

DM DISEASE MANAGEMENT ADVISOR™

Health centers improve diabetes care, results

Community health centers can play a key role in reducing health disparities, but it takes more than simply opening a center in a medically underserved neighborhood. In order to bridge the racial and ethnic gap, strong leadership, a long-time commitment, adequate resources, and proper incentives are required, says **Marshall Chin, MD, MPH**, an associate professor of medicine at the University of Chicago and coauthor of the recent study *Improving and Sustaining Diabetes Care in Community Health Centers with the Health Disparities Collaboratives*.

Chin and seven other researchers wrote the study, which was published in the December 2007 *Medical Care*. They reviewed 34 Midwest and West Center cluster community health centers that participated in either the first or second Health Resources and Services Administration's Bureau of Primary Health Care (BPHC) Diabetes Collaborative initiative to improve diabetes care.

BPHC oversees the country's 5,000 community health centers that are improving care of the medically underserved through Health Disparities Collaboratives (HDC). Sixty-eight percent of the health centers in the HDC chose diabetes as their target disease, namely because of the difficulty of caring for patients with diabetes and its impact on ethnic and lower socioeconomic populations. "Diabetes is a paradigmatic disease for chronic care management," wrote the study's authors.

"When there is the will, the mission, and the leadership, and support in the overall program, you can make dramatic improvements in terms of quality and outcomes for diabetic patients."

—Marshall Chin, MD, MPH

The study looked

to answer two major questions about the HDC:

- ▶ What impact does the HDC have on care and outcomes related to diabetes over a sustained period?
- ▶ What is the effect of varying the intensity of the intervention? Do more intensive quality improvement (QI) efforts that incorporate organizational change, provider behavioral change, and patient empowerment improve care further?

Researchers discovered improved diabetes care and results over a five-year span (1998–2002).

Hemoglobin A1c and LDL levels decreased, whereas diabetes care standards improved, including A1c tests and lipid assessments, foot and eye exams or referrals, and aspirin use.

The study also showed the importance of perseverance. Although test-taking improved at the two-year mark of the study, it took the full four years to show improved test results. Chin says this is because it takes longer to see health improvements than simply improving



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care. The authors noted the “importance of enduring commitments to the QI intervention and long-term outcome studies.”

The health centers used a Model for Improvement developed by Associates in Learning called the Plan-Do-Study-Act cycle. They also used the MacColl Chronic Care Model that was created by Group Health’s MacColl Institute for Healthcare Innovations in Seattle. The Chronic Care Model has six target areas:

- Patient self-management
- Information systems
- Decision support

- Community outreach
- Leadership organization
- Effective delivery system

“Its ultimate goal is to improve the quality of care and outcomes by having activated, empowered patients working with a proactive team of doctors, nurses, and administrators,” says Chin.

According to the authors, the study’s “important implications” for health centers are: a powerful governmental organization can “facilitate sustained QI in a national network of generally highly motivated, idealistic [health centers] by training, lending assistance, and conveying that the QI collaborative approach should be done . . . The rapid QI approach and Chronic Care Model are paradigms that allow flexibility. [Health center staff is] used to working creatively in resource-constrained environments.”

“There is a very positive message that when there is the will, the mission, and the leadership, and support in the overall program, you can make dramatic improvements in terms of quality and outcomes for diabetic patients even under very difficult circumstances,” says Chin.

Chin says he figured the researchers would see care improvements but knew the centers faced challenges because of limited resources and patient population (poor, little education, and many without insurance). In fact, approximately one-third of the patients in the centers studied did not have health insurance, and about one-quarter were on Medicare.

Standard vs. high-intensity intervention

In addition to determining whether the HDC improves diabetes care in health centers, investigators reviewed whether more intensive interventions enhanced care further.

The standard-intensity arm included:

- An HDC team that met regularly with the support of senior administrative leadership

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- Tracking by each center of a registry of diabetic patients to gauge care
- The introduction of a Model for Improvement developed by Associates in Learning to the centers
- Support from the BPHC, including quarterly progress reports from the QI teams and senior leadership, conference calls with other centers, and cluster coordinators
- Yearly in-person meetings with other health centers

The high-intensity arm included the above and:

- Four 1.5-day learning sessions
- Training in patient-provider communication and behavioral change techniques
- Patient empowerment videos and brochures
- Monthly conference calls

The more intensive intervention showed a mixed bag. There were increases in the use of angiotensin

converting enzyme inhibitors and aspirin, but less documentation of diabetes education and dietary and exercise counseling. “These findings suggest tradeoffs between intensifying medication use and participating in diabetes education and dietary/exercise counseling,” wrote the study authors.

Chin says intensive interventions did not affect care as much as expected because the standard health collaborative is already “pretty intensive.”

“[The high-intensity arm] may help at the margin, but some of these ideas were already in the standard HDC . . . I think what this shows is you get a lot of bang out of the standard health disparities collaborative,” says Chin.

Although the study focused on health centers, the authors noted that other healthcare entities can learn from the report.

“More generally, motivated, hardworking healthcare staff can improve care and diabetes outcomes when given autonomy and support to create change.” ■

Six keys to bridge the disparity gap

Improving and Sustaining Diabetes Care in Community Health Centers with the Health Disparities Collaboratives showed how health centers affect care for the poor, but how do private insurers and DM companies reach that population?

