

# DM DISEASE MANAGEMENT ADVISOR™

## **New efforts target healthy individuals** **A call to action on health management of populations**

For years, most DM programs have worked by first identifying the members of a population at the highest risk and then deploying interventions aimed at keeping complications—and health utilization—in check.

However, some health policymakers are now turning that model on its head, arguing that the greatest opportunity for controlling healthcare costs lies in identifying people who are low risk and intervening in a way that will keep them from transitioning into higher-risk groups.

This was a recurring theme during the National Managed Health Care Congress (NMHCC) meeting in Atlanta in March.

There were plenty of opinions to go around during the gathering of experts from healthcare, academia, and the business community, but there was wide agreement that

the practice of shifting cost increases on to members or employees has been pushed to its limit and that payers need to rethink the way they have traditionally managed populations.

### **Offer something for everyone**

Noting that there is consensus among employers/payers that they cannot sustain their businesses if healthcare costs continue to escalate, **Dee Edington, PhD**, director of the Health Management Research Center at the University of Michigan in Ann Arbor, emphasized that key players need to

**“There are no negative aspects of health management. You decrease costs and you increase productivity.”**

*—Dee Edington, PhD*

collaborate on new ways to implement health management.

“The old system hasn’t worked,” he said. “We identify the high-risk people, and then we go after them and try to get them to change. How successful [are] we? We [aren’t] successful at all, so the only solution here is to stop the upward flow.”

That upward flow is the transition of people at low risk into higher-risk categories, which inevitably results in higher costs. In the current environment, most health management programs offer nothing to members or employees in low-risk groups, preferring to target programming or interventions at people who have already been identified as having chronic diseases or other health risks, he noted.

Although he acknowledged that people with chronic diseases or acute problems need intervention, Edington suggested that it is a flawed strategy to focus on such groups to the exclusion of individuals who maintain active, healthy lifestyles—people he referred to as champions. “Whenever



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That’s the key to getting healthcare costs under control, according to one health plan that has reengineered its programming with this concept in mind.

##### **p. 43 A formula for success**

By working together, dozens of community health centers believe they now have a methodology to help bring quality care to every patient.

##### **p. 45 More time for diabetics**

Some experts believe this is the way to improve clinical outcomes, and they’re doing it by getting nurses and pharmacists more involved.

**NMHCC**

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you do your benefits, whatever you think about a population, you need to have something for everyone," he said, noting that people at all levels of risk should have access to coaching and that everyone should receive outreach contacts. "There are no negative aspects of health management. You decrease costs and you increase productivity." The type of comprehensive health management approach that Edington described is a tall order, including the administration of regular health risk assessments (HRA) and positive reinforcement of health in the worksite environment (see **Figure 1** on p. 39). In addition,

he said effective population management should include the following:

- ▶ Risk-reduction strategies
- ▶ Traditional DM programs
- ▶ Low-risk maintenance activities
- ▶ Web resources
- ▶ Incentives for participation
- ▶ Outcomes measurement

Most organizations cannot put together this type of model without help from partners, Edington acknowledged, noting that a critical aspect is getting employees or members involved with the process. "You don't have to teach weight loss or exercise," he said. "Just teach them to be self-leaders."

**Psychology and timing affect results**

Although it is clear that reducing risks should dampen spiraling costs, the data to support the kind of model Edington proposed are limited. Nonetheless, some companies attempting to go down that road have achieved success. For example, Hannaford Brothers, a supermarket chain based in Portland, ME, has implemented a range of initiatives aimed at educating employees about their risks and arming them with resources they can use to better manage their health.

One component of this approach involves placing a wellness professional—either a registered nurse or a health educator—at all 159 of the company's store locations. At first, the wellness professionals mainly provided health education to company employees, but they are now expected to take a much more proactive role. "We have evolved that [position] so that the wellness professionals] now advocate for better care, help employees prepare for their physician visits, and coach people along the behavior change continuum," said **Ellie Udeh**, manager of wellness initiatives for Hannaford Brothers. "We are noticing that this has had a significant [effect] on the culture of the store and on the attitudes in the store."

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The wellness professionals have learned that, in many cases, you have to take the time to get to know someone before you can begin to suggest changes in lifestyle, Udeh said. She also noted that timing is important. “It is really important to take a psychological approach with people that piggybacks on anything else that is going on. In January, people are making New Year’s resolutions, so we better have stuff at the store level to capitalize on that,” she said. “In the summer, people care more about their weight because they are wearing shorts and bathing suits, so it is another great time to piggyback and make sure we are ready with a walking program.”

**Financial incentives get results**

In addition to having wellness professionals on-site part-time, the company has implemented financial incentives for employees who agree to complete an HRA once a year, are tobacco free or participating in a smoking cessation program, and agree to actively participate in DM coaching offered through the health plan if they receive an outreach call. “It used to be that all employees had to do was take the call and receive education, but now we are requiring them to set goals,” said Udeh, noting that the goals can range from needed lifestyle changes to procedures or screening tests they need to have done by their PCPs. “This has been a very provocative [move], but it has definitely influenced employees to take action.”

The company has also begun offering a smaller incen-

tive for smokers who are at least willing to participate in the process. “We felt if we could at least get them to take the HRA and participate in DM outreach, this would be another way of reaching them and, hopefully, getting them to make some changes in their lives,” said Udeh.

The incentives have enabled the company to boost HRA completion rates to 90% in 2006—up from 60% when there were no incentives in place. Further, the people who opt out of the HRA process, and thereby bypass the financial incentives, essentially pay for the individuals who do participate, Udeh noted.

Where opportunities exist, Hannaford is trying to partner with community resources to offer healthy programming. One example involves a diabetic program the company has put together with a local hospital. Also, as part of a new initiative, the company is working with data supplied by the state of Maine to identify best providers and centers of health excellence. This approach has been controversial, and it is not yet clear whether people are making use of the information, Udeh said. But the company is exploring the idea as a way to help employees access good, quality care, she added.

**Costs are under control**

Some aspects of the program have been difficult for Hannaford. For example, coming up with exercise programs and other activities is challenging because of the widely varying shifts that supermarket employees typically work. The company has had some success with a virtual walking program, but providing large-scale access to these kinds of activities remains difficult. And although the company would like to leverage the Internet to deploy HRAs and decision-support tools, the employee population—much of which is located in rural areas—is reluctant to do anything online, said Udeh.

However, financial data show that although the company hasn’t eliminated healthcare cost increases, the costs aren’t rising to the degree that national trends suggest other companies are experiencing. “If we were where the national trends are, then we would be spending \$121 million more over three years than we are,” said Udeh. ■

**Figure 1**

**Next Generation Health Management Program**



Source: University of Michigan Health Management Research Center, Ann Arbor. Reprinted with permission.

## Whole-population approach aims for early identification and intervention

# New, integrated model of care targets risk rather than disease

After years of relying primarily on outside vendors to provide DM services, some organizations are considering offering such programs internally—or at least devising new ways to make healthcare programming less fragmented. Fueling this trend is a demand for less-expensive programming and a growing recognition that stand-alone programs focused on single disease states do not necessarily offer the best value.

There is evidence that several of the big players, including Aetna and Humana, are taking a fresh look at how they can better integrate their DM/wellness offerings. In fact, convinced that this type of transition will accelerate in the coming years, Pittsburgh-based Highmark Blue Cross and Blue Shield showcased the evolution of its Blues on Call Plus Program for attendees during the National Managed Health Care Congress meeting in Atlanta in March.

The approach is designed to take a more aggressive stab at dampening healthcare costs by intervening with a much greater proportion of the population, and doing so at an earlier stage—before individual risks begin to multiply. Further, rather than building the program entirely from within or completely outsourcing the model, the approach was assembled with both internal and external compo-

nents. This was not an easy process, the presenters said, although they were optimistic that the resulting model will be in a better position to capitalize on the power of prevention and make the system more accessible to users.

### Payers want integration

Highmark went to work on a more integrated model of care because customers—employers and individual members—wanted to go to one place for all of their healthcare needs, said **Michael Dubroff, DO**, vice president of Health Excellence Partners, the division of Highmark that oversees the new program. Employers/payers are desperate to contain spiraling healthcare costs, and there is little evidence that siloed programs offer any kind of economic advantage, he added.

Consequently, Highmark developed some new capabilities and took steps to consolidate core systems and processes so that case management, DM, and other services can be accessed and managed through the same system and account-specific care management team (see **Figure 1** below). Although care management services (e.g., behavioral health) have been brought in-house, the model still includes some outsourced services, Dubroff said. However, developers have taken steps to integrate these services to the point at which all of the care components work off of the same data and can be accessed through the same system.

