Disease Management Advisor™

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Grantees leverage the value of community health workers

Initiative shines spotlight on real-world models for diabetes care in diverse populations

Diabetes is such a complicated disease that, even in the best of circumstances, providers often struggle to meet patient needs. This task becomes much more difficult in disadvantaged populations in which more barriers, (e.g., financial hardship and language difficulties) compromise patient care. This is why the Princeton, NJ–based Robert Wood Johnson Foundation is funding its Diabetes Initiative, a program involving 14 demonstration projects around the country aimed at identifying approaches to deliver effective and affordable care in real-world settings.

In fact, although many of the demonstration sites continue interventions developed as part of the project, the overall initiative is now shifting its emphasis toward disseminating the tools, strategies, and lessons that investigators at the various sites have found most valuable over the course of the five-year venture.

Inside This Month...

- ***A DM model appeals to physicians.*** *DM providers and physicians do not always see eye-to-eye when it comes to patient care, but a unique, hospital-funded effort in Middlesex County, CT, is getting high marks for the smooth working relationship it has forged between the nurse managers who drive the DM interventions and the providers who send them patients....137*
- ***New-age PHRs aim to uncover opportunities for quality improvement.*** *Health plans have been scrutinizing administrative data for years, but thus far have not offered such analysis to patients or providers. Doing so is just part of the package that will soon be made available to the customers of Manhattan, NY–based ActiveHealth Management through Web-based personal health records. The approach is designed to get patients more involved in their own care, facilitating analysis of not just claims data, but patient-reported data as well 140*
- ***Health plans and pharmaceutical companies develop adherence strategies.*** *With only about half of all prescriptions being taken as directed, both health plans and pharmaceutical companies are getting serious about developing strategies to keep patients on track with their medications. What they're finding is that it's a complicated problem requiring patient-centric solutions....143*

A broad focus on self-management

The Diabetes Initiative is made up of two core programs: one that focuses on advancing self-management skills and another that emphasizes building community supports for diabetes care. Developers decided to concentrate on these areas because, although both elements are cited as being essential to quality care in the Chronic Care Model[1], they felt that these aspects of care haven't received the kind of attention that they should in clinical settings.

"There has been more attention given to clinical algorithms, work processes, and information systems," says **Edwin Fisher, PhD,** national program director of the Diabetes Initiative. "So part of our reason for being was to demonstrate how self-management support and community resources can be developed and promoted with a good, important model."

Looking at the programs more broadly, Fisher stresses that both actually focus on self-management. What distinguishes the two programs is that whereas one focuses on advancing self-management in the

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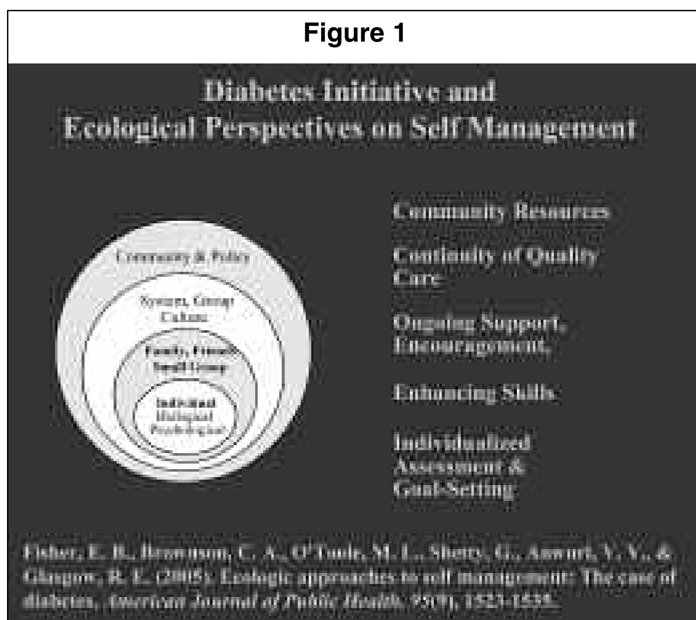
primary care setting, the other is focused on providing such support in community settings. "The two programs take somewhat different slants on self-management, but one of the interesting things we have seen over the past four or five years is that the grantees for each program have tended to broaden their perspective so that it is harder to tell now what is a primary care program and what is a community-based program," says Fisher.

This gradual synthesis of the two programs is, in many ways, in line with the initiative's belief that self-management is affected by many factors, all of which have some influence on one another. It's what many experts in the public heath field refer to as "ecological perspectives" (see **Figure 1** below).

"It seems that a strong emphasis on clinical medicine is to sort of seek a rational, necessary, and sufficient cause for a problem, and then treat it in a way that does away with the program. And one of the principles of public health is that there are no magic bullets," says Fisher. "We are best able to promote self-management if we develop influences and supports and encouragements at multiple ecological levels, rather than treating individuals as if they are responsible for their own behavior in an absolute sense."

Figure 1



The grantees were selected to participate in the initiative based on a number of criteria, including whether they had

- a track record of implementing these types or programs well
- an innovative idea
- a grasp on self-management
- a plan for reaching a high-priority audience (e.g., ethnic minorities)

Additionally, initiative planners wanted to achieve geographic balance with the chosen sites, and they aimed to reach a diverse population base.

Consequently, the selected sites are spread across the country, with some serving largely Latino, African American, or American Indian populations—groups in which diabetes is highly prevalent (see **Figure 2** on p. 135).

Experience yields insight

Although the sites have each developed their own approaches geared to the unique characteristics of the populations they serve, their collective experience has yielded insight useful to just about any diabetes DM effort. For example, in the early stages of the initiative, many of the grantees began to report that their attempts to reach patients with education and support were often unsuccessful, because their patients appeared to be disinterested, or, in some cases, even listless.

The association between diabetes and depression is well-documented, so finding patients who were dispirited was no surprise. However, grantees challenged the prevailing view that you must treat the depression before moving on to issues related to self-management. In fact, they found problem-solving therapy and other approaches that are used for depression to be similar to the types of strategies employed in diabetes self-management.

"We went from seeing depression and diabetes as comorbidities of each other that are separate and needing treatment in sequence to realizing that they could be treated together," says Fisher. "And both of them entailed approaches that stress behavioral, edu-

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Figure 2

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cational, and psychological perspectives, as well as medication and medical perspectives."

Further, Fisher says depression is clearly not the only behavioral comorbidity of diabetes. Related difficulties (e.g., anxiety, hostility, and stress) are also problematic in this population, but they are also responsive to the same behavioral and medical interventions as depression. "Increasingly, we are thinking in terms of healthy coping and negative emotion including but not limited to depression," he adds.

CHWs offer high value

Investigators also learned the value of using community health workers (CHW)—especially in disadvantaged populations. Interventions are particularly effective when CHWs are recruited from within the targeted population, Fisher says. "The CHW helps members of the population trust and understand the provider system better, and the CHW also helps the provider system understand and work more effectively with the population it is failing to reach—so one real utility of the CHW is linkage."

Additionally, CHWs can help people to learn how to implement behaviors within the context of their own environments and can be a source of ongoing encouragement. "All of the meta-analyses—not only of diabetes but of patient education in general—point to the importance of ongoing support, ongoing intervention, and reminders as being critical to sustained behavior change," says Fisher. "And the CHW can provide that kind of ongoing support—both checking in with people every couple of months to make sure they don't fall through the cracks and also being readily available to people so if they have a question that comes up, they have someone who they can reach readily."

Campesinos Sin Fronteras in Somerton, AZ, is one grantee that has fully acted upon both the importance of dealing with negative emotions and leveraging the value of community health workers. The director of the program, which serves a large number of migrant workers along the U.S.–Mexican border, is **Emma Torres, BSW,** a pioneer in the use of CHWs, or promotoras. She has been using the approach to address a variety of social and health problems in the community for 20 years. However, with grant money from the Diabetes Initiative, she is building a new infrastructure to the promotora model aimed at improving care for the Hispanic population affected by the disease.

Promotoras provide many services

In their attempts to identify barriers to diabetes care, the promotoras quickly recognized mental health as a significant issue that needed to be dealt with for any quality improvement efforts to succeed. At first, the promotoras attempted to bring in professional help. However, when they were unable to find an appropriate person from the community, they decided to build capacity from within their program by weaving education and input regarding mental health into their existing diabetes education classes.

"Once we incorporated this type of self-help—motivation discussions, talk about depression and self-esteem, and other issues—[the patients] didn't want to leave the class," says Torres. "They were comforted and felt as though they had finally found a place where

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they could address some of these issues." Consequently, the promotoras established support groups so that these discussions could continue.

In addition to establishing support groups, the promotoras looked across the border for a mental health expert to present to patients who needed extra emotional support. They found and brought in a psychiatrist who was actually a diabetic himself. "The first session we had specifically for people with depression and negative emotions and their relationship with diabetes, and we had 65 or 70 people attend," says Torres. "There was such a catharsis of emotions from these people, many of whom had never talked about their feelings."

The seminar was so well-received that the promotoras set up additional presentations. They also compiled resources they could use to address mental health in their diverse population of diabetic patients. "The promotoras have a very clear understanding about their role—they are a facilitator," says Torres. "The people know them and trust them, but they are not medical professionals, and they know they are not the ones to provide medical advice or [clinical] advice on mental health."

Torres has data showing that the intervention has produced significant improvements in health and quality of life, but she emphasizes that the effect has been especially evident in individual testimonies from the patients involved. "We have people who would not go out of their homes at all for anything, and now they are going back to work. We have people who were bedridden and in pain all the time . . . but they are now walking," she says. "Definitely, it has made a difference."

Physician buy-in, teamwork essential

Another site, Gateway Community Health Center, Inc., in Laredo, TX, is using promotoras to make up for the severe lack of certified diabetes educators in the area. "We have close to 3,000 patients diagnosed with diabetes in our center population," says **Lourdes Rangel,** Gateway's director of special projects. "We needed to come up with an innovative way to provide these patients with diabetes self-management information so they could learn more about their disease and how to manage it."