Winston F. Wong, MD, MS, medical director of community benefit and director of disparities improvement and quality initiatives for Kaiser Permanente in Oakland, CA, provided these six keys to reduce health disparities for any healthcare organization:

- Good data that highlight conditions affecting the specific population
- Patient registries, at the very least disease registries
- Bilingual, bicultural workers
- Strong clinical leadership that sets the agenda for the clinicians
- Partnerships with local and/or regional effort to improve care for vulnerable populations
- Strong health educators and community health workers, including social workers and certified diabetic educators, that augment clinicians

Marshall Chin, MD, MPH, an associate professor of medicine at the University of Chicago and coauthor of the health center study, believes health plans, DM companies, and individual practices can learn from community health centers.

“I think the average practice can do an outstanding job also. I think for the health center, [caring for at-risk populations is] a larger priority. It’s very much on the radar screen. The health centers serve a large number of ethnic minorities and poor patients. It’s an integral part of the mission. Nationally, we’re seeing equity issues becoming a larger part of the quality debate,” he says.

Chin praises those who work at health centers for their open-mindedness and passion. Having a motivated staff that is not too large makes change possible. “One thing that centers have done very well is: how can you tailor to your own subpopulations? I think that the general message of tailoring to your specific population as opposed to just blindly using a one-size-fits-all approach is an important lesson of the collaborative,” he says.

Flexibility is important

Having a chronic care model in place is a helpful foundation to bridge the health disparities gap, but **Marshall Chin, MD, MPH**, an associate professor of medicine at the University of Chicago, adds that the community health center must be flexible to implement programs that best help their patient population.

Winston F. Wong, MD, MS, medical director of community benefit and director of disparities improvement and quality initiatives for Kaiser Permanente in Oakland, CA, says health centers are able to quickly tweak care to best serve their populations because they are not bound by hierarchical and clinical roles and position descriptions that are common in other areas of healthcare. Making changes are not as easy for a large organization that must deal with thorny labor and HR issues.

"You have to be willing to wipe the board clean at least in a pilot site or a microsetting where there is enough willingness on all parties to look at what people do in the clinic and have definitions that enable flexibility to occur . . . You first have to see the clean board and understand the needs of patients come first rather than the preservation of job titles," says Wong, who was formerly the medical director at

Asian Health Services in Oakland, CA, and a clinical officer for the Department of Health and Human Services' Region IX, which included overseeing health centers in Arizona, California, Nevada, Hawaii, and the Pacific Basin.

Part of the reason why health centers are able to adapt and know their community so well is because these centers' staff members are usually from the neighborhood and have risen through the ranks at the centers.

"The centers are such that for it to work you basically have to have buy-in from everyone. You need providers to be into it, the front-office staff, the senior leadership. You need an overall commitment and that kind of effort to do it," says Chin.

With PCP and nurse shortages expected in the near future, Wong says he is concerned about the prospects for health centers that serve the most vulnerable.

"There is a looming threat of not having enough nurses and not having enough community-oriented primary care physicians to care for the populations. Whenever those things happen, all good work that has been done in regard to caring for patients with special needs gets undermined," he says.

Patient-centered care critical to Medicaid programs

States battling spiraling Medicaid costs may have a friend in DM.

Two recent studies provide a glimpse into two Medicaid programs that not only improved care but contained costs. Containing costs is especially critical for Medicaid programs, which devote nearly 80% of funding toward chronic diseases. Both Medicaid programs, one in Virginia and the other in Washington state, controlled costs and improved care by involving physicians and engaging beneficiaries in a patient-centered system.

Researchers reviewed a DM program contracted with the Heritage Information System that was an extension of the Virginia Health Outcomes Partnership (VHOP). The researchers included **Thomas T.H. Wan, PhD**,

along with Ning Jackie Zhang, Louis F. Rossiter, Matthew M. Murawski, and Urvashi B. Patel (Wan and Zhang are consultants for Heritage Information System). The result was a report, "Evaluation of Chronic Disease Management on Outcomes and Cost of Care for Medicaid Beneficiaries," that appeared in *Health Policy*. The study showed that the DM program improved patient drug compliance and quality of life while reducing ER, hospital, and physician office visits.

The other report, compiled by Milliman Consultants and Actuaries in Seattle, reviewed McKesson Health Solutions' Medicaid program in the state of Washington and showed a \$13.3 million savings and 3:1 ROI in the program's final year (August 2005 to June 2006).

Virginia

Researchers from the University of Central Florida, The College of William and Mary, Purdue University, and Milliman reviewed the Virginia DM program that focused on five chronic diseases and comorbidities (diabetes, hypertension/CHF, depression, gastro-esophageal reflux disease/peptic ulcer disease, and asthma/chronic obstructive pulmonary disease) from 1999 to 2001.

The DM program required providers, including 5,995 physicians and 1,410 pharmacists, to offer monitoring, assessments, and interventions for patient self-management. VHOP hosted an introductory videoconference before the first intervention and sent quarterly educational mailings to providers. The mailings included up-to-date practice guidelines, claims data-based feedback sheets, and clinical measurements for each disease. The program asked the providers to consult with patients about their lifestyles, treatments, and drug uses, according to the study authors.

To find program savings, researchers compared hospitalizations, ER visits, and physician office visits for the 35,628 people in the experimental groups (broken into two subgroups: physician/pharmacist-intervention and physician-intervention) and compared them with the 29,504 beneficiaries in the control group.

“Results show that patients in the experimental groups with single diseases generally reduced their medical utilizations more than those in the control group did, but at a different rate for each disease,” wrote the researchers.

Although medical utilizations decreased after interventions, the researchers noted that statistical significance wasn’t found for depression and/or diabetes patients. This could have been because depression and diabetes patients “rarely have acute symptoms and are less likely to require emergency room visits,” wrote the study authors.

