

# DM DISEASE MANAGEMENT ADVISOR™

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*IMPACT program urges PCPs to focus on emotional needs*

## Give depression among elderly the urgency it deserves

Studies suggest that depressed, older adults are higher utilizers of medical care than elderly patients who are not depressed, but that doesn't mean that depressed patients are getting the preventive services they need. To the contrary, a new study completed by researchers at Duke University School of Nursing suggests that elderly patients suffering from psychological distress are significantly less likely to receive preventive services recommended for this age group than patients who are not depressed.<sup>1</sup> (See **Figure 1 on page 26.**) The underlying reasons for this gap in care are not entirely clear, but researchers emphasize that the Duke study is just the latest in a series of findings which underscore the need for better screening and treatment of depression in older adults.

It's a difficult problem to address because many PCPs are uncomfortable or ill-equipped to deal with mental health issues, and older patients are often reluctant to seek help from a mental health provider. However, a bold new model called IMPACT (Improving Mood Promoting Access to Collaