

A home health technology project in rural Kentucky

BY DAVID A. GROSS AND FRAN FELTNER

With the touch of a button, Henrietta Caskey logged into the hand-sized machine sitting on a table beside her recliner and waited for the screen to activate.

Seconds later, a message popped up. “I’m so glad you’re back, Henrietta,” the screen read. “Did you check your blood pressure today?”

After clicking “yes” and responding to a series of other health-related questions, Caskey, 77, pressed another key on her Health Buddy, an appliance that plugs directly into a telephone line. Instantly, the information was sent from Caskey’s northeastern Kentucky home to a data center in San Jose, Calif. Using a shared electronic medical record, her local physician and home health nurse can view the results within minutes.

“I never thought I’d be doing anything like this, but I’m glad,” says Caskey, a widowed mother of 10 who has not so much as used a computer in her lifetime. “It gives me something to do.”

More than that, it makes Caskey, who suffers from diabetes and congestive heart failure, an active part of her care team. In fact, prior to her Health Buddy session each morning, Caskey checks not only her blood pressure, but also her weight, pulse rate and blood glucose level.

For the most part, the intense self-monitoring has improved the health outcomes for Caskey and other Morgan County, Ky., residents who are participating in an innovative home health technology project. With support from a state grant, the University of Kentucky (UK) Center for Excellence in Rural Health, Appalachian Regional Healthcare (ARH), Kentucky Homeplace and other partners have implemented telehealth into the homes of approximately 40 patients who face mobility or communication issues.

The in-home units – accompanied by devices such as scales, glucometers and blood-pressure cuffs – enable home health personnel to monitor patient care via a Web-based electronic patient and data management system. Workers at Kentucky Homeplace, a rural-based patient assistance program, train patients to use the technology and assist home health staff members in tracking data. Most importantly,

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the project – now in its second year – allows physicians, nurses and pharmacists to have timelier access to outpatient information, resulting in a heightened level of care.

The enhanced response to patient needs already has reduced their rate of hospital re-admissions, says Rhonda Dixon, director of the Morgan County ARH Home Health Agency.

Because of the intriguing prospects, the use of technology in patient self-testing has become increasingly prevalent nationally.

“This type of technology is the wave of the future,” says Les Rogers, corporate home health administrator

for ARH, one of the nation’s largest providers of in-home services. “I can’t have a nurse in the home all the time, but this unit is there all the time.”

Better for the patient – and the system

That degree of accessibility is particularly important in rural areas, Rogers said, where home health services are all the more vital for a variety of reasons including higher disease rates, older populations, scarce public transportation, and thousands of poor residents living with limited access to other health care and social services.

Yet, the rural-based agencies providing that care face difficulties themselves, including financial pressures that result from lengthy commutes between patients’ homes. During an average year in Kentucky

alone, approximately 115 home health agencies provide services including skilled nursing, therapy, education and personal care for nearly 120,000 patients.

That’s why officials are excited about the home-health technology project – it’s reducing the number of expensive home visits made by nurses while improving patient care.

Part of the reason for participants’ improved health outcomes, Dixon says, is that the Health Buddy assists in patient education by regularly providing useful tips to help patients take better care of themselves.

“The key is reinforcement,” Dixon says. “It’s instilled in them over and over to be cognizant of their health.”

Project officials also realize the importance of producing evidence-based results. Dr. Baretta R. Casey, director of the UK Center for Excellence in Rural Health and



Henrietta Caskey, a patient in the Morgan County, Ky., home health technology project, checks her blood pressure each morning before entering the results into her Health Buddy. Within minutes, the results can be viewed by her physician and home health personnel.



Each day, Henrietta Caskey and nearly 40 other home health patients in Morgan County, Ky., enter health information into a Health Buddy, an appliance that more closely links patients with their home care provider.

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Dr. Baretta R. Casey, director of the University of Kentucky Center for Excellence in Rural Health and principal investigator of the project, talks with West Liberty, Ky., physician James Frederick, who has referred several patients to the home health technology initiative.

herself a former private-practice physician, said plans call for the provision of biannual progress reports to local doctors who refer patients to the project.

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In the coming months, ARH and UK Center for Excellence in Rural Health officials will analyze project

One of those is Dr. James Frederick, a lifelong resident of Morgan County, Ky.

“These folks are extremely poor, but they’re not dumb,” Frederick says of patients he has referred.

“They’ll learn to use these devices. It will improve their whole status.”

data to determine the potential for future applications, including replication of the project throughout ARH’s operations in eastern Kentucky and southern West Virginia.

“Our ultimate goal is to keep as many patients as possible healthy and out of the hospital,” Casey says, “and in so doing decrease cost to the patients and the health care system. I hope we can spread this throughout Appalachia.”

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