Another finding in the study is that groups with physician/pharmacist interventions reduced ER visits and hospitalizations more than the physician-intervention group—although this was not statistically significant for the majority of the target diseases. The three statistically

significant differences between the groups were ER visits for hypertension/CHF and gastro-esophageal reflux disease/peptic ulcer disease patients, and office visits for comorbidity patients.

“Disease management programs that include the education of physicians and pharmacists represent coordinated care that reduces medical utilizations and adverse drug events and improves patients’ quality of life while saving costs, although these impacts of the program were not evidenced throughout all disease groups,” wrote the study authors.

“I think the message to take away is there is something we can do to improve the coordination,” says Wan, a professor of public affairs, health service admission, and medicine, and associate dean for research at the University of Central Florida’s College of Health and Public Affairs.

According to the authors, the average payments per hospitalization per patient over the assessment period for the experimental and control groups were \$1,548 and \$1,896 respectively. The authors estimated that if every person in the study had been in the experimental group, the Medicaid program would have saved at least an average of \$2.99 million over the two-year assessment period. The program also achieved a 1.7:1 ROI, according to the researchers.

Having a system in which the physician, pharmacist, and DM company work together, which was the case in the Virginia program, can improve care and reduce costs—particularly in the Medicaid population. The healthcare system should further explore that model, says Wan. “I think the entire delivery system is in the wrong direction,” he says about the current system. “The focus should be on the patient. Patient-centric care management should be implemented.”

Washington

Milliman Consultants and Actuaries performed the computations for Washington’s Medicaid DM program that ended in June 2006. The program managed four

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Medicaid

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diseases: asthma, diabetes, CHF, and chronic obstructive pulmonary disease.

The DM program included a 24/7 nurse advice line that beneficiaries used for recommendations about acute medical issues and informed decision-support.

Ricardo Guggenheim, MD, MBA, vice president of product management and program outcomes management at McKesson in Broomfield, CO, says the Washington Medicaid program was an earlier-generation DM program. Since creating the Washington program,

“Working with the state on this program, we learned a lot, which helped shape our approach to programs going forward.”

—Ricardo Guggenheim,
MD, MBA

Guggenheim says McKesson has expanded its programs and focuses more on the total needs of patients rather than the particular chron-

ic disease. McKesson now has Medicaid programs in Illinois, Pennsylvania, Texas, Oregon, New Hampshire, Montana, California, and Florida.

Guggenheim says McKesson learned from the Washington program. “Working with the state on this program, we learned a lot, which helped shape our approach to programs going forward,” he says.

The clinical outcomes showed improvements in all four disease states, including patients using prescribed medications and receiving the proper testing.

Guggenheim says a key to McKesson’s Medicaid program was identifying gaps in care by reviewing medical claims.

For instance, the American Diabetes Association recommends diabetic patients have A1c tests twice per year. If a diabetic patient had not received an A1c test, McKesson informed the physician and patient. Knowledge gaps about chronic care are common not only within Medicaid populations. “You would be surprised by the percentage of people across all demographic groups and education levels that really don’t know much about the

chronic disease they have. It’s a universal issue,” says Guggenheim.

However, caring for Medicaid populations complicates those issues further. There are often significant barriers to care that may include:

- ▶ Challenges to remaining in contact with beneficiaries. Medicaid beneficiaries are often a more mobile population and may regularly change their addresses
- ▶ Transportation issues that make it difficult to keep doctor appointments or working conditions that make it challenging to miss work to go to the doctor
- ▶ Difficulty in finding physicians who accept Medicaid, which provides lower reimbursements than Medicare or commercial insurers
- ▶ Prevalence of severe mental illness (Guggenheim estimates that 25%–30% of Medicaid costs are because of mental illness)

“You want to engage with these members, but it is far more difficult to engage with Medicaid members than with commercial members because they are more mobile and difficult to find,” he says.

A key aspect of that engagement is getting physicians involved with the DM program, which is consistent in both successful Medicaid programs featured in this article.

Guggenheim says DM companies must allay physician fears and make it clear that they are there to help the physician with the goal to get the Medicaid beneficiary into the doctor’s office for care.

Guggenheim says the roles of vendors and doctors are changing, with providers taking the lead in the delivery of care for patients.

“It won’t be long before providers are the primary care managers of their patients. Programs like ours will support this new role of providers and will play a critical role supporting the needs of patients so they can effectively interact with providers around their medical needs,” says Guggenheim. ■

MEDICARE

DISEASE MANAGEMENT

CMS: MHS ends this year No word on future of Phase II

Proving cost savings is a goal of any program administered by the CMS, but Medicare Health Support (MHS)—the large pilot program that was initially seen by DM providers as a panacea and a large boon to their successful business—was different. Now, two and a half years after the start of the MHS pilots by eight DM providers, the industry finds itself defending the ability of the DM model of care management to produce results in an older and much sicker Medicare population.

CMS called the five companies remaining in the MHS pilot in late January to tell them that their pilot programs would end exactly three years to the date that they each began. At the same time, the federal agency published a fact sheet on its Web site (www.cms.hhs.gov) about the MHS changes. These changes also included an end to the 5% savings threshold that was lifted December 28. The shocking news for DM companies was the fact that there was no date announced for an industry-expected move into an expanded MHS pilot (Phase II). There will be no transition for chronic care services for Medicare beneficiaries who are currently enrolled in the pilots.