Gateway used the grant funding to hire promotoras and team them up with the medical providers in the center's two clinics. The promotoras then received more than 300 hours of training on diabetes self-management, how to document in the medical records, and how to communicate with the medical providers and support staff.

Under the model, physicians refer patients to the promotoras for self-management education. The promotoras then work with each patient on a weekly basis for five and a half months. "In a 10-session course, the patients come in and learn about the importance of taking their medications, checking their eyes once a year, and going for their foot exams," says Rangel. "The promotoras set up goals with them and all of this is reported to the medical providers so that when the patients come to see their providers, the providers can support what the promotora is doing."

Given that the promotoras were all recruited from within the population served by the center, they have had no difficulty getting patient buy-in to the approach, says Rangel. A much bigger problem, at least initially, was getting some of the medical providers to believe in the intervention.

"They couldn't see how a lay person—a promotora—would be able to teach the patients. So when we started the project we got all the medical providers together and asked them to tell the promotoras what they wanted them to teach their patients," says Rangel.

Some of the providers remained skeptical of the approach for a while, but the results of the intervention ultimately won them over. "When they started seeing the numbers in black and white—how their patients were changing and their lifestyles were improving—that is when we got the buy-in," says Rangel.

New thinking is needed

With the demonstration sites now finishing their initiative-related work, the national office is focused on analyzing the results and disseminating the tools and lessons learned from the projects. "There is a lot of research that shows that self-management is important, but most of that research has been done in university settings and at academic medical centers," says Fisher. "Our mission is to show that self-management can be done in real-world settings, so we want to provide people with strong models, and I think our grantees do that." ❖

Reference

1. Wagner EH. "Chronic Disease Management: What will it take to improve care for chronic illness?" *Effective Clinical Practice* 1998;1:2-4.

Effort attracts kudos, but reimbursement remains an issue

Hospital offers DM-style programs that physicians embrace

It is no secret that one of the biggest barriers to effective DM is physician resistance. For example, providers often resent recommendations from a third-party vendor. Also, sometimes DM programs come with mounds of onerous paperwork that can take away from time spent on patient care. Ideally, however, DM programs should lighten the load on physicians by helping them care for some of their most complex and time-consuming patients.

The trick is coming up with a mission and structure that works for everyone involved. One organization that has made impressive strides toward achieving this delicate balance is Integrated Resources for the Middlesex Area, LLC (IRMA), a group based in Middlesex County, CT, that provides clinical management services for the 300 physicians on staff at Middlesex Hospital.

For the past seven years, IRMA has been delivering one-on-one chronic care management services to some of the sickest patients in its service area. The approach has successfully improved outcomes and reduced unnecessary utilization. Unfortunately, many of these success stories have come at the financial expense of the hospital which is, ironically, funding IRMA. The hospital has lost money from admissions prevented by the services that IRMA provides.

Although the financials are complicated, the effort has attracted kudos for the smooth working relationship it has established with area physicians, and the professionals involved believe that relationship is a primary underpinning of IRMA's success and longevity.

Referral process offers advantages

The difference between IRMA and the type of DM program that you might find from a DM vendor begins with the way patients are identified for intervention. Whereas the DM vendor typically has access to a database that contains information on an entire population that it can use for case finding, IRMA most often relies on physicians for referrals. The lack of data analysis could certainly be viewed as a weakness, but the physician-referral process offers important advantages as well.

"The physicians are heavily involved and invested in what we are doing," says **Katherine Schneider, MD,** IRMA's chief medical officer and a practicing family physician who refers patients into the program. "It is not a parallel process. It is really integrated into the physicians' care, so we have much better effectiveness and much better enrollment when the physicians are telling the patients they are going to refer them into the program, and that they will benefit from it. It helps us achieve optimal health outcomes"

A second strength of the program is that the referring physicians all know IRMA's care managers by face and by name, emphasizes Schneider. Consequently, the care managers are viewed almost as an extension of the physicians' office staff. "It is a very different model than a telephonic, parallel process to the care going on between the patient and the physician," she adds.

Care managers have flexibility

IRMA's care management activities are now centralized at a new Center for Chronic Care Management, which is staffed by an administrator who handles all patient intake procedures, as well as several nurse/care managers who work one-on-one with patients and families who have been referred to the program. Currently, the center offers programs focused on diabetes, asthma, smoking cessation, and HF. Each program is administered by a care manager who specializes in the specific disease or issue being targeted.

For example, IRMA's asthma care manager, **Veronica Mansfield, RN, APRN, BC,** is a pediatric nurse practitioner and a certified asthma educator. Further, she has the additional responsibility of overseeing the Center.

She points out that although all of the programs follow national guidelines, the care managers have considerable flexibility in determining how they can optimally work with a patient. "Depending on what the patient's needs are, we do home visits or they come to our chronic care center," she says. "We also do some telephonic [follow-up], but it is not all telephonic. For some very complex patients, we will go to their physician's office with them and help them."