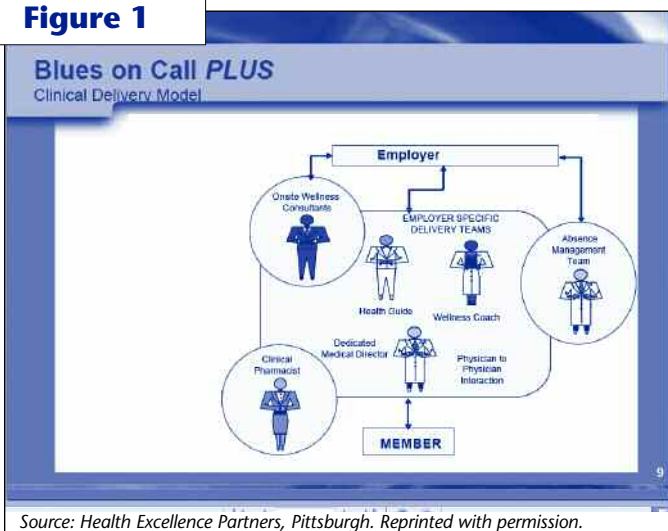
“In building this model, what we looked at was employer-specificity, and a care team that includes a wellness coach, a health guide, and a medical director,” said Dubroff. “And then [we also use] worksite wellness consultants to help drive the method and champion it.”

### Absence management is coming

Among the new services that have been integrated into the model is absence management, which is triggered when an employee has been absent for 72 hours or

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**Figure 1**



Source: Health Excellence Partners, Pittsburgh. Reprinted with permission.

# Report sounds the alarm on prevention of chronic disease

When you consider that working adults spend roughly one-third of their time in the office, the workplace may well be an ideal launching pad for wellness initiatives aimed at changing behavior. That is one of the conclusions of *Working Toward Wellness: Accelerating the Prevention of Chronic Disease*, a report developed by the World Economic Forum in collaboration with PricewaterhouseCoopers' Health Research Institute.

The report is a compilation of health statistics and interviews with the leaders of multinational companies—all aimed at identifying best practices for dealing with the epidemic of chronic disease. For employers, chronic disease is driving the steep increases in healthcare costs and is a massive drain on employee productivity. Chronic disease is also the leading cause of death and disability worldwide.

"If you look at overall deaths globally, 60% arise from chronic disease, and half of those occur before the age of 70 or during [the working years]," said **Michael Thompson**, principal at PricewaterhouseCoopers American Standard, in a presentation of the report during the National Managed Health Care Congress meeting in Atlanta in March. In addition, Thompson noted that although the leaders of U.S. companies cite healthcare costs as a primary threat to their ability to remain competitive in the world marketplace, the incidence of chronic disease is growing most rapidly in developing countries (see **Figure 1** and **Figure 2** below).

The report suggests that by conservative estimates, the

benefits from improving general wellness in the work force will deliver an annual return of three to one or more.

However, interviews with company leaders indicate that organizations face several challenges in implementing wellness strategies, including the following:

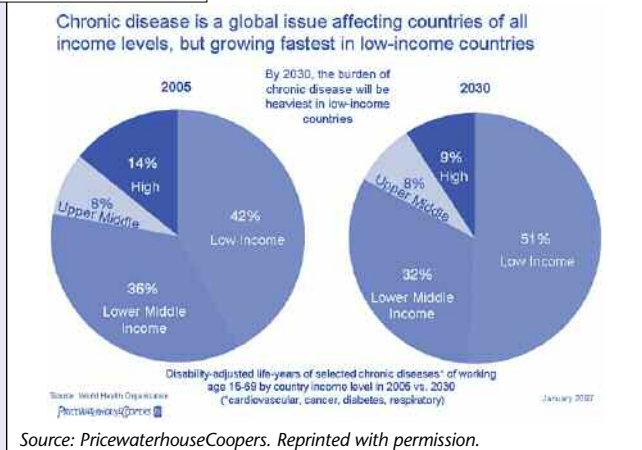
- ▶ How to evaluate and monitor results
- ▶ How to most effectively implement incentives
- ▶ How to create a supportive environment

For any wellness initiative to be effective, organizations must conduct baseline measurements of the health risks inherent in the work force so that future progress can be measured against these benchmarks, the report suggests. Additionally, companies need to make wellness part of their overall business strategy.

