduce their A1C levels by 1.0 [percentage point]," said Adcock. "We were blown away when we discovered that the average A1C level had dropped by 1.7 [percentage points] in just six months."

Remarkably, 96 percent of those first 100 patients took their medications as directed, and 83 percent kept their scheduled telehealth appointments. Not a single patient was hospitalized or admitted to the ED during that time. Furthermore nine cases of diabetic retinopathy, that may have otherwise gone undiagnosed, were identified. Many Diabetes Telehealth Network participants said they avoided foods high in sugar because they knew practitioners would detect their dietary choices when they submitted their vital signs.

The data from the first 100 patients also showed that participants avoided traveling 9,500 miles they would have driven to see specialists in Jackson, or neighboring states. Furthermore, $339,000 in true health care costs was saved, as measured through Medicaid.

"Medicaid extrapolated our data and told us that if 20 percent of Medicaid patients with diabetes in Mississippi enrolled in this program and achieved similar results, the state would save $189 million," said Adcock. "As our pilot demonstrated, telehealth has a tremendous impact on managing chronic disease as well as on controlling costs."

American Hospital Association®

often don't look at the information again," said Michael Adcock, executive director of the Center. "The Diabetes Telehealth Network gave us a way to monitor progress on improving health while providing smaller doses of education to patients during their daily 10-minute sessions. We felt confident that this would help empower and engage patients."

Lessons Learned

During the pilot program, the Center learned several important lessons regarding vital upgrades to their selected technology. Initially, pilot participants in the Diabetes Telehealth Network used a large tablet to connect to providers and report their vital signs. Now, all program participants receive a mini iPad, which is easier for patients to transport and use. The technology is also now Bluetooth-enabled so that patients are not required to plug anything into their devices. Finally, the Center ensures that the technology kits given to patients run on cellular technology in order to eliminate the need for patients to have Wi-Fi access in their homes.

University of Mississippi Medical Center – Jackson, MS

Future Goals

The success of the Diabetes Telehealth Network prompted the Center to use the same model to bring care to patients with chronic obstructive pulmonary disease, hypertension, kidney disease and other conditions that require chronic disease management. Services being replicated from the Diabetes Telehealth Network include scheduled live video health sessions and coaching on diet, exercise, and adherence to medications. Passage of a 2014 law by the Mississippi Legislature that requires insurance companies and Medicaid to reimburse for both remote patient monitoring and store-and-forward telemedicine paved the way for enhanced use of the network's model.
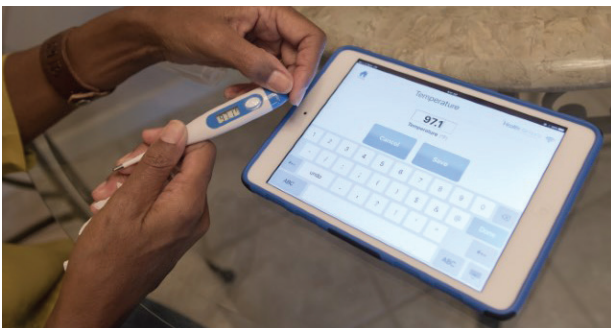
Tablet used by patients for remote patient monitoring

The Center also wants to focus on educating providers across the state to understand what the telehealth program is and how it impacts their practice. "There is no 'playbook' for this model of care," said Adcock. "But we do know that without provider engagement, the concept won't take hold." Although the clinical content for the program is not difficult to identify, refining the referral process, working with Medicaid and insurance companies, and informing legislators on the benefits of telehealth programs like the Center requires a great deal of effort and patience.

"Our telehealth program has been the first true win-win I have encountered in my nearly 20 years of working in the health care field," said Adcock. "Patients, providers, and payers all benefit. It's rare that something like this happens, and since it has, the profession needs to maximize the spread of programs like this."

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