HF program targets inpatients

Although most of the referrals come directly from physicians, care managers also hear about patients from school nurses or from the individuals themselves. Also, especially in the case of HF patients, the program gets a large number of referrals from discharge planners at the hospital.

"With HF, we have targeted inpatients as our low-hanging fruit, and we want to do at least a brief intervention with them," says Schneider. This can be as minimal as a brief phone call following discharge or—for patients identified as needing more support—a more comprehensive series of interactions with a care manager.

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DM-style programs

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Typically, the care manager will review clinical information on potential candidates for the program before even making contact. He or she will then visit patients in the hospital prior to discharge to verify their eligibility for the program and to assess whether they would benefit from the intervention.

Model relies on three-way partnership

Once care managers have made contact with a candidate for any of the programs offered through the center, the patient must sign a consent form allowing the care managers to communicate directly with his or her physician in order to participate in the program. "If they don't [provide this consent], we can't work with them because this is a three-way partnership; that is the model—patient, doctor, and care manager all working together," says Schneider. "If we can't share information, then the model doesn't work."

Patients need not have any particular type of payer. In fact, many of the patients served through the center are uninsured.

However, candidates must be patients of one of the physicians on staff at the hospital. "We are not getting funded by anyone except the hospital essentially at this point," says Schneider. "It is a service to our physicians, so we really haven't been overwhelmed [with patients]."

Care managers stratify patients

Although the center has never had to turn patients away, the staff have become backlogged on occasion. However, Schneider emphasizes that care managers are able to manage the workload by stratifying patients according to the intensity of support that they need. For example, upon initial assessment, the care manager may determine that a diabetic patient just needs to be referred into a diabetes education class and is otherwise well-managed.

It is also not uncommon for care managers to see patients with mild, intermittent asthma who only require a one-hour, face-to-face intervention. This leaves time for care managers to provide more support and follow-up to patients in need of higher-intensity care.

The target population for each care manager is 80 patients, so the center typically interacts with 200–300 patients in any given year. The various programs offered through the center—which have been phased in gradually since 1999—have served approximately 2,500 patients thus far.

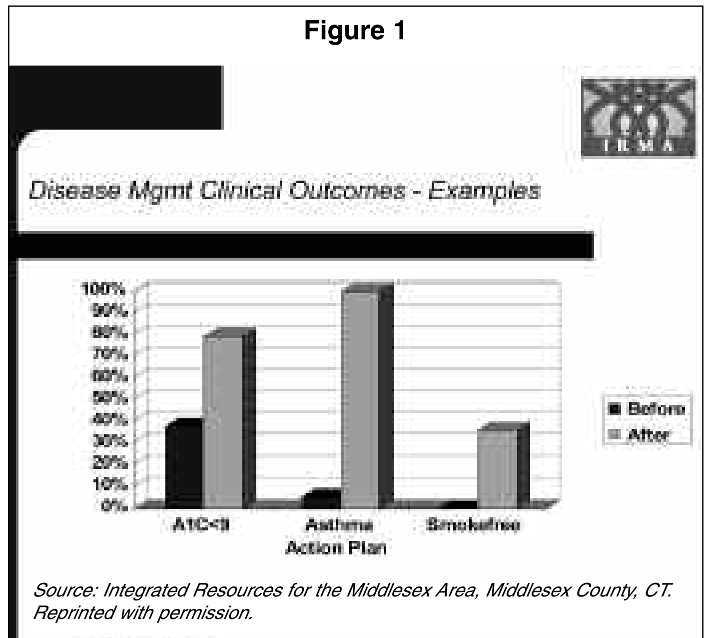


Figure 1

Source: Integrated Resources for the Middlesex Area, Middlesex County, CT. Reprinted with permission.

Patient education is critical

All of the programs are carried out according to national guidelines. Consequently, a patient's initial meeting with a care manager will include a detailed assessment that is based on the relevant recommendations.

Typically, this includes a thorough patient history including use of medications, a detailed review of symptoms, and discussion of any problems or barriers that are interfering with patient compliance.

Armed with a complete understanding of the patient's needs, the care manager will then establish what steps need to take place next.

This often includes at least some patient education. In fact, this is a particularly important aspect of the asthma program, in which most of the patients are children.

"We really go through in detail what the disease is all about, how we are going to manage it, and what things the family can do for the environment in the home," explains Mansfield. Additionally, she will make sure that children understand what symptoms they need to tell their parents or their teacher about, as well as how to use monitoring tools (e.g., a peak flow meter).

Care managers tackle barriers

Care managers make it a priority to resolve any barriers or other issues interfering with a patient's plan of care. In many cases, a key underlying barrier to compliance is financial.

"Unfortunately, many times people are not taking their medications because they have no insurance or a limited amount of insurance," says Mansfield. In these

cases, the care manager will attempt to link the family with a medication assistance program.

Another problem that crops up frequently is depression. For this reason, depression screening is a key component of the initial assessment for most of the adult patients. "We found that this is one of the biggest barriers to people taking their medications correctly or even complying with their whole management plan," says Mansfield. In these cases, a referral to behavioral health will be one of the care manager's first steps.