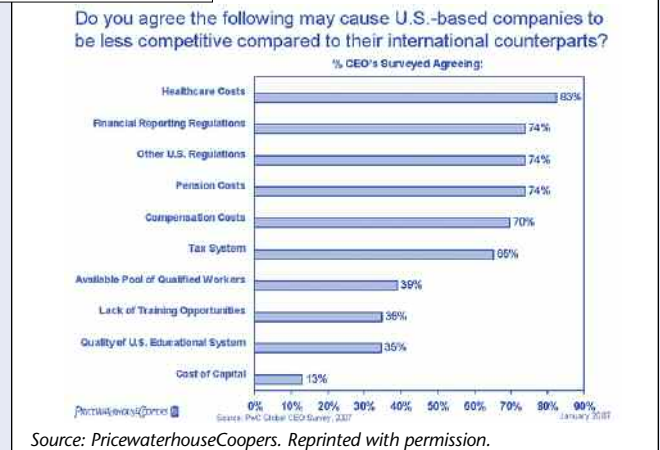
Other necessary components cited by the report include committing the appropriate resources to help change lifestyle-related behaviors and sustain health improvements, collaborating with community health resources to enhance wellness opportunities, and making sure that organization leaders demonstrate the group's commitment to wellness.

*Editor's note: The full report, Working Toward Wellness: Accelerating the Prevention of Chronic Disease, can be accessed through the PricewaterhouseCoopers Web site at [www.pwc.com](http://www.pwc.com).*

**Figure 1**



**Figure 2**



## Blues on Call

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longer. "The employer-driven information goes to a team of physicians; they will contact the member's physician, do an assessment of the diagnosis, and establish an expected return-to-work date," said Dubroff.

A key aim of absence management is to connect people with appropriate care right away, said Dubroff. "If you look at claims information and aggregate healthcare conditions, close to 25% of the time you will find a diagnosis that is referable to low-back pain," he said. "If you can get someone directly into a care delivery system, have a case manager call them, and have a physician call their physician, you have a significantly better chance of getting them back to work sooner, as opposed to waiting for short-term disability and, subsequently, a workers' compensation claim."

Not all of Highmark's customers are opting for absence management, a new concept to the marketplace, noted Dubroff. But he predicted that such services will be commonplace in the next few years as employers look increasingly for enhanced employee productivity from their health benefits.

### Flexibility is key

The Highmark model is not driven by claims data, but by rules that take into account data from several sources, including claims, lab values, pharmacy data, health risk assessments, and even employer productivity data, said Dubroff. Before providing services, analysts will look at all of the data that are available for a population and prepare what Dubroff referred to as an opportunity assessment, a process that essentially homes in on where interventions can potentially make an impact from a clinical/financial standpoint.

A key advantage of looking at an entire population is that it gives you the flexibility to allocate resources where they are most needed, said **Ian Duncan, FSA, MAAA**, president of Solucia, Inc., a Hartford, CT-based actuarial firm that worked with Highmark to develop the Blues on Call Plus program. "You can address case management if that is the

**Figure 2**

Blues On Call Plus Population Segments		
 Health Guide	ICM	<b>Intensive Case Management</b> High dollar cases (≥ \$50,000 over 3 months) Specific diagnoses such as cancers, ALS, Lymphoma
 Health Guide	PCG	<b>Primary Chronic Conditions</b> Asthma, COPD, CHF, CAD, Diabetes (with associated comorbidities)
	THC	<b>Targeted Health Conditions</b> Maternity, Depression, Obesity, Back Pain, Osteoarthritis, Osteoporosis, Hypertension, Gastrointestinal Disorders, Migraines & Headaches
 Wellness Coach	NTHC	<b>Non Targeted Health Conditions</b> Those with claims for other than preventive care as well as those conditions defined above in ICM, PCG, & THC (lower prevalence, lower cost and modifiable condition).
	AR	<b>At Risk</b> No claims other than preventive care (positive utilization only). HRA indicated significant risk
 Wellness Coach	AW	<b>Apparently Well</b> Well on basis of HRA and/or biometric screenings with no claims other than preventive (positive utilization only)
	NU	<b>Nonusers</b> No HRA or claims

Source: Health Excellence Partners, Pittsburgh. Reprinted with permission.

prevailing concern of the population or where the potential savings might be, or you can move more resources toward wellness if that appears to be where the investment should be made," said Duncan.

According to Duncan, the population assessment essentially involves the following three steps, which build on one another:

- ▶ Identification
- ▶ Segmentation
- ▶ Stratification

Through this multilayered analytical process, Highmark can determine which conditions or diagnoses are prevalent in a population, which level or intensity of intervention is needed for the various subgroups of people who exhibit common characteristics, and what the potential future costs and cost-savings are from the various groups, Duncan said (see **Figure 2** above).

The opportunity analysis provides a framework not just for clinical and financial metrics, but for operational or process metrics, as well, he said. "Simply having a model, and being explicit about its components sets up the analysis that then needs to be done as people are brought into the program," he said, acknowledging that some of the outcomes anticipated in the model are based on assumptions rather than hard data. "The DM compo-

nents of the model—the risk factors, the costs, the effectiveness of the interventions—are pretty well known because they have been studied.” However, outcomes from case management have not been well studied, and wellness programs are too new for anyone to have good results, he said. “We have set up a framework so that Highmark can go out and collect the data.”

### Data on wellness are lacking

In designing the model, Highmark’s goal was to target risk, rather than disease, noted Dubroff. Consequently, the challenge is to intervene with people early enough to prevent risk deterioration. “We’re trying to prevent symptoms from becoming conditions, conditions from becoming disorders, and disorders from becoming disability,” he said, noting that this approach offers the best opportunity for flattening the medical cost trend curve. “You will

never decrease that because you can’t have increased technology and increased aging of the population, and also anticipate saving pure dollars. But you can get a handle on the spiraling of the medical cost trend curve.”

Whether the model will work is still an open question. Dubroff reported that 150,000 people are currently engaged in Blues on Call Plus, but the approach is still too new to report outcomes. Additionally, it is unclear what level of a financial commitment toward wellness interventions will produce a financial benefit.

“The wellness/at-risk population does not yet fit into the financial model because we have so little data at our fingertips in terms of effectiveness of wellness interventions,” said Duncan. “But potentially the highest value from the program—and what employers want—is this prevention, because it prevents transition to a higher-risk segment.” ■

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## Community health centers work together to achieve success

# Healthcare collaboratives focus QI efforts on every patient

Quality improvement (QI) is difficult, especially in disadvantaged populations in which financial strains and other challenges can interfere with health concerns. However, a collaborative effort involving dozens of community health centers has demonstrated that with the appropriate resources, leadership, and framework for action, improvement can be achieved.

Reporting in the March 6 *New England Journal of Medicine (NEJM)*, investigators found that a series of interventions designed to improve care for asthma, diabetes, and hypertension did, in fact, improve performance on a range of key process measures relating to these diseases.<sup>1</sup>

Although these improvements did not translate into improved clinical outcomes—at least not during the one-year intervention period—clinicians from some of the participating sites believe that they have hit upon a winning formula for continued progress. And they are

moving forward with efforts to broaden many of the QI processes that they have implemented with respect to specific chronic diseases in order to benefit their entire population of patients.

### Health centers share successful strategies

The interventions were implemented as part of the Health Disparities Collaboratives, a network of community health centers across the country that work individually and collectively to nurture QI on a range of health measures. Sponsored by the Health Resources and Services Administration (HRSA), the collaboratives continue to pilot tools and strategies aimed at improving quality/efficiency, and they exchange information regularly so that the participating centers can learn from each other.

In the *NEJM* study “Improving the Management of Chronic Disease at Community Health Centers,”

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## Collaboratives

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investigators analyzed interventions with 9,658 patients at 44 health centers that participated in the collaboratives and 20 centers that did not, in order to serve as control centers. They abstracted quality measures through chart reviews at each center, focusing on the one-year period prior to the interventions and the year immediately following the interventions. They then calculated overall quality scores.

