

GETTING TO THE HEART OF CHF MANAGEMENT:

ONE MONTANA PROVIDER FINDS THE KEY



Billings Clinic in Billings, Montana

By Mitch Work, MPA, FHIMSS

Heart disease is one of the nation's most serious chronic diseases, affecting more than 19 million Americans and costing some \$213 billion annually in treatment and lost economic productivity costs. New, innovative monitoring and treatment approaches are beginning to show promising results.

Like a large number of patient care organizations across the country, the Billings Clinic integrated health system (which encompasses one inpatient hospital and eight medical clinics across Montana) has been looking for years for effective ways to treat and manage chronically ill patients. And, like a number of patient care organizations, Billings Clinic leaders had in the past made tentative attempts at addressing the problem, only to realize that ultimate success would require a more comprehensive approach.

“We had a heart failure program of sorts” for patients with congestive heart failure (CHF), recalls F. Douglas Carr, M.D., medical director, Education & System Initiatives, for the Billings Clinic organization. “We had a couple of nurses who worked with our electrophysiologist,” he says. But though some patients received devices such as implantable defibrillators through that initial program, it was typical of hospital- and clinic-based disease management programs that start—and stay—very small and tentative. At best, Carr says, 10 to 20% of potential hospitalizations for CHF heart failure were averted.

Still, based on some of the results from that first program, and based on a strong organizational commitment to addressing CHF and other chronic conditions at Billings Clinic, Carr and his colleagues went in search of a more comprehensive approach. The result? Using technology developed by a team of physicians and other clinicians, Billings Clinic has developed a program that has shown strong results in CHF management.

To date, over 500 patients have been enrolled in an intensive CHF monitoring and management project at Billings Clinic. Their health status is being monitored and managed remotely via a telephony and Internet-based program from Northfield, Illinois-based Pharos Innovations that uses the clinic's nurses to check in on patients who phone-in daily health information on their condition.

Reductions in CHF Readmissions Result in Big Savings

The way the program works is actually quite simple in terms of process, but has major implications for disease management innovation more generally. Facilitated by basic interactive voice response (IVR) technology requiring telephony or Internet access, program enrollees' call in their weight and other vital information every day by answering five prompted questions. The call generally takes about 90 seconds. Responses are automatically entered into a computer program that is driven by clinically derived algorithms developed by Pharos, which determine whether a clinical intervention is required. When patients phone in responses that put them into elevated risk categories, the system triggers prompts for the case managers who, in turn, telephone the patients and initiate a conversation about what is going on. Depending on what the patient's signs and symptoms indicate, the nurse case manager might either help the patients adjust their medications, or might schedule an appointment with his or her cardiologist.

As a result, the Billings Clinic Heart Failure Clinic has achieved a 59% reduction in hospitalization of CHF patients during the period of January 2006 through July 2007 (compared to their prior rates of rehospitalization). This equates to a total cost savings of \$3,020,480 (\$2,455,907 of which was a savings to the Medicare program).

And while health plan-based programs sometimes alienate physicians because of their different and overlapping demands, hospital- and clinic-established programs face their own built-in challenges, Carr readily admits. The biggest of these is often the lack of sustainable funding. Still, he believes, disease management programs run by clinicians and based out of direct patient care organizations have the best chance of success in terms of building and reinforcing the kinds of clinician-patient interactions that most directly benefit patients.

Using Remote Monitoring to reach CHF Patients in Rural Communities

"There certainly are a lot of patients within the organization's service area who could potentially benefit from this kind of approach to chronic care management," Carr says. Not only is

Montana's population slightly older than the national average (with about 15% of its population over 65, versus 12% nationwide), it has minority populations, especially a Native American population that suffers disproportionately from chronic illnesses like CHF." The Billings Clinic organization's geographically dispersed service area also speaks to the potential for telephony-based disease management to make a difference in CHF patients' lives.

"We really have an effective catchment area of almost 300 miles radius," Carr notes. "We are in south central Montana, and patients come to us for tertiary care, but also even primary care, sometimes from as far as 150 to 200 miles. And we're in the eastern two-thirds of Montana, some of northern Wyoming, and western North Dakota." And, he notes, "If you put a map of Montana over the eastern U.S., it would extend from Washington, D.C. to Chicago. So despite the fact that the Billings Clinic has clinic sites 150 miles east and 150 miles west of its hub in Billings, transportation is always an issue for patients, and a significant reason that Carr and his colleagues have invested in a program that uses a simple, in-place technology for remote patient monitoring. Since almost all patients either already have a telephone or cell phone or access to them; there is no need for placing, maintaining, and retrieving special devices."

