Telemonitoring vulnerable patients in their homes

BY JOHN MORRISSEY

Monitoring the health of not-so-healthy people gets trickier once they leave the hospital or physicians’ offices and head home. The previous extent of chronic healthcare management included visits from nurses, phone calls and other inter-interactive activities. But those moves alone weren’t the level of accountability now required to catch medical decline before it leads to emergency department trips, hospital admissions and readmissions. That’s why Geisinger Health Plan and its staff of case managers use telemonitoring to supplement nurse efforts to reach patients discharged from Geisinger Health System hospitals in central Pennsylvania. It’s a tool to better prioritize patient caseloads per manager that “approach of 125 to 150 patients,” says Donovan Salik, the health plan’s director of population management operations.

It’s also why Christus Health is discharging some patients with a software-as-a-service kit that connects wirelessly with a weight scale, pulse oximeter and blood-pressure cuff. A home-based application takes patients through the same set of questions and vital-sign recordings that a nurse would do in person, says Hank Fleen, director of technology advocacy at the Irving, Texas-based health system. Remote monitoring of patients using computational devices outside the confines of care to cover recently discharged patients at risk for readmission as well as people with chronic conditions means that heart failure who could dissolve in a hurry without a way to detect the first dip. These technological assets can be set up internally or contracted out to a monitoring firm. The most crucial aspect isn’t the plates but rather the clinical process around it, says David Lee Scher, M.D., a consultant on digital health technologies. “You can’t just give the hospital a remote monitoring system and expect them to run with it and be successful,” Scher says. A good company will interact with the health system in advance, “giving physicians involved in creating and customizing algorithms that will determine what information gets to providers and what, if any, does get done about it.”

Geisinger developed two remote programs in conjunction with using firmware on an Android-based tablet (see case study). The results are significant, but so is the simplicity of the method, says consulting Scher. “Geisinger has proven that you don’t need terribly sophisticated technology to have good outcomes.”

CASE STUDY

G eisinger case managers get on the phone with patients within 24 to 48 hours of when they have the hospital and, that’s enough to assess whether the patient is a good candidate for telemonitoring or the next step. If a process efficiently determines if issues are surfacing that “ordinarily cause a readmission or a bounce back to the ED,” Salik says.

The health system’s ProvenHealth Navigator program, which case managers in medical-home teams, almost was reducing unscheduled visits. A study published in 2010 showed a 36 percent reduction in readmissions and an 18 percent reduction in inpatient stays. A study published in 2010 showed a 36 percent reduction in readmissions and an 18 percent reduction in inpatient stays. A study published in 2010 showed a 36 percent reduction in readmissions and an 18 percent reduction in inpatient stays. Geisinger developed two programs in conjunction with using firmware on an Android-based tablet (see case study)
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hospitals in central Pennsylvania. It’s a tool
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patients” at any given time, says Richard
Scher, M.D., a consultant on digital health

technologies.

Geisinger developed two programs
that use a voice-enabled device to
remote monitor patients using
telephony. One program for post-discharge
follow-up, another for heart failure patients
who add a Bluetooth-enabled weight scale
to the IVR-based monitoring. Case manage-
ers had been flummoxed by patient homes
since 2006 and understood the drivers of
readmissions and ED visit, says Scher. Their
input revealed in the doors or questions and the
bridging logic that proceeded from them.
For the heart failure program, a cur-
tain weight gain triggers as EVP cell
with a different set of scaled-down questions
regarding signs and symptoms of complica-
tions.

Despite those patients don’t use a human
face, they get the message from Geisinger
that “this tool that we’re introducing into
your everyday life will be a direct communica-
tion line to your care team,” says Scher. “In your
-case management is to get information that
is being collected through this cell, when
you step on the scale.” She says that’s very
comforting to the patient and care team
and can lead to phone calls to further discuss
issues for a prompter prompt.

The remote monitoring kit and clinical
interaction that Christian Health has piloted
since late 2012, guided to people in their
homes by case managers. But could they
do better by being even more vigilant?
A total of 875 Medicare patients enrolled in
the combined case management and remote
monitoring program were compared with
2,633 patients being case managed alone.
On top of what we already accom-
plished with having a case manager, this
tool for post-discharge IVR provided us
another 10 percent reduction in readmis-
sions and in the population they concerned,”
Scher says. “The results are significant, but so is
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facing that “necessitate a readmission or a
hospoint back to the ED,” Scher says.

In the Kaiser Permanente Health system,
where case managers are medical staff,
reducing readmissions is the focus.
A study published in 2010 showed a 36 percent
reduction in readmissions and a 19 percent


together mean the videoconference takes place
within that one device,” Scher says. It’s a
secure, two-way video phone with a

The CONTINUUM

AT&T Healthcare Community Online

Enable the highly secure exchange of patient data to coordinate care and

configuration and other new models.