The DM industry is pushing back hard on the latest CMS announcement. “Ending Phase I of MHS without ensuring continuity of these services as regulators consider movement toward Phase II will strand many chronically ill fee-for-service beneficiaries who most need coordinated care,” says **Tracey Moorhead**, president and CEO of DMAA: The Care Continuum Alliance in Washington, DC. “DMAA urges federal regulators to move on an accelerated track toward Phase II and ensure continued provision and expansion of

needed chronic care services for our nation’s elderly,” she says. Moorhead also challenges CMS on questions raised by DM providers about the MHS pilot that the agency has never addressed.

“We also request an expeditious, thorough review of documented shortcomings of the pilot’s design and execution, including participant selection and randomization,” she says. “Last year’s interim report found insufficient evidence for any firm conclusion about the pilot’s performance and noted significant disparities between the control and intervention groups and other critical flaws.”

DM industry

expert **Vince Kuraitis, JD, MBA**, principal at Better Health Technologies, LLC, in Boise, ID, says the long-term concern is that, “Medicare will conclude that ‘carve out disease management’ doesn’t work and that we shouldn’t try any more demos with them.”

Kuraitis says CMS’ decision is undoubtedly a disappointment to DM providers, but the news is unlikely to translate into reluctance by DM providers to play in the Medicare market. “It’s too huge to ignore,” he says.

Drop of 5% cost savings requirement

MHS was created by the Medicare Modernization Act of 2003 as a way to test chronic care improvement

“The problems are now understood better than ever, and there are a number of other alternatives that can and should be tested.”

—Vince Kuraitis, JD, MBA

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programs for people living with multiple chronic illnesses. The legislation required that it be budget neutral, but when CMS drew up the program itself, the agency added a requirement that providers meet a net 5% savings threshold and agree to 100% fee risk for performance that falls short of that goal. That threshold proved to be a major headache for DM providers.

The pilot will still require budget neutrality as it continues in 2008, but the news that the onerous 5% threshold has been lifted was met with nothing but praise from DM industry leaders. It had been sought for some time as a critical step to saving the program. "We are extremely pleased to see the performance threshold brought in line with the authorizing statute," says **Christopher Coloian**, chair of the Government Affairs Committee of DMAA: The Care

Continuum Alliance. Coloian is also a vice president of CIGNA, a company that participated in MHS from September 2005 until January 14. "The change will help place the focus back on improved clinical measures and beneficiary satisfaction," Coloian says.

Coloian tells **Disease Management Advisor** that the "constant threat" of the 5% requirement made it difficult for providers to focus on the broader goals of clinical performance and quality improvements among beneficiaries.

Other pilot sites agreed. "The pilot now has a better chance to be judged as successful," says **Robb Cohen**, chief government affairs officer for XLHealth in Baltimore, one of the five companies administering an MHS pilot site. Cohen says the issue of cost savings has somewhat overshadowed several other key factors that

History of DM's pioneering pilot program in Medicare

Section 721 of the Medicare Modernization Act passed by Congress in 2003 authorized the development and testing of a voluntary chronic improvement program to improve the quality of care and life for people living with multiple chronic illnesses. The program, called Medicare Health Support (MHS), is a CMS pilot. It was authorized by Congress to run for three years with potential for a second wider expansion program if the initial goals were met. The goal of MHS is to test a range of program models that serve diverse populations in both urban and rural areas. They are intended to help increase adherence to evidence-based care, reduce unnecessary hospital stays and ER visits, and help participants avoid costly and debilitating complications and comorbidities. The pilots are not single-disease-focused.

Pilot sites were chosen after a competitive bid process. CMS pays the pilot sites monthly fees per member. Payments are based on performance results. The assumption is that the program cannot add to Medicare net costs.

In addition, MHS is a pilot program, not a demonstration. Like a demonstration, the program is intended

to test a hypothesis. Unlike a demonstration, the pilot can be expanded without additional legislation from Congress. CMS has the authority to expand a pilot in program elements that have been proven to be successful in meeting Phase I goals. An independent evaluation must demonstrate that all conditions of the pilot are met before expansion can be considered.

Although the original legislation that created MHS did not require it, CMS added the 5% net savings requirement, and the providers who bid to participate in the pilot agreed to these terms. But they subsequently requested that these savings targets be dropped. The pilot sites also asked that the design requirement for a control group be reconsidered. CMS agrees with the pilot sites that the first report to Congress confirmed that the randomization procedure produced similar demographic, disease, and economic burden profiles between the intervention and control groups. CMS answered these concerns by providing actuarial adjustments to account for the resulting historical financial disparities between the two groups.

have influenced the success of the MHS pilot so far: study design (including the comparability of the control group), identification of enrollees, and collaboration with physicians.

Stock shock

The news that CMS was ending Phase I of MHS was a shock to the industry and to shareholders of publicly traded companies like DM giant Healthways. On January 29, Healthways stock closed at \$66.37 per share. After the MHS announcement, the closing price was \$55.85 (a 15.85% loss) one day later.

"The MHS program was intended to lower Medicare claims costs, and it has only a nominal impact," says **Doug Simpson** of Merrill Lynch. The financial picture may be even bleaker than the one-day drop in stock price. CMS says in a fact sheet available on its Web site that even with the threshold for savings pegged at budget neutrality, the five companies, including Healthways, that remain in MHS will need to produce Medicare claims costs between \$300 and \$800 per participant per month for the remaining months of the pilot program.

This represents a 20%–40% reduction in claims costs from the current levels that are being billed, according to CMS. The government says that program fees paid as of January represent an increase of 5%–11% in Medicare costs for the participating beneficiaries. If the companies do not meet budget neutrality at the end of Phase I, they will have to return at least partial payments to CMS.

"This looks very much like it could be the end of the MHS pilots for Healthways," says **Joshua Raskin**, an analyst for Lehman Brothers. "Failure to move into the next phase would deal a blow to Healthways, which has already spent about \$23.5 million to support these MHS programs," he says. CMS officials are cautious about the future of MHS.

Kuraitis and others are finding it difficult to understand CMS' thinking on MHS. "CMS needs to be more transparent about its plan," he says.

"We are allowing Phase I of the Medicare Health Support pilot to run its course," a CMS official tells **DMA**. (*Editor's note: CMS policy does not permit public attribution of comments by its staff members.*) "The next step is to continue the ongoing evaluations to determine if the goals of the pilot were met. If we find evidence of success, CMS may move to a Phase II as allowed for in the enabling legislation," says this official.

The official says that because the agency has yet to find evidence of success, it is doubtful that the program will expand to Phase II anytime before the second required report to Congress, which is due in February 2009. The legislation required three independent reports on the pilot. The first was based only on the first six months of interventions in the pilot program and was given to Congress in 2006. The third report is due in February 2011. Phase II can be initiated at any time by CMS if it finds evidence that the program met its three statutory requirements: improve clinical quality outcomes, improve beneficiary satisfaction, and achieve budget neutral financial savings.

Lessons learned

Although costs savings are a major factor in the success or failure of MHS, the industry says the pilot raised other concerns about the application of DM in older patients with more than one chronic condition. Coloian says the MHS pilot has demonstrated the need for DM interventions earlier in the disease process.

"We have to stop the production of illness and disease, if you will, before it takes its toll on the patient and on the healthcare system," he says. "In the commercial space, we are focusing on the lower end of both preventing the onset of chronic conditions and in managing these conditions on a lower end," he says. "We think it is only a matter of time before we move to this reality in the fee-for-service market."

The original MHS design was to enroll beneficiaries with multiple comorbid conditions who were

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responsible for the highest percentage of Medicare costs. “We may have erred by targeting the high end rather than looking for more achievable savings in beneficiaries with less chronic disease,” Coloian says.

“The time period for when the beneficiaries were first identified to when the program launched may have resulted in participants being even further progressed in their illnesses,” says XLHealth’s Cohen.

The original eligibility criteria for MHS also did not disqualify beneficiaries with cognitive impairment and social and psychological issues that might have made it harder to fully implement DM efforts, Coloian says.

Coloian says the MHS pilot also does not make data available on a timely basis. Evidence of this, he says, is that although the sites have been administering the program for more than two years, data are yet to be available for anything beyond the first six months. The hope in a program meant to test certain ideas would be that problems would be identified early and adjustments made. But these changes can’t happen without data, he says. Cohen says that any successful DM program takes time to have an impact, and, like Coloian, he points to the lack of good data identified so far in

the MHS pilots by CMS. “We believe that our program has shown quality improvement and high satisfaction among beneficiaries,” says Cohen. Likewise, he says the XLHealth program has improved the coordination between the physician and the DM provider. “We work as companions to the physician, as their enablers,” he says. “It is not feasible for doctors to manage patients with multiple chronic conditions alone.”

As for the future of MHS or, perhaps more importantly, the role of DM in the Medicare population, providers, industry experts, and government regulators agree that MHS will show what works and what doesn’t. “A great deal has been learned from MHS Phase I, which will be applied to future efforts to improve the quality of care for beneficiaries with chronic conditions and to save resources for the Medicare Trust Fund,” according to CMS.

Kuraitis says the latest news shouldn’t be generalized into a “DM doesn’t work in Medicare” mantra. “MHS is only one narrow, outdated business model option of how Medicare could choose to address the challenges of chronic disease,” he says. “The problems are now understood better than ever, and there are a number of other alternatives that can and should be tested.” ■

Audioconference highlights VBIDs

Join HCPro for the live audioconference “Value-Based Insurance Design: Alternative to High-Deductible Plans” at 1 p.m., March 13.

The hour-long audioconference will highlight why reducing the cost of copays for chronic illness treatments improves medication compliance and may significantly affect the long-term costs of treating such diseases.

Value-based insurance design (VBID) is gaining in popularity in the consumer-driven healthcare and disease management industries, and the idea received a shot in the arm with January’s release of a major study led by a team of University of Michigan and Harvard University researchers. The study involved two major companies, one of which cut copays in half or altogether to its

employees. Employee use of important preventive medicine increased significantly in the business that reduced its rate, whereas the employer whose rates remained stagnant did not experience a similar improvement.

The speakers for the March 13 audioconference are leaders in the VBID movement: **A. Mark Fendrick, MD**, a professor of internal medicine and health management and policy and codirector of the Center for Value-Based Insurance Design at the University of Michigan, and **Gregory B. Steinberg, MD**, chief medical officer at ActiveHealth Management.

To sign up for the audioconference, go to www.hcmarketplace.com (click Managed Care, and look under Audioconferences) or call 877/727-1728.

Industry responds to RAND report

RAND Corporation's report that there has not been enough third-party research showing that DM saves money was not a surprise to industry leaders.

For the most part, industry leaders do not reject RAND's premise in "Evidence for the Effect of Disease Management: Is \$1 Billion a Year a Good Investment?" which was published in the December 2007 *American Journal of Managed Care*. Instead, they say there are reasons DM programs have not been widely reviewed: DM companies' desire to maintain commercial secrets, the industry's focus on improving—rather than reviewing—programs, and the simple fact that purchasers see firsthand the effect of DM and don't demand independent research.