CMS Pilot Demonstration for Innovative Chronic Care

Another main reason that the organization has been moving forward on coordinating care for patients with chronic illnesses has been Billings Clinic's participation in an important federal initiative, the Centers for Medicare and Medicaid (CMS) program called the Medicare Physician Group Practice (PGP) Demonstration. Under the demonstration pilot, which began in April 2005, physician groups participating in the program continue to be paid on a fee-for-service basis, but also have the opportunity to share in program cost savings generated from enhancements in care management. Ten physician groups, including Billings Clinic, as well as such pioneer medical organizations as Dartmouth-Hitchcock Clinic, Marshfield Clinic, and Park Nicollet Health Services, are participating in the program. One of the goals of the program has been to encourage flexibility among physician organizations to redesign care processes around chronic illnesses and complex care needs and to facilitate innovations that can both improve the care of chronically ill patients and at the same time save the federal program money.

Key Success Factors

Several elements of the Billings Clinic program have been critical to its success to date, says Carr. First and foremost was a strong and sustained commitment to delivering innovative CHF treatment programs. That commitment, Carr says, has come from executive management and clinician leaders at the Billings Clinic organization. Similarly important has been a strategic investment in the kind of information technology the organization's clinician leaders decided early on was crucial to program effectiveness.

How do you figure this out, and not only pay for it, but incentivize people to do it?"

Indeed, one of the reasons that Carr and his colleagues went with the vendor they did was a difference they perceived in strategic emphasis. "I saw a lot of vendors demonstrating their products at conferences," Carr recalls, "and many of them were emphasizing the device. It was almost as though there was all this enthusiasm over devices, and they forgot the patient and the process. Pharos said, we have a tool, and we want to make sure you can intervene successfully with the patient." Working closely with their vendor, Carr and his colleagues were able to ensure that their software and telephony tool was integrated into the care management process for their program.

In fact, says Pharos CEO Randy Williams, M.D., who has spent years as a practicing cardiologist and whose leadership in CHF program development led to the launching of the Pharos solution, "The industry would benefit from a focus on process redesign centered around patient and care giver needs, rather than on the device. We believe that by constantly focusing on the process of care management and on the needs of our customers and their patients, we will produce the biggest gains no matter what technology we implement."

The Challenge of Work Flow Process and Staff Behavior Change

One specific challenge had to do with the classic problem of labor costs and shift coverage among nurses. "We realized that we needed to make nurses available seven days a week—not 24/7, but nevertheless, every day of the week—in order to be effective," Carr says. "And we said, in order to make this cost-effective, we're going to use this technology. Patients call in between 4 A.M. and noon each day," and nurse coverage needs to be adequate for several hours a day, he notes. "Technology is a tool, it's a leverage point, and it allows nurses to see a lot more patients and to focus in on those patients who need intervention," Carr says. In fact, the Billings program has grown to over 550 patients since its inception.

Both specialist and primary care physician and nurse buy-in were critical as well, of course. For nurses, Carr says, it required a cultural change to accept the need to use a telephony-based system in order to be optimally effective in monitoring chronically ill patients and intervening on behalf of those at increased risk. At first, nurses felt some psychological resistance, but soon realized the tremendous gains in effectiveness that a technology-supported program could produce, he says.

In fact, Carr says, "Cardiologists were more embracing of this initially than were nurses or primary care physicians. I'm an internist by training," he explains, "and I went back to my own department and told them, this can work." And I think they were concerned by the kinds of disease management programs run by health plans in the past, and those are nothing but a nuisance." But once the program was fully developed and launched, it became clear to both primary care and specialist physicians and to nurses that it would be highly effective.

Future Directions: Expanding Beyond CHF

Indeed, the effectiveness of the CHF program so far—the organization has saved the Medicare program nearly \$2.5 million in averted rehospitalizations and the clinician executives at Billings Clinic are now busy developing programs for other disease states such as COPD—have prompted Billings' leaders to ask some broader questions.

"One of the lessons learned," says Carr, "is that when you start looking at populations, and start to become accountable for all of their care, you can really change the whole healthcare paradigm. It just changes your perspective, and really allows you the freedom to create patient-centric programs that benefit patients, and at the same time, you create significant cost savings. The problem is, cost savings to whom? How do you figure this out and not only pay for it, but incentivize people to do it?" The future of the Billings Clinic CHF program is still evolving, but it's already clear that its effectiveness to date is illustrating the possibilities inherent in disease management innovation. **PSQH**

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