Care managers communicate with physicians by whatever means is necessary, stresses Schneider. For example, by protocol the physicians receive standardized letters upon a patient's initial assessment and for regular updates.

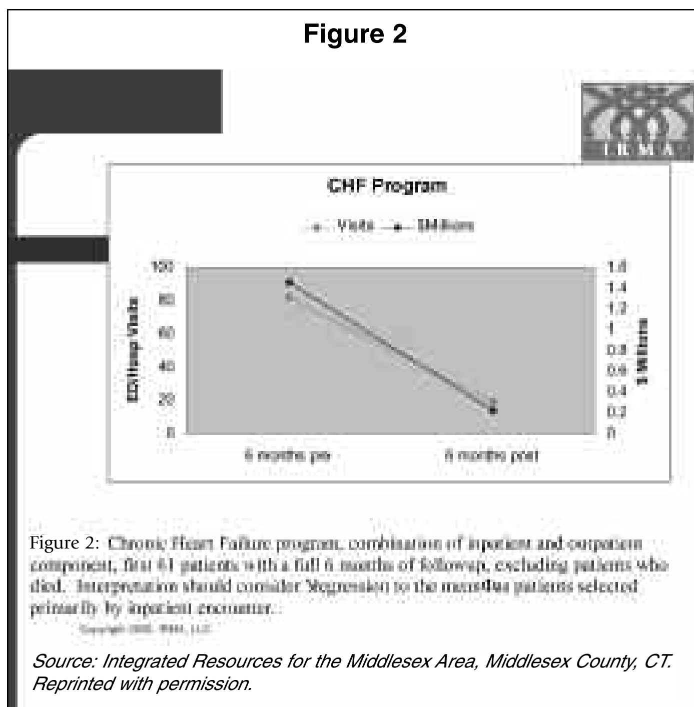
"When a patient meets with a care manager, he or she receives a self-management report card that lists our evidence-based outcomes and goals," Schneider says . There are three copies of the report card—one [each] for the patient, provider, and care manager.

For a more urgent matter, care managers call the physician's office.

For example, nurses may recommend a medication change or they may have other recommendations based upon a problem that they have uncovered in their dealings with a patient.

"These are experienced nurses and nurse practitioners who are staffing these programs, and so the physicians generally respect those recommendations," says Schneider. "As a physician, they save me time because all the ducks are in a row when the patient comes in, and the patient may come in for an office visit in a more proactive manner, rather than waiting until there is a train-wreck situation that I have to deal with."

Figure 2



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Outcomes show promise

Given that IRMA does not have access to total population data, it is difficult to measure outcomes with the kind of rigor that researchers like to see.

Nonetheless, the organization does look at both clinical and financial outcomes with respect to the patients who have been referred to the center.

For example, it has data showing significant improvements in HbA1c levels when readings from six months before enrollment are compared with readings at six months postenrollment (see **Figure 1** on p. 138).

Similarly, data show a dramatic improvement in asthma patients who have an asthma action plan at one year postenrollment and in patients enrolled in the smoking cessation program who have reached their quit date.

Additionally, the CHF program has produced clear reductions in expenditures, although IRMA makes it clear that regression to the mean needs to be considered in this case, because most of the patients were identified during a hospital admission (see **Figure 2** below at left).

Future plans

The financial picture is not clear, because the hospital spends more than $500,000 per year to support these DM programs and is undoubtedly losing money on at least some of the reduced utilization that the program produces.

However, in cases in which the program has prevented hospitalization of uninsured patients, the hospital clearly sees some financial benefit because it would not have received reimbursement for these hospitalizations.

Further, as a nonprofit organization, the hospital needs to show that it offers programs that benefit the community, and Schneider points out that the programs offered through IRMA have won numerous awards in this regard.

Where the program goes in the future will depend heavily on whether health policy-makers can come up with incentive structures that reward DM programs or the clinical improvements they produce.

"I think it is going to really depend on where the world goes in reimbursement for these services," says Schneider. "If the patient needs could dictate, we could expand quite a bit and have a great effect." ❖

Web-based tool designed to reach more people with actionable recommendations

New-age PHR comes with decision-support, multiple opportunities for DM

Healthcare organizations have long analyzed claims data to identify DM cases, and to monitor and predict costs. But rarely is this information made available to providers or patients. However, New York–based ActiveHealth Management has just unveiled a service that will not only make this information available to patients and—with their permission—providers, but it will also provide feedback on the information in the form of actionable steps to address identified problems or gaps in care.

This new approach, which will be available early in 2007, will be offered via personal health records (PHR), Web-based repositories of healthcare information that will be continually analyzed by a sophisticated software system to unearth opportunities for quality improvement. The system will then relay these recommendations to individual patients through their own secure PHRs. "It's the notion of really taking what is certainly valuable as a repository and what is valuable as a health risk assessment vehicle to something that is far more dynamic, much more explicit, and, frankly, much more individualized with regards to the particular needs of the individual patient," says **Lonny Reisman, MD,** CEO at ActiveHealth Management.

