

Healthcare Informatics

The Business of Healthcare Information Technology

BRINGING HEALTH HOME

Though some say the verdict is still out on telehealth because of funding questions, many proponents say its value is unquestionable.

by Michelle Grey

The statistics are staggering — 300 million people across the globe are clinically obese, over 600 million are afflicted with chronic diseases, and the number of people 60 and older is expected to increase to 1.2 billion by 2025. Healthcare institutions are currently not equipped to deal with this surge in the aging and ailing population. The provisioning of care will not only need to shift from traditional institutional settings to people's everyday environments — including the home — but from curative care to prevention.

Telehealth, also referred to as remote patient monitoring, is the use of a digital network to provide automated monitoring and treatment delivery to patients in a different physical location than the medical expert providing the treatment. This monitoring can improve patient outcomes and reduce the number of visits patients need to make to the hospital.

A recent report by independent market analyst Data-monitor (London), predicts the homecare telehealth market will grow at a five-year compound annual growth rate (CAGR) of 56 percent compared to 9.9 percent in the clinical market. In addition, the report expects that the overall global telehealth market will exceed \$8 billion by 2012.

Taking the pulse

The most widely adopted application of homecare telehealth is the use of devices to monitor congestive heart failure (CHF) patients and diabetics.

Five years ago, Lehigh Valley Hospital, a 765-bed healthcare system based in Allentown, Pa., deployed a home monitoring technology provided by Brookfield,

Wis.-based Honeywell HomMed to remotely monitor its CHF patients. Honeywell's device is placed in the patient's home, where it is able to collect various vital signs such as blood pressure, weight, pulse oximetry, and heart rate, explains Charlene Bergstresser, director of planning and program development, Lehigh Valley Home Health Services, which operates as a department of Lehigh Valley Hospital.

As an adjunct to biometric monitoring, patients are also prompted to answer a list of subjective behavioral questions about how they're feeling, or even what they ate for dinner the night before. The information collected is then transmitted, usually via a remote phone line, to a central repository where it is monitored by a registered nurse (RN), Bergstresser says.



What the RN is watching for are specific trends in a patient's data. "For example, if a patient has gained five pounds overnight, we can either adjust their medication, have them come in for evaluation, or send a nurse out to see them. Ultimately, what we're trying to do is prevent re-hospitalization for a serious complication that could have been avoided by better management of their disease," says Bergstresser.

According to Bergstresser, giving nurses access to patient data on a regular basis has reduced the number of home visits from an average of three-times-a-week to just once-a-week. This has meant significant savings from a staffing perspective, she says.

Bergstresser also says monitoring patients remotely has helped with increasing the hospital's capacity. "We were turning away business because of the limited number of beds available. But by implementing this technology, we can safely send cardiac patients home — knowing their status can still be monitored — which frees up beds for new patients," Bergstresser explains.

Reducing hospital readmissions is often cited as a major benefit for patients utilizing telehealth technology. Linda Wick, an R.N. at St. Mary's Medical Center, a 325-bed hospital based in Duluth, Minn., says that by implementing Chanhassen, Minn.-based Cardio-com's Telescale device to monitor CHF patients, the hospital has reduced its readmission rate of cardiac patients to 2 percent — the national average for readmission of heart failure patients within the six-month

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period after discharge is between 30 to 50 percent.

In addition, patients that do end up back in the hospital have a shorter length of stay because their disease has been better managed, which significantly decreases cost, Wick says. "Our hospital went from losing money on every heart failure patient to making money," she says.

According to Wick, another advantage of telehealth is that it enables people to be better stewards of their own healthcare. "Patients love it, because prior to being in our program they were in and out of the hospital all the time, and now they're able to function in the community," she says. "Knowing that someone is tracking their vitals gives them peace of mind, but also encourages them to make better lifestyle choices."

Adoption challenges

The biggest obstacle to widespread homecare telehealth technology adoption is cost, says Gregg Malkary, senior analyst, Spyglass Consulting, a market intelligence and consulting firm based in Menlo Park, Calif. Currently, telehealth is paid for through grants, funds, or out of the pockets of provider organizations that view the technology as a cost avoidance tool, he says.

"The results of this technology are clearly beneficial, but the most frustrating part about implementing a telehealth program is that there is no reimbursement for the devices, or for the extra time it takes staff to monitor the data," Wick says.

The financial considerations that accompany the decision to implement remote patient monitoring solutions are varied and multi-faceted. Hospitals are reluctant to implement telehealth technology because it's not reimbursed by Medicare, says Malkary.

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“Also, why would a hospital want to keep patients out of their facility in the first place? That’s only going to hurt their bottom line,” he says.

The fact that this type of technology so successfully keeps patients out of the hospital can sometimes be the very reason an institution might choose not to implement it, opines Malkary. Organizations that will financially benefit from the technology are those that act as the payer and the provider, such as Kaiser Permanente (Oakland, Calif.), HMOs, or the Department of Veterans Affairs, he explains.

“If you are responsible for paying the bills, then it’s in your best interest to keep cost down,” says Malkary. However, for most hospitals, he explains, it’s the insurers that are responsible for footing the bills for expensive procedures. “If you’re not getting reimbursed for the technology, you’d much rather spend your time seeing patients that you can get money for. The sad reality is that these monitoring devices are beneficial for the patient, but often not financially advantageous for the provider,” he says.

However, with pay-for-performance (P4P) on the horizon — where healthcare facilities are financially rewarded for good patient outcomes — it may end up being beneficial for hospitals to better manage their patient’s diseases, Wick says. “If you can financially incentivize an organization to focus on preventative care then they’re more likely to follow that path. It’s my belief that hospitals will embrace this technology more as a result of P4P programs because it hits them right in the pocketbook,” she says.

But not all healthcare facilities feel that keeping patients out of the hospital will lead to financial loss. “We are a very large network, so capacity is a big issue. If we can keep our beds

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free for our highest priority patients, then that’s a cost benefit. You don’t want all your business to go away, but you want to best manage your business,” says Bergstresser.

Joseph Tracey, vice president of telehealth services at Lehigh Valley Hospital, agrees

that reducing re-hospitalization doesn’t necessarily have to cut into a hospital’s bottom line. “It’s situation dependent. What the technology can do is appropriately discharge a patient because you know they are going to be monitored, and that can free up a bed for someone who really needs it. This creates additional throughput and capacity, and ultimately, financial gain.”

There are other ways an institution can make money even if it has to foot the bill for a telehealth program, says George Mayzell, senior medical director, The Shands Healthcare System, a 696-bed academic medical center affiliated with the University of Florida based in Jacksonville, Fla. According to Mayzell, Medicare, the country’s largest payer, has published a fee-for-service product, in which it will pay a flat rate for certain conditions. In other words, he says, a hospital is given a one-time payment of \$10,000 to treat a CHF patient, which it can utilize any way it wants. “In our case, implementing Cardiocom’s CHF monitoring device saves us money because we can decrease re-hospitalization for complications. This means we get to keep more of the lump sum payment because it’s not getting eaten up by the cost of having these patients back in our facility.”

In addition, Medicare won’t pay any additional money to a hospital if a patient is re-admitted for the same condition within a 30-day period. “This regulation is in place to discourage hospitals from aggressively discharging patients before they’re ready to go home, just so they can pocket the remainder of the flat fee,” explains Mayzell.

What telemonitoring can do is provide a safe aggressive discharge option. If a patient can be appropriately monitored at home, the hospital can preserve more of the lump sum payment, he explains.

Still, some hospitals see little

