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DM Companies in Pilot Mode Regarding RPM Use

Remote Patient Monitoring Inching Its Way Into DM

Remote patient monitoring (RPM) has the potential to reduce the cost of caring for people enrolled in disease management (DM) programs while enhancing quality, says a national expert on healthcare technology. But a number of broken links in the value chain are inhibiting quicker, more widespread use of the technology in DM, he adds.

"The value proposition for remote patient monitoring is intuitively dramatic," says Vince Kuraitis, a principal with Boise, Idaho-based Better Health Technologies Inc. "You have an ability to measure patients' physiologic responses and to communicate with your patients and change behavior or diet on a real-time basis and then monitor their physical reactions. Intuitively, it offers a tremendous amount of appeal."

However, the reality is that RPM is still largely in the experimental stage in DM, Kuraitis tells *DM News*. "It's still very early, and we're experimenting," he explains. "There's not a lot of evidence to back [the intuitive benefits] up. This stuff seems to work, but we don't have to the evidence to say it does, and we have no studies to show the cost-effectiveness of remote patient monitoring. We're about 2 percent of where we will [ultimately] be in terms of [the use of] remote patient monitoring in DM."

RPM is an "umbrella" term encompassing a number of high-tech applications that involve car-

ing for people without face-to-face contact, according to Kuraitis. About 75 companies currently market these applications. RPM's use in DM is but one of several applications in the healthcare arena, which can range from something as simple as monitoring a person's heart rate while working out on a treadmill in a fitness club to transmitting a patient's telemetry readings to a nurse clinician over the Internet, he says.

"Remote patient monitoring comes in many sizes, shapes and flavors," Kuraitis explains. "There's no black-and-white definition for [it]. It's pretty gray. There is a wide variation in terms of clinical conditions that can and should be monitored, how often they should be monitored and whether they should be monitored real-time or synched up periodically. All these factors add to the confusion in clarifying the value proposition of remote patient monitoring. It's in the mode of experimentation, trying to figure out of where the highest value proposition would be."

RPM is in that evolutionary mode because it is strongly tied to the Internet and the rapid evolution that is occurring with the worldwide web of connectivity the Internet has engendered, Kuraitis says.

A number of catalysts are fueling the DM industry's interest in RPM, according to Kuraitis. They include the current trend toward healthcare consumerism, widespread initiatives to reduce

medical errors and improve healthcare quality, and an expanding technology infrastructure that is producing quick and dramatic improvements in mobile communications. (See next page for a listing of RPM catalysts and barriers.)

Conversely, however, several obstacles are slowing the DM industry's acceptance and use of RPM and preventing it from making deeper inroads into the industry, Kuraitis adds. Chief among them are the lack of reimbursement for the use of RPM, physician resistance to its use, and the relative immaturity of RPM technology.

These and other barriers constitute "broken links in the RPM value chain" that must be fixed for the potential benefits of RPM in DM to be fully realized, Kuraitis says. Reimbursement, mobility and physician issues are the key links that must be connected to improve the value chain, he believes.

Despite these barriers, American Healthways Inc., LifeMasters Supported SelfCare Inc. and several other DM firms have recognized the potential RPM has to offer their programs and the patients they serve. They are all currently using the technology in everyday DM practice or are testing RPM's efficacy in pilot programs with select patients with chronic diseases. (See related story.)

Kuraitis says a fundamental benefit that these and other firms hope to gain through the use of RPM is improved compliance, which he calls "the holy grail for

DM.” He sees RPM as a powerful tool to improve patient compliance with DM programs. “There are other value propositions, but this is a big one,” he says.

These companies have a strong intuitive belief that RPM has some benefits for DM. “We believe there is some percentage of high-cost patients that can benefit from remote patient monitoring,” Kuraitis says. “We don’t know if that’s 2 percent or 5 percent of the population, but you’ve got to start somewhere.”

The clinical experiences of these companies will likely influence the degree to which other DM firms migrate toward and adopt RPM, Kuraitis believes. But so will their financial experiences, he adds. As it is with the entire DM indus-

try, the jury is still out on what, if any, return on investment (ROI) RPM can produce for firms that adopt the technology.