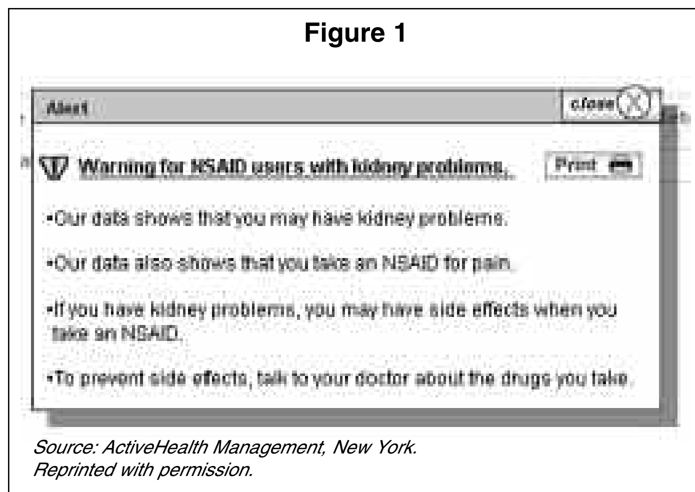
Further, even before the first-generation PHR has been unveiled, work has already begun on the next version—an enhanced PHR that developers anticipate will fully integrate with the company's DM offerings, providing new capabilities to DM nurses and their patients.

An interactive tool

The PHR product, like all of ActiveHealth Management's services, is being driven by the company's patented CareEngine system, a computerized decision-support tool that continually applies hundreds of thousands of literature-derived rules to clinical and administrative data that have been submitted for analysis. In the case of the PHR, the data will not only include claims, pharmacy data, and in some cases lab results, but also any information that the individual has self-entered into his or her PHR. For example, patients may enter their own height and weight, family history, and any over-the-counter medicines they take.

"As an inherent part of the PHR, there is a health risk assessment, which will not only have typical questions about health status and lifestyle, but based on answers, it will also introduce branching logic, which will hopefully motivate the member to get more data that would further supplement the substrate of data that we work with," says Reisman.

Figure 1



Source: ActiveHealth Management, New York. Reprinted with permission.

Patient engagement drives compliance

When the CareEngine analysis identifies a potential problem with some aspect of a person's health, the system will automatically send a message via e-mail to the individual, advising the patient to check his or her secure PHR, where the specific nature of the trouble is explained. The individual may be due for a screening test (e.g., a colonoscopy), or the CareEngine may have uncovered a potential danger with one of the over-the-counter drugs the person is taking (see **Figure 1** above).

A wide range of subjects can be raised to patients through the PHR. ActiveHealth believes that by bringing such matters to the attention of the individual, it will be able to boost compliance, thereby improving care and even reducing utilization. "What we are finding is that when the member is apprised of the issues that the CareEngine identifies, he [or she] is motivated to embrace those issues and talk about them with his [or her] doctor," says Reisman. "And to the extent which we are right—which we hope to be on most occasions—we see higher rates of implementation of the suggestions that we make about diagnostic, therapeutic, preventive, and follow-up issues."

Physicians are in the loop

Reisman stresses that by no means are providers kept out of the loop. To the contrary, the only health plans or employer groups that can avail themselves of the PHR product are those that also use ActiveHealth's CareEngine physician messaging services. Through these services, providers are issued "care considerations" or "alerts" whenever the system

uncovers a potential problem involving patient care. With PHR capability, however, providers may also have access to additional patient-reported information. "With the patient's explicit permission, we now have a vehicle through which we can give providers the totality of the member's data as appropriate," says Reisman.

The company has provided two ways for members to get PHR information to their providers, says **Arman Ozgun,** managing partner of Netsoft USA, Inc., which worked with ActiveHealth Management to develop the PHR. "There is a section in the PHR where members can log in and define their provider's information, and they can grant their provider read-only access to the PHR through the use of secure information that is provided to the physician," he says. Alternatively, members can print out information from the PHR and bring it to their physician visits. "For example, there is a 'health summary' section they can print out, which basically includes all diagnoses, conditions, procedures, and medications they are taking," adds Ozgun (see **Figure 2** at right).

Another feature that has been built into the PHR is the automatic generation of suggested questions that the patient can ask his physician during scheduled visits. The questions pertain to the patient's specific diagnoses, medicines, lab results, symptoms, or other data populating the PHR (see **Figure 3** on p. 142).

Tool facilitates far-reaching DM

Although conventional wisdom suggests that physicians might balk at receiving computer-generated guidance on patient care, Reisman says reception from the provider community has been enthusiastic. "A big reason this appeals to physicians is because not infrequently the issues we identify don't reflect physician error, but rather noncompliance on the part of the member," he says, noting that patients often don't follow physician recommendations to get screening tests, fill prescriptions, or make changes in lifestyle. "Those issues come up frequently, and physicians don't have a lot of time to spend with individual members. To the extent that there is vehicle like the PHR that collaboratively supports the issues they have identified for the member appeals to them very much."