Soeren Mattke, MD, DSc, the study's lead author, says RAND undertook the review because the think tank is reviewing presidential policy proposals to see which ones are supported by evidence. Mattke says presidential candidates can include DM programs in their proposals but warns they should not expect savings that could fund other programs, such as universal healthcare. Doing so is merely a leap of faith, he says.

"It's very plausible that disease management would save money because we do know for a fact that chronic care is bad," says Mattke, who coauthored the study with Michael Seid, PhD, and Sai Ma, PhD. "People with chronic conditions don't get the tests they need, they don't get the drugs they need, they don't get the advice and education they need, and we do know that bad management of chronic conditions results in adverse long-term outcomes and also in high-cost events that could be avoidable."

The belief that DM reduces hospital admissions and ER visits is plausible, Mattke says, but the industry simply hasn't opened itself up to enough analysis to confirm that. "I'm showing that it hasn't been sufficiently researched as to whether or not it does save money."

Mattke says a literature search for studies on population-based DM programs found a total of three large-scale program evaluations. In those studies, researchers found "consistent evidence that disease management

improves processes of care and disease control, but no conclusive support for its effect on health outcomes," according to the report. Mattke says he is puzzled by how little independent research is available. He adds commercial disease managers have large databases that can spotlight the experiences of hundreds of thousands of patients before and after they enrolled in DM.

If the DM industry opened itself up for independent program review, Mattke says there would be greater buy-in to its chronic disease programs. However, until that kind of third-party research is completed, Mattke says payers and policymakers "should remain skeptical" and demand evidence that DM saves money.

DMAA: The Care Continuum Alliance responded to the RAND report by writing that DM is a "wise investment" even though there haven't been many large-scale studies. **Gordon K. Norman, MD**, chair-elect of DMAA, wrote, "There are sound reasons why DM outcomes satisfy buyers today, even if academics remain unconvinced. Taking all the data and circumstances as a whole, it is reasonable and responsible to conclude that we are wise to continue investments in DM, while accumulating more and better evidence about the total population efforts."

Disease Management Advisor spoke to a number of DM leaders in the aftermath of RAND's release, and most acknowledged the report's findings were expected—and there is nothing wrong with the conclusion.

"If there is no evidence that it does save money, there is no evidence to prove it doesn't save money. The existing science can't disprove that negative," says **Jaan Sidorov, MD, MHSA, FACP**, an independent consultant and former medical director at Geisinger Health Plan in Danville, PA.

Sidorov adds just because there is a lack of peer reviewed medical studies doesn't mean DM is ineffective. He likened independent evaluations to merely one window into the DM industry. Other "windows" have provided a different view and conclusion, he adds.

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Christobel Selecky, CEO of LifeMasters Supported SelfCare, Inc., in Irvine, CA, doesn't think the lack of double-blinded randomized control studies of DM is a problem. "At this point, I would say that the jury may still be out on what specifically works and what doesn't in DM, and I don't see anything wrong with that," she says. "We are still in a rapidly evolving field, and it would be difficult to pick a point in time to say 'this is DM' and decide whether 'it works or not since we are still doing lots of research and development to improve our processes and programs."

Al Lewis, JD, executive director of Disease Management Purchasing Consortium International, Inc., in Wellesley, MA, says he was impressed with the study and agrees with RAND's findings—except he's a little more optimistic. Lewis doesn't agree with either side of the argument—whether it is from benefit consultants, who promote huge savings via DM, or from academia, which is more pessimistic.

In regard to the movement within DM to review productivity costs rather than—or in addition to—direct medical costs, Mattke says that too has not been "sufficiently researched" by independent analysts.

Selecky says there hasn't been a plethora of independent scientific research conducted by DM organizations because the industry is focused on continually improving its programs and finding ways to more effectively engage patients. Also, purchasers are not demanding proof from studies conducted by academic and scientific institutions because they understand that DM is having its intended effect on their own population.

Warren Todd, founder and past president and executive director of DMAA: The Care Continuum and founder and executive director at International Disease Management Alliance in Flemington, NJ, gave another reason why DM has not opened itself up to independent review: The industry is commercially driven, and DM

RAND breaks down impact by diseases

As part of the "Evidence for the Effect of Disease Management: Is \$1 Billion a Year a Good Investment?" study, RAND Corporation researchers analyzed data on DM's impact on six chronic condition areas: CHF, CAD, diabetes, asthma, depression, and chronic obstructive pulmonary disease (COPD).

Researchers noted they found evidence that DM programs improved the quality of healthcare in all areas except asthma and COPD. Those two chronic disease states showed inconclusive results.

The researchers also found:

- ▶ DM reduced hospitalization rates for patients with CHF
- ▶ DM meant higher utilization of outpatient care and prescription drugs for depressed patients

On the issue of depression, **Soeren Mattke, MD, DSc**, the study's lead author, says patients with depression are commonly undertreated and an effective DM program in fact increases healthcare utilization and prescription costs. The authors, however, note there is little evidence that depression

DM programs actually improve health outcomes over the long term.

Christobel Selecky, CEO of LifeMasters Supported Self-Care, Inc., in Irvine, CA, says that at a minimum, DM should be expected to improve quality without adding costs, but that generating cost savings is highly dependent on which chronic conditions and populations are being targeted and managed.

Mattke says the study shows the industry should open itself up for independent review. If that kind of review is done, then everyone would know what programs save money, which programs work better, and how DM can better tailor programs. After several independent studies have been published, the industry could conclude that there are simply some conditions in which it can't save money, but that DM is still a valuable way to improve care.