Based on these data, investigators noted significant improvements at the intervention centers in process measures related to prevention and screening, including the following:

- ▶ A 21% increase in foot examinations for diabetic patients
- ▶ A 14% increase in the use of anti-inflammatory medication for patients with asthma
- ▶ A 16% increase in the level of HbA1c screening in diabetics

However, the intervention centers did not significantly outperform the control centers with respect to processes-of-care measures related to hypertension. The lead author of the study, **Bruce Landon, MD, MBA**, from the Department of Health Care Policy at Harvard Medical School in Boston, points out that the measures related to hypertension were the most limited of the three conditions that researchers looked at. “The collaboratives were actually designed for CVD, and we focused on hypertension as the condition we looked at within that, so there were certainly a lot of other [measures] that may have been improved,” he says. “There were also fewer measures to look at with regards to hypertension.”

Why the process improvements did not carry over to clinical improvements, as well, may be explained by the short study period. Further, some of the clinicians involved with the effort maintain that the collaborative approach is definitely making a difference at their health centers.

“The collaborative process is different than typical DM in that it is an ongoing process, so there isn’t simply a

tool that you apply, but rather you apply a tool and test it, and if it doesn’t work well, then you adjust it and move on,” says **Mark Loafman, MD, MPH**, chief medical officer at PCC Wellness Center in Oak Park, IL. “[The model] is a lot more dynamic because it allows the practice to test and assess their own unique ways to make things better as opposed to just taking an externally derived package and trying to make it fit.”

In addition, Loafman stresses that the regularly scheduled conference calls with other collaborative participants have a way of keeping people focused on issues or interventions that have been prioritized.

“The regular check-in times with the peer group enable you to keep performance improvement and guideline issues on the front burner, because people are aware

### Implement change through the PDSA method

Staff members at Hudson River HealthCare in Peekskill, NY, follow a simple formula to implement improvements. It’s a strategy that they have borrowed from the Institute for Healthcare Improvement, based in Cambridge, MA, and it boils down to four steps referred to as PDSA: plan, do, study, and act, explains **Paul Kaye, MD**, Hudson Rivers’ chief medical officer.

“You do small test cycles that we call PDSA cycles,” he says, noting that it enables people to continually improve a tool or a task before implementing it on a large scale. “You develop a new diabetes form, but before you print out 10,000 of them, you take your first draft and show it to a patient. When the patient says it makes no sense, you redesign it . . . so these small test cycles of change, done rapidly, are the methodology for improving things.”

In fact, Kaye notes that PDSA has become a verb that everyone in his organization understands. When people are going to try out something new, they say they are going to PDSA it, he says. “It has really helped us to develop a culture of change and a culture of quality.”

that you will be calling in next week; they need to get their data together, and [they ask themselves whether] they did the things that they said they were going to do," he says. PCC Wellness Center staff members have gotten several good ideas from other centers through this channel of communications. For example, Loafman says that they now get medical assistants much more involved in care tasks that are recommended by guidelines.

"The medical assistants were historically waiting for the providers to tell them what needed to happen . . . but pre-approved standing orders allow the medical assistants to go ahead and collect a specimen or set up for a procedure," he says, noting that some of the other participating health centers had already figured out that they needed to get things automated in this way so that they did not depend so heavily on the provider. "That is probably the biggest cultural or organization change that we have done, and we are now applying it to many other situations," he says.

Although working with registries and care teams has been helpful in boosting performance for several chronic conditions, HRSA is now looking to expand the model to apply the same care practices to the entire patient population. "The idea is to move from a DM model to a more comprehensive model [in which] every patient has a planned visit," says Loafman. To do that, leaders within the collaboratives recognize that the health centers will need to adopt an electronic medical record (EMR). "If you are going to say that there is going to be a planned visit for every patient, and every patient will get what they will need, you can't use a system like a registry [in which] you have to have staff to enter things and worry about data entry," says **Paul Kaye, MD**, chief medical officer of col-

laboratives member Hudson River HealthCare in Peekskill, NY. "So identifying EMRs that also do the functions of DM that help us take care of patients better—not just record what we did with them, but help us do a better job—is our next big issue." Second, in order to adequately prepare for every visit, Kaye emphasizes that every provider needs to have adequate support staff and must clearly define the responsibilities of each person. To pay for an expanded care team, health centers will also need to generate more patient visits.

"We have an acute care-based system that isn't designed to produce chronic disease management or interventions for prevention," says Kaye. "So one of the real challenges for all of the health centers is how to keep this work going financially when the system doesn't really recognize it. The only thing you can do is get more patients, because that is the only way you can get more funds. It's a major national issue that has to be addressed."