SOURCE: InMedica, November 2012

CASE STUDY

Telehealth use booming

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<th>Year</th>
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<th>Percent of all patients</th>
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To learn more, visit

AT&T Healthcare

Enable the highly secure exchange of patient data to coordinate care and collaboration across all settings.

Accelerate the shift to accountable care and other new models.

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About the series
An health care moves rapidly toward a value-based delivery model, a greater emphasis will be placed on care coordination. We must ensure that patients not only get the right care at the right time, but also that every part of the delivery system is connected and understands that a patient’s need will be critical going forward. Information technology will be instrumental in making sure that these connections take place and in providing tools with valuable new decision support tools.

AWHN, with the support of AT&T, has created this yearlong series called Connecting the Continuum to explore how hospitals and health systems are addressing the care continuities in their strategic and operational plans. Each month, we will examine such topics as health information exchange, mobile health and transitions of care. Follow strategic and operational plans.

New York health system tries cameras to boost checklist compliance

North Shore-Long Island Jewish Health System in New York is looking to take checklist adherence — and a host of other patient safety tactics — to the next level by using remote video monitoring to keep clinicians and staff honest.

"The operating room is an intense, do or die situation, doctors, patients, a cleaning crew, people bringing in sterile equipment. It’s a tremendous amount of stress, the most complex environment in any hospital," says John D. Capua, M.D., president of anesthesiology services for the health system. "To do many of hospitals or most difficult to monitor and to improve any area in.

North Shore-LIJ first tested each monitoring technology in its intensive care units over one year ago to keep an eye on hand washing. That proved successful, so Capua says, the leaders decided to test the approach in the OR to increase safety and efficiency.

They started in March at Forest Hills (N.Y.) Hospital, which has eight ORs. Converse, monitored off-site by a third party, keep tight the entire process, from pre to postoperative, making sure the doctor follows each step in the checklist. Images from the equipment are clear enough to show what’s happening, but fuzzy enough to disrupt the patient’s focus, says Rita Maciel, R.N., executive director of the hospital.

The technology is used to improve throughput by alerting cleaning crews that an operating room is ready to be set up for the next case. As a result, the hospital has improved its turnover metrics by 15 percent. And the technology has shown that the room has been cleaned properly to reduce risk of infection.

"Two out of three hold about 30 percent of the time, they’re being done at the correct duration, and everyone is engaged in the process. That’s a remarkable achievement," Maciel says.

Now, the health system is expanding the approach into all ORs at Long Island Jewish Medical Center, and is carrying the entire operation. Eventually, it may be the standard throughout the industry, says Dr Capua, who is also chief medical officer of North Shore-LIJ’s anesthesiology provider, North American Partners, a partner in the pilot.

"We’ve tried a lot of different things throughout the country to get people not to rush, not to be distracted," he says. "Having video and telling people exactly ‘Look, we’re not too fast; you’re doing it’ is powerful information for them to say, ‘Wow, I guess I really can do better.’ "

How clean is clean? Germ killer

How can hospitals prevent the spread of C. diff, a bacterium that infects thousands of patients annually, has failed to reduce infection rates, according to a national survey. But another study shows that the patient who cleans and disinfects patient rooms and how he does it can make a difference in controlling the deadly factor.

In a survey by the Association for Professionals in Infection Control and Epidemiology, 70 percent of respondents said the hospital in which they work has adopted additional interventions to address C. diff infections. Yet, only 42 percent said they observed a decline in infection rates during that period. While, 43 percent did not see a decline, according to APIC’s 2013 CDC Proportion of survey.

Although cleaning activity has increased, monitoring the results has not kept pace, the survey found. While 10 percent of respondents have increased emphasis on environmental cleaning and equipment decontamination, 64 percent said they rely on observation instead of more accurate monitoring technologies to determine cleaning effectiveness. Fourteen percent said that nothing was being done to monitor cleaning.

Because C. diff spores are resistant to several antibiotics and the retrospective data are not sensitive to the bacteria, they work has adopted additional interventions to address C. diff infections.

In a study published in the journal for the Infectious Control and Hospital Epidemiology, the journal for the Society for Healthcare Epidemiology of America, the study describes the importance of establishing a rigorous cleaning and disinfection protocols to control C. diff.

There are 337,000 hospitalizations for C. diff annually in the United States and C. diff is linked to 28,000 deaths, adding at least $13 billion in healthcare costs, according to the Centers for Disease Control and Prevention — see table.

EmCare is focused on the future and looking hospitals, clinics and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers. Ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers, and ambulatory surgical centers.