Additionally, Reisman says the PHR will enable healthcare organizations to reach out to far greater numbers of members with DM-style support. For example, he notes that there are people with significant medical concerns who fall short of meeting the risk criteria for formal DM services. "These various technologies allow us to touch more people, touch them more efficiently, and, hopefully, [touch people] across the entire continuum—ranging from people who are well to people who are catastrophically ill," says Reisman.

Developers want more opportunities

At this time, ActiveHealth Management has two fundamental goals for the PHR. First, the company wants to enhance compliance with the recommendations identified by the CareEngine. "We have found that by engaging the member, you can improve the overall compliance . . . by about 20%," says Reisman. "Part of that is helping the member understand the significance of the issues, and part of it is a result of

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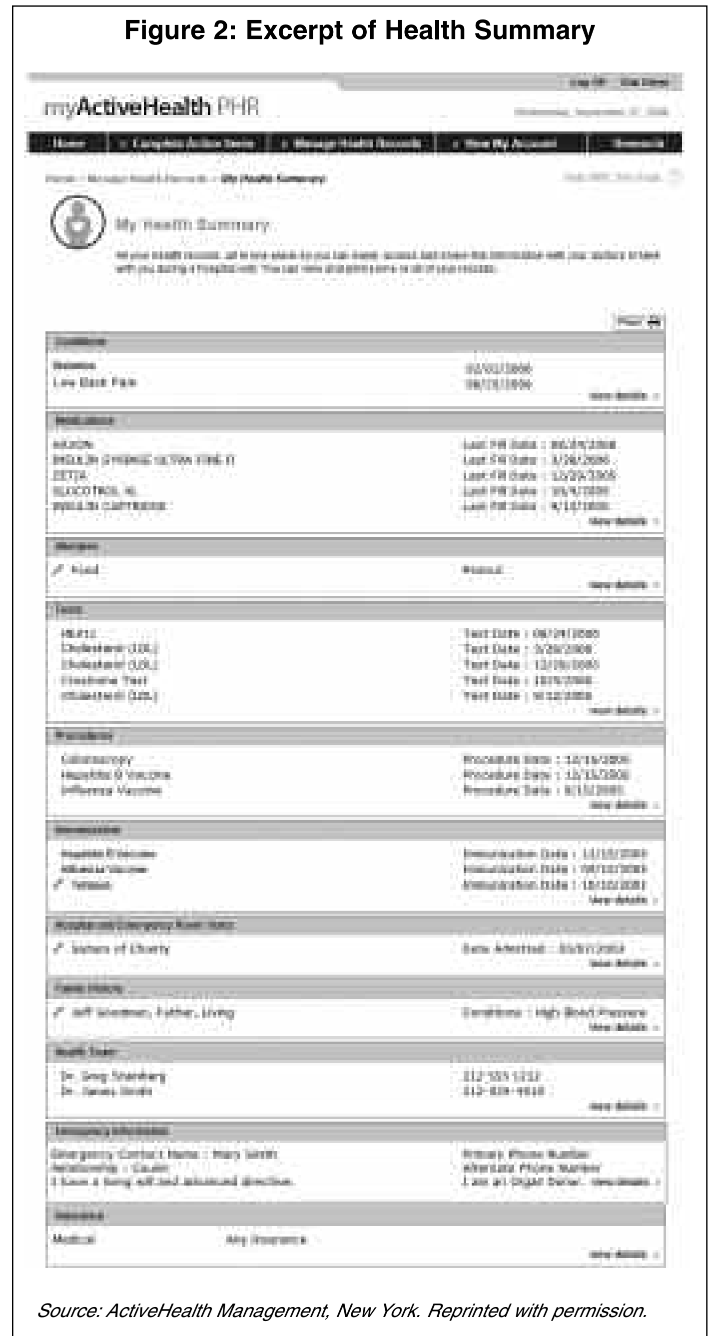
Figure 2: Excerpt of Health Summary



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New-age PHR

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them reminding the doctor.

They are not coming in with a stack of information off the Internet. This is information that is specific to them."

Second, by having a larger body of data to analyze, the company anticipates that it will be able generate additional opportunities for improvement. The rules that the CareEngine uses to perform its analyses have been expanded to reflect the new data streams that will be available through the PHRs, and developers anticipate that the advice generated will continually increase as the rules are updated with new evidence-based research.

Future possibilities

The first PHRs will be implemented in February 2007, but work has already begun on future enhancements. Among other ambitions, the company intends to make use of biometric devices so that the CareEngine has access to even more clinical data about patients.

Further, the company plans to fully integrate its nurse-driven DM programs with the PHR so it can be populated by care plans and other DM-program content. Additionally, the PHR may ultimately serve as a forum for nurse-patient interactions.

Also, the company is already in discussions with large employers about setting up kiosks in workplaces so employees can log into their PHRs at work, possibly alongside an on-site nutritionist or nurse to help them sort through the information.

"As employers think about employee wellness, preventive programs, and worksite injuries, we are talking about using the PHR as a technology platform for them," says Reisman. "And maybe we could even enhance the data through screening activities at the employer site." ❖

Figure 3

myActiveHealth PHR

My Medications/Supplements

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Editor's note: For more information about ActiveHealth Management, visit the company's Web site at www.activehealthmanagement.com.