Clearly, multiple challenges are involved in implementing the idea of a planned visit for every patient, but Kaye and Loafman believe that the same collaborative process that they have used to drive improvements in process measures will help the participating health centers accomplish this goal. "If we haven't quite put our finger on everything that has to be changed—well, neither has the rest of the healthcare system," says Kaye. "But I think the methodology suggests that you can change small and large systems using these methods." ■

#### Reference

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## **Experts agree that time is an essential ingredient to improved outcomes**

# **Alternative models of care get results in diabetic patients**

Care of diabetes in this country is far from optimal. Statistics suggest that only about half of all Americans with diabetes have their disease under control, and the situation threatens to become more desperate if the inci-

dence of diabetes continues to increase as expected. However, studies show some nontraditional models of care delivery make quality improvement of clinical, as

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## Diabetes clinic

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well as process, measures possible—even in some of the toughest populations.

One critical message from such studies is that diabetic patients require much more time with the clinician than the typical office visit allows.

However, some innovators get around this issue by training nonphysician specialists (e.g., nurses or pharmacists) to take charge of diabetes care, especially for those patients who struggle with the disease.

How to pay for such nontraditional models in the current system of reimbursement remains a stumbling block to large-scale implementation, but data suggest that under the right circumstances, diabetes clinics managed by both nurses and pharmacists offer several advantages.

### Approach slashes utilization

**Mayer Davidson, MD**, director of the Clinical Center of Research Excellence at Charles Drew University in Los Angeles and a professor of medicine at the University of California, Los Angeles, recently reported on the results of a nurse-directed diabetes program he developed and implemented at a public health clinic in Los Angeles.<sup>1</sup> In that model, the Diabetes Managed Care Program (DMCP), Davidson trained a registered nurse to follow patients according to detailed treatment algorithms derived from evidence-based guidelines.

“She would see the patients in a special clinic, follow them on the phone, and schedule visits with them,” says Davidson, explaining that the nurse was charged with keeping close tabs on glucose levels, lipids, blood pressure readings, foot screenings, referrals for eye exams, and all of the other key aspects of diabetes care. “She made sure they got the kind of treatment that you can do if you have the time and the expertise to do it.”

Further, under the supervision of Davidson, the nurse was also able to direct treatment, including changes in medication.

“All of the things you should do, she made sure got done,” says Davidson. “I was available by phone [for con-

sultation] at all times, but I would also meet with her once a week and sign the charts.”

To assess the program’s effect on utilization, investigators compared the emergency department (ED) and hospital utilization for 331 patients during the program’s intervention year and the year prior to implementation.

What they found was a 51% reduction in utilization during the intervention year, and dramatically reduced expenses.

Hospital and ED charges dropped from more than \$129,000 in the year prior to the intervention to just \$24,630 during the intervention year.<sup>1</sup>

Clinical measures also improved, according to Davidson. “When [the nurse] started with the patients, their average HbA1c was 8.6, which is about average for the country,” he says. “And she got [these readings] down to about 7.”

### Time is critical

A number of factors contributed to the success of the program, according to Davidson. He emphasizes that the nurse was highly skilled and well-acquainted with the types of cultural issues that can affect compliance.

“She is Hispanic, and 75% of our people were Hispanic, so she was able to achieve a rapport with them that a [non-Hispanic] physician, frankly, can’t do,” says Davidson.

Additionally, the ability to make timely treatment decisions was critical as well, he notes.

Perhaps most important, however, was the amount of time the nurse was able to devote to making sure that all of the recommended care tasks related to diabetes care were looked after. “When a patient comes to see a doctor, he [or she] has all these other concerns, and the doctor has limited time,” says Davidson. “Here, we have a situation [in which] this specially trained provider can spend time with the patient, only focusing on diabetes and what needs to be done.”

Another critical factor is accessibility, says **Maria Castellanos, RN**, the nurse who primarily delivered the

patient care as part of Davidson's study and continues to work within the DMCP model to deliver care to diabetes patients at county clinic sites. "These are people who make the minimum wage, so if you are going to ask them to take a half-day off—which is typical of many clinics—then we are going to have a problem," she says. To get around this obstacle, appointments are scheduled in the early morning hours, as well as in the evenings and on weekends.

Further, when appointments are broken—a common occurrence in this population—an administrator makes every effort to reschedule the appointment before the end of the day. "These are low-income people. That is why we give them options," Castellanos says.

### Model is versatile

In fact, although he hasn't always had the funding to collect data, Davidson has replicated the model in many other settings and socioeconomic groups. The challenges presented can differ, but the model adapts easily to different circumstances, he says. "In [the study population] the nurse was able to follow 150–175 patients [at a time]," says Davidson. "In a middle-class setting, a nurse can follow up to 250 patients, because many of the [required care tasks] can be done over the phone or via fax machines."

However, the intervention needs to be ongoing to remain effective, Davidson says. Studies have shown that patients sent back into usual care typically regress to where they were before the intervention within six months. Consequently, Davidson suggests that the best way to implement the model is not in a specialty clinic, but to have the trained nurse on site, within a regular adult clinic, so that he or she can see diabetic patients on an ongoing basis.

Davidson has been running a DMCP program based in a hospital setting for at least eight years, but financial pressures have thus far gotten in the way of his efforts to replicate the model on a much larger scale. "You don't get paid to take care of patients by phoning them or faxing things to them, and we don't get reimbursed for [nurse

visits] with patients, so in private practice, people have not wanted to do this," he says. "I would have thought that health plans would want to do this, but their argument is that patients aren't around long enough for them to reap the benefit, and therefore they have been resistant, although they are getting a little better."

### Life challenges take a toll

**Linda Jaber, PharmD**, an associate professor at Wayne State University in Detroit, has also had success working one on one with disadvantaged diabetic patients. She has accomplished this by working with a group of internal medicine physicians who refer some of their more complicated diabetic patients. The patients need to meet certain criteria to be referred to the Pharmacist Managed Diabetes Clinic (PMC), says Jaber. "They may have uncontrolled diabetes or noncompliance issues, or they may be on multiple medications and in need of a simplified drug regimen," she says, adding that she rarely works with newly diagnosed patients or patients who are managing their disease reasonably well.

Once a patient is referred, Jaber typically meets with him or her as often as weekly or biweekly for three to five months—whatever is required to get the disease under control.

The model is similar to the DMCP in that it includes a hefty dose of patient education, close monitoring of all of the key parameters involved with diabetes care, and adjustments in medications as needed.

In addition, Jaber uses written patient contracts to get patients to agree to work toward goals that they have established together.

"I tell patients that all I am going to do is give them advice and guidance . . . but they will be doing all of the work," says Jaber. "Then I prioritize things based on [my initial] session with them."

For example, if a patient has never learned how to prevent or deal with impending hypoglycemia, that is likely to be high on the priority list of things to review.

"Education is the key because they can prevent it;

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## Diabetes clinic

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they can treat it," says Jaber. "It becomes not as scary when you talk about it." Other matters that Jaber frequently addresses early on are myths about diabetes and barriers to proper management of the disease.

"Compliance is a huge issue with this population, but in many cases you can identify the source of the problem," says Jaber, noting that financial problems may prevent patients from obtaining needed medications, or they may be afraid of insulin because they lack understanding of their disease. "It is not that they do not care. They do care, but you have to help them sort things through," she says.

## PMC boosts care and outcomes

Studies have demonstrated that care through the PMC improves glycemic control as well as adherence to diabetes care guidelines.<sup>2</sup> However, although some physicians are enthusiastic about the approach, this support is not universal, Jaber says. "When I did my first study [of the approach], it was obvious to me that the success of the program came because of my expertise on the use of medications—my aggressive approach to using combinations of medications rather than one," she says.

However, some of the physicians involved with that effort were uncomfortable with her involvement in the medication management aspect.

"They had no problem with me sitting down and providing education to patients, but once I stepped into the medication area, they were nervous because they felt I had stepped outside my area," Jaber says.

However, many physicians are supportive of the approach and appreciative of her knowledge and experience with pharmaceuticals, she adds. As with the DMCP model, a critical element in the success of her model is time, Jaber says. In both cases, the patient's initial visit with a clinician lasts for an hour or more, and physicians rarely have that kind of time to devote to a single patient.

She says the extra time would benefit patients with prediabetes, as well—perhaps enabling them to prevent development of the disease in the first place. Consequently, as she is only available to work in the clinic one day per week, Jaber is trying to obtain funding for another pharmacist to work there during the rest of the week. "There is so much we can do prior to a patient having diabetes," she says. "And I could do much more of that if I had someone else to rely on." ■

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