"These data need to be out in the open so purchasers can make an informed decision rather than having to decide on vendor-based reports that are never validated by an outside entity," says Mattke.

companies therefore find it difficult to share proprietary information on what works and does not work.

There is also this argument: Should DM still even have to prove ROI? Lewis says DM has been around long enough that it is part of the healthcare landscape, and once an industry is part of the landscape, big returns are no longer demanded. For instance, no one would require an ROI on neonatal intensive care. DM may not save money, but it is a way to handle chronic diseases. "It's quite possible to be optimistic about the future of disease management while at the same time to be realistic about the savings potential," says Lewis, who is scheduled to discuss the RAND study further with Mattke and Ariel Linden, president of Hillsboro, OR-based Linden Consulting Group, during a session at the Disease Management Colloquium in May.

Although some have lamented RAND's results, Todd says he is pleased that independent organizations are beginning to re-view DM and hopes other respected researchers will follow the RAND effort to bring more objectivity to DM program assessment. As well, the RAND report may be a wake-up call. "While the RAND results were somewhat discouraging, we may need some bad news like this to motivate the industry to recognize that investment in new models of disease management is needed," says Todd. ■

"It's quite possible to be optimistic about the future of disease management while at the same time to be realistic about the savings potential."

—Al Lewis, JD

Safety net for high-risk pregnancies

Outpatient programs save money, reduce ER trips, hospitalizations

Childbirth-related expenses represent the highest health costs for many companies, and premature pregnancies consume 60% of neonatal healthcare dollars. Couple those facts with the sober statistic that more than 12% of U.S. pregnancies end prematurely, and it's clear how the March of Dimes reported the preterm birth cost was at least \$26.2 billion, or \$51,600 for each preterm infant, in 2005.

According to the March of Dimes, the average length of a hospital stay for a term infant is 1.5 days, but preterm infants spend an average of 13 days in the hospital. In a preterm child's first year alone, the average medical cost, including inpatient and outpatient care, is \$32,325, about 10 times greater than for term infants (\$3,325).

High-risk pregnancies are not only short-term cost drivers, but premature babies can suffer from long-term (sometimes lifelong) health issues.

With that in mind, two companies have implemented programs that provide a safety net for those most at risk.

Matria Healthcare

Matria Healthcare has found that a comprehensive outpatient management program for women with preterm labor saves money through fewer ER visits, averted antenatal hospitalizations for the mother, and fewer neonatal ICU (NICU) admissions for the newborn.

"What our program is trying to accomplish is to get that pregnancy further along so that the baby is born in a later gestation stage so therefore their morbidity and their cost for you, the health plan, or the society at large is reduced," says **Gary Stanziano, MD**, senior vice president at Matria. He is a coauthor of "When More Care Can Equal Less Cost: Remote Health Monitoring of the Pregnancy Experiencing Preterm Labor," a study presented at the 2007 Disease Management Leadership Forum in Las Vegas.

The Marietta, GA-based DM company reviewed the data from 34,099 high-risk pregnancies enrolled in its comprehensive outpatient preterm labor management

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services between January 2000 and December 2005. Researchers compared those numbers to a control group of the same singleton, twin, and total number of high-risk births, which they collected from data published in several clinical articles.

What Matria found did not surprise its researchers: The outpatient program that prolongs pregnancy averts hospital visits and saves money. In fact, Matria claims a 3:1 ROI when researchers compared the outpatient program to the control group.

“The ROI is one piece of it, but with these types of pregnancies, it’s the impact of not just the cost of the hospitalization of the mom and the immediate costs for hospitalization of the baby in a NICU, but there is also the long-term and disability costs that have to be borne by our healthcare system,” says Stanziano.

The review found fewer antenatal hospital days and admissions and shorter stays in the NICU for the monitored group. (See the chart on p. 11.)

Companies that implement a high-risk pregnancy program should expect to invest money in the front end with the understanding that longer pregnancies, and averted hospitalizations and ER visits, will save money in the long run. In Matria’s case, the outpatient program (nurses and equipment) cost more than \$200,000, and there were no added outpatient costs in the control group. Overall, researchers reported Matria saved \$12,597 per pregnancy during the study period.

Matria’s high-risk pregnancy program has two components. One is in the home. High-risk obstetrical nurses visit the home and educate the expectant mothers on the services prescribed by their physicians, including pre-term labor signs and symptoms, premature birth facts, and lifestyle issues. The nurses also train the expectant mothers on the home biometric devices that are part of the program, which the expectant mothers utilize twice a day to allow the nurses to track uterine activity. (The nurses also communicate with the patient’s doctor via weekly written reports of the biometric data.)

“What our program does is it follows her after that episode, and we watch her at home, the nurses watch her at home, access her daily via the telephone, and monitor the uterine activity so we can have early detection if there is a problem,” says **Niki Istwan, RN**, coauthor of the study and director of clinical research at Matria.

The other section of the program is a 24/7 nurse line. This allows expectant mothers to call with questions, and more importantly, if a patient experiences contractions, she calls the nurse line rather than rush to the hospital. The uterine activity is transmitted from the biometric device over the phone line to the nursing call center where it is evaluated, usually within 45 minutes. The nurse then instructs the expectant mother whether a trip to the hospital is warranted.

The 1,400 high-risk OB nurses who work in the Matria program are usually ex-labor and delivery nurses who have an expertise in complex cases. “You need the nurse, you need the machine, and you need the experience. You need all the information you can get,” says Istwan.