Right now, the initial metric being used to value RPM is financial ROI, Kuraitis says. “The driving force for bringing this technology into DM companies is one of helping the company to automate processes and reduce labor costs and, therefore, better reduce hospitalization of people,” he explains. “While we think there is a value proposition for improving quality care, that’s not the driving force for disease management right now. The driving force is lowering costs.”

Kuraitis believes the DM industry should measure the value of RPM in other ways than financial value, such as patient adherence to DM programs. “I think ROI is the wrong financial measure,” he says. “But, nonetheless, I recognize that that’s what is driving most DM programs today.”

Beyond ROI, other external marketplace influences are also likely to influence the degree to which the DM industry embraces RPM in the future, Kuraitis believes. A collection of what he calls “killer” RPM applications on the horizon is likely to lead to a broad and warm embrace, he predicts. These applications will “synergistically interact to help achieve the vision of moving the full market toward value as opposed to simply managing costs,” Kuraitis says. Among those applications are:

- Medical information sites for physicians;
- Wireless reference, ordering and coding systems;
- Electronic medical records;
- Voice recognition;
- Physician/patient e-mail;
- Telehealth in patients’ homes;
- Expert systems for decision-support.

Although Kuraitis believes RPM is certainly a good fit with DM and has a deserved place in the industry, he nonetheless believes the most dramatic and beneficial uses of RPM will

What’s Fueling/ Impeding RPM Growth

Catalysts

- Healthcare consumerism
- Medical error reduction/quality improvement initiatives
- Connectivity infrastructure: transaction processing lays the foundation for e-care
- DM “assembly” model gaining prevalence (vs. making or buying)
- IT -- data warehousing, data mining
- Clinical workflow automation software
- ASPs: particularly suited for healthcare
- HIPAA (promoting standardized data)
- “eHR”: employers connecting with employees
- Physicians acceptance of the Internet, particularly for clinical applications
- “HMOs-R-Us.com”: Defined contribution/e-health insurance
- Medicare reform

Barriers

- Lack of reimbursement
- HIPAA: Privacy/confidentiality issues
- Physician resistance (“what’s in it for me?”)
- Technology immaturity
- Inadequate infrastructure
- Bandwidth limitations
- Lack of standards
- Unfriendly user interfaces

Source: Better Health Technologies Inc.

The State of the RPM Market

- The remote patient monitoring (RPM) market is extremely fragmented. Companies have diverse core competencies.
- The value proposition of RPM is compelling.
- The strength and specificity of the RPM value proposition is unproven.
- Customers are adopting RPM applications.
- Cost savings (NOT quality improvement) is driving current RPM adoption.
- Valuation of RPM companies in terms of marketing capitalization and sales is unclear.
- RPM has multiple drivers and multiple barriers.
- There are broken links in the RPM value chain.
- The immediate RPM market is being driven by niche applications as opposed to integrated, enterprise-wide adoption.
- Watch for RPM’s synergy with other promising healthcare information technology “killer” applications.

Source: Better Health Technologies Inc.

RPM Users Sing Praises of Technology's Use in DM

The first wave of disease management (DM) firms to delve into using remote patient monitoring (RPM) in DM give high marks to the benefits the new technology can produce for their programs and the patients they serve.

American Healthways Inc., LifeMasters Supported SelfCare Inc. and several other DM firms are now using RPM in everyday DM practice with certain patients or are testing RPM's efficacy in pilot programs with select patients with chronic diseases.

LifeMasters is partnering with LifeLink Monitoring Corporation to provide telemonitoring services to a select group of LifeMasters' DM program participants with congestive heart failure (CHF). To date, about 225 individuals are participating in this service, according to Christobel Selecky, chief executive officer of the Irvine, Calif.-based DM vendor.

Before initiating the new telemonitoring service, LifeMasters had been collecting and analyzing vital sign and symptom data from program participants remotely in a variety of ways, including via an interactive web site, Selecky tells *DM News*. The LifeMasters database continuously analyzes this data and generates alerts when values fall outside of nationally accepted parameters, she explains. LifeMasters nurses then follow up on these alerts by calling program participants. Exception reports are then sent to participants' personal physicians if appropriate.