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Patient-centric strategies focus on tailored messaging and education

Pharmaceutical companies and health plans have a shared interest in boosting medication adherence

Studies suggest that only half of the prescriptions filled each year are actually taken correctly. It's a huge problem especially among chronically ill patients who risk serious complications, hospital admissions, and even death when they fail to take their drugs as prescribed. And yet patient noncompliance persists year after year, costing the country an estimated $45 billion in hospital and nursing home admissions and leading to 125,000 deaths.

Numerous factors play a role in noncompliance, which is precisely why it is such a difficult issue to address. However, with so much as stake, healthcare organizations are making headway with strategies that help them identify cases of noncompliance so they can intervene at an early stage.

Additionally, pharmaceutical companies—which lose an estimated $30 billion annually from noncompliance—are having success tackling the problem by offering new resources designed to address individual patient concerns and needs.

Focus on customization

A new report on patient adherence prepared by Cutting Edge Information, a Durham, NC–based research and consulting firm, suggests that determining the underlying reasons or barriers behind noncompliance is just a first step in resolving the problem.

Amanda Zuniga[1], a research analyst and the lead author of the report, stresses that organizations need to also find out what each patient's needs are and then cater to those needs.

"For example, a patient might need to know exactly what causes hypertension, and not only what the drug can do for them," she says. Other patients might want lifestyle advice (e.g., guidance on appropriate exercise regimens) or even access to support groups where they can discuss their condition with other patients.

Providing such support is important within the context of any DM or adherence effort because it helps to achieve patient buy-in, adds Zuniga. However, it does require organizations or providers to conduct surveys or otherwise gather information that goes beyond just clinical and demographic data.

For example it is critical to know how patients prefer to receive communications. "We found that older adults tend to prefer to receive printed materials, whereas younger audiences prefer e-mail and other Internet-based communications," says Zuniga.

Keep the dialogue going

The report also outlines another adherence strategy—establishing regular milestones for patients as a method for keeping them motivated to stay on track. For example, some pharmaceutical companies regularly send patients educational information in the form of refrigerator magnets or guides along with surveys to fill out. When the patients complete and return the surveys, they then receive something else in return (e.g., a recipe booklet). Other programs may send certificates when patients complete the initial steps of an adherence or DM program. They continually look for ways to keep the dialogue going with patients.

"Ideally, you will have some sort of mechanism in place through which you can make improvements in the program or at least respond to patient criticism, feedback, or ideas," says **Eric Bolesh,** research team leader at Cutting Edge Information.

Some programs collect this kind of information through focus groups or follow-up calls with patients. However, one of the most effective ways to both collect patient input and respond to immediate questions is by setting up a call center.

"When you have that kind of infrastructure in place, it allows program leadership to go back and listen to call recordings or to read call reports and see what people are saying," says Bolesh. Such a process can help administrators quickly zero in on problem areas and make program improvements.

MTM program facilitates communication

San Francisco–based Blue Shield of California is taking steps to facilitate the pharmacist-patient encounter in its new Medication Therapy Management (MTM) program, now available to a subgroup of Medicare Part D members. Through this program, clinical pharmacists are available to help members manage their medications, provide guidance on usage, and answer any questions the member may have.

"We leave it up to [members] to decide how frequently they would like their telephone consultations," explains **Dawn Becker-Ellison, PharmD,** coordinator of the MTM program.

The approach has been particularly helpful in cases in which patients have been hospitalized for complications and then discharged on a new medication regimen. Patients like being able to review

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Medication adherence

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their new medications with a pharmacist, stresses Becker-Ellison.

Also, patients are calling in more often with concerns about how they can best manage their pharmacy costs—a critical factor with adherence. Sometimes the pharmacist can suggest generic alternatives or other changes that may reduce the complexity or cost of a drug regimen. "Our pharmacists have a process for contacting physicians to ask about a potential therapy change," says Becker-Ellison.

Stress member and physician messaging

Another intervention that the MTM program employs is being carried out with the assistance of Resolution Health, Inc. (RHI), a DM analytics and communications company based in Columbia, MD. Through a continuing analysis of member claims data, RHI can determine whether members are getting their medications refilled at the appropriate times.

"If a member is not compliant, that will trigger a message to go out to the member called a 'personal care note' that has reminders in it about the importance of continuing to take the drug," says Becker-Ellison. Additionally, the program sends a different type of message to the patient's physician, letting him or her know of the compliance problem.

Blue Shield of California recently unveiled the MTM program and has not yet compiled data about its effectiveness. In fact, one problem with adherence programs is that it is difficult to measure financial outcomes.

Even pharmaceutical companies—organizations with a business interest in boosting adherence—have a difficult time justifying the expense to develop adherence programs. But they do understand the long-term value of establishing relationships with customers, and many of the companies are doing that through their adherence efforts. ❖

Reference

1. Zuniga A, et al. *Pharmaceutical Patient Adherence and Disease Management.* Cutting Edge Information, Inc., 2006.

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