Stanziano says Matria’s outpatient program works especially well in the Medicaid population. “I think part of the reason is because they are talking to a nurse who is committed to that pregnancy and that woman’s outcome. That sector today in our society is blown off a lot of the time. There is a bonding that occurs with the nurse,” says Stanziano.

Istwan disagrees that a pregnancy must reach full term in order to be deemed successful. Any pregnancy prolongation benefits the child. “You’re trying to get to term, but every week is a success . . . Any week you can prolong a pregnancy, you are going to decrease costs and neonatal morbidity.”

The Assist Group

The Assist Group in Lakewood, CO, is another example of a company that has created a maternal-newborn and child care management program aimed at improving clinical outcomes while lowering costs. Newborn

conditions, such as prematurity, low birth weight, and respiratory distress syndrome are among the highest-cost catastrophic conditions, according to The Assist Group. “Technology and medical improvements are helping more and more fragile infants survive,” says **Rose Bemis-Heys**, executive vice president of strategic development at The Assist Group. “These developments are not only increasing NICU length of stays and costs but long-term costs that stretch into childhood and sometimes adulthood.”

The Assist Group’s response to the issue is CareAssist, a comprehensive maternal-child care management program. The program is designed to manage the high-risk pregnancy, the newborn admitted to the NICU, and, as necessary, any complications extending to the pediatric period.

High-risk pregnancy management can optimize the pregnancy outcome, avoiding or reducing the NICU length of stay and childhood problems. When an infant

is admitted to the NICU, the CareAssist program is already in place and working to improve the infant’s outcome from day one. CareAssist can assure continuity of care after discharge from the NICU for any scheduled surgeries, procedures, or other pediatric issues. The company’s program includes several innovative features:

- ▶ Predictive modeling that uses a system that draws from a database containing nearly 120,000 newborn records that estimates each infant’s length of stay and costs
- ▶ Acuity-based resource allocation assuring that the right resources are assigned to each case based on the patient’s clinical and psychosocial complexity
- ▶ Multidisciplinary expert team that provides access to neonatologists, maternal fetal medicine specialists, pediatric subspecialists, and expert nurse care managers

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Matria program shows savings

	Control (n = 34,099)	Monitored (n = 34,099)	Savings
Antenatal hospital days			
Admissions	35,463	3,596	
Days/admission (mean)	3.4	3.6	
Total days (\$1,659/day)	120,574	12,900	
Subtotal hospital cost	\$200,032,372	\$21,401,100	\$178,631,272
Nursery days			
<i>NICU/intermediate nursery</i>			
Total admissions	18,257	13,938	
Average days/admissions	23.8	17.7	
Total NICU/intermediate days	434,516.60	246,494	
NICU/intermediate cost (\$2,544/day)	\$1,105,410,230	\$627,080,736	\$478,329,494
<i>Normal nursery</i>			
Total admissions	23,798	28,587	
Average days/admission	2	2.7	
Total normal days	47,586	78,041	
Normal cost (\$500/day)	\$23,793,000	\$39,020,500	(\$15,227,500)
Subtotal nursery costs	\$1,129,203,230	\$666,101,236	\$463,101,994
Outpatient services			
Subtotal outpatient costs	N/A	\$212,193,024	(\$212,193,024)
Total	\$1,352,375,184	\$899,695,360	\$429,540,243
Cost/pregnancy	\$39,660	\$26,385	\$12,597

Source: Matria Healthcare.

Pregnancies

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- Family preparedness that includes an expert nurse care manager who works with family members to involve them in decision-making and provides them with education and resources up to 14 days after discharge
- Financial claim review in which CareAssist documents the changes in levels of care and reviews the billed charges to ensure that they reflect the care provided

The nurse care manager coordinates the care team—providers, family, and payer—and the flow of information and decision-making. This individual is also available for the family to answer questions and serves as an expert and advocate for the family. The physician consultant works directly with the attending physician. The consultants are expert neonatologists and maternal fetal medicine specialists. Bemis-Heys says this aspect of the program is crucial.

Managed care programs often meet resistance dealing with physicians, but Bemis-Heys says that has largely not been the case for CareAssist. The reasons are that The Assist Group’s specialists are leaders in their area of specialty and they provide recommendations (rather than demanding changes in care) that are supported by evidence-based medicine.

The family preparedness aspect of CareAssist spans the continuum from pregnancy to bringing the infant home.

This can include making sure the facility where the patient delivers has the appropriate level of NICU care so that the child isn’t born in one facility and then transported to a hospital with a higher level of care. It also includes helping parents cope with a fragile newborn. The company uses a program called COPE, which has been demonstrated in a randomized controlled clinical trial to reduce NICU length of stay and decrease depression, stress, and anxiety for parents of premature infants.

The financial claim review is a way to assure payers that they are being billed properly for the care provided. CareAssist offers a preliminary review of the claims. If discrepancies are noted, a full bill review called a “Forensic Review” is recommended. Bemis-Heys says The Assist Group’s Forensic Review solution can save payers on average 20% of billed charges.

Without taking the claim review savings into account, a recent evaluation showed CareAssist’s impact on costs.

They concluded CareAssist’s ROI was 3:1, or three dollars saved for every dollar spent on care management. There was an average reduction in NICU length of stay of 15%. Bemis-Heys says the ROI comes from ensuring optimal care and family preparedness. Including high-risk pregnancy management can even add more to the savings as “every week in the womb helps improve the newborn outcome and reduce costs,” says Bemis-Heys. ■

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