The arrangement with Bearsville, N.Y.-based LifeLink provides LifeMasters' DM program participants with another avenue by which they can transfer data to LifeMasters in a manner that best meets their individual needs, thereby improving compliance with DM programs, Selecky adds. "With the press of a button, participants enrolled in this arm of the LifeMasters' CHF disease management program can now easily collect and transmit biometric information, such as weight and blood pressure, to the LifeMasters systems and nurses who remotely monitor their conditions," she explains. "In addition, these participants can use interactive voice response (IVR) technology to record non-biometric data such as symptoms and compliance information."

The backbone of DM is a constant flow of information between patients and physicians, Selecky adds. "LifeMasters' implementation of the LifeLink Monitoring solution is a valuable aid in enhancing this overall process," she says. "We want to offer our participants as many ways as possible to transmit data to LifeMasters. For those who are unable to transmit data via the IVR or the web, the LifeLink Monitoring solution is a good alternative. Besides having a technology that worked well for us, we chose LifeLink Monitoring due to its commitment to customer service and willingness to effectively integrate telemonitoring with our CHF program."

Meanwhile, American Healthways is also using RPM with a select group of its CHF patients, says Bob Stone, executive director of the Nashville, Tenn.-based

DM vendor. The firm has used the new technology for about a year and a half, he says. "We're using it for between 10 percent and 20 percent of our most unstable CHF patients," Stone tells *DM News*.

American Healthways is using RPM devices supplied by Philips Medical Systems that provide weight, blood pressure and pulse readings. The firm currently has about 2,000 units distributed to its CHF patients. The units are paid for under American Healthways' overall fee structure.

"We are using remote monitoring because with this population there is clear evidence that being on top of things like small amounts of weight change is critical in terms of being able to effectively intervene before unnecessary emergency room utilization or hospitalization is needed," Stone explains.

Because RPM is built into the DM program and is part of all of the CHF programs American Healthways is managing for its customers, the firm has no means by which to measure the effectiveness of the technology separately, Stone says.

"It's something we decided to do because we thought it was appropriate and is a significant contributor to positive results," Stone says. "We think it's terrific, and the patients love it. It's a wireless technology so they don't have to dial a phone."

Philips initially sends in home health people to set up the equipment and explain its use to people targeted for the technology, Stone says. When patients demonstrate extended periods of stable behavior, the equipment comes out. On average, patients use the remote monitors for about six months, according to Stone.

The firm endorses RPM for the financial and qualitative benefits it produces, Stone says. "It's cheaper than home visits, and because it's wireless it provides two benefits. You get the data without the patients having to do much. You don't have to rely on patients' self-reported data, which can introduce errors. Perhaps most importantly, since this is potentially a very acutely ill population, if we don't get any data on any given day, that gives us the opportunity to reach out to those patients to make sure there's not a serious problem. So there's a positive data feed when the data comes in, and there's a negative data feed in its absence. Did they just forget to set foot on the scale that morning, or did they have some serious compromising situation and are unconscious somewhere?"

CorSolutions Medical Inc. also is reportedly using RPM with some of its patients. Efforts by *DM News* to confirm this with the Buffalo Grove, Ill.-based DM vendor were unsuccessful.

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emerge in other healthcare arenas. "I don't expect it to come out of DM. I think there are other areas where initial remote patient monitoring will offer higher value. But the disease management market is so huge that there will be a tremendous amount of activity."

He also cautions DM providers not to get intoxicated by the sexiness of the technology and view RPM as an end in itself. Instead, he advises, it as a means to achieve an end. "The technology is the means. The end is really

behavior change," he says.

"Ultimately, the challenge is getting people to change their behavior and improve their health. Remote technology offers tremendous promise in being a leverage point and an important tool to achieve that end. But it's not the end in itself."

With that as a backdrop, he urges DM providers to learn more about RPM and to experiment with it. "This area is too big to ignore. It's a very complicated, very immature and fascinating

area with tremendous promise both for patients and [DM] companies. [It involves] a dramatic and significant change from current practice, so you have to start somewhere and do some pilots and experimenting and learning from what other folks are doing. Otherwise you'll find yourself like some people back in the early 1990s who said, "This Internet thing will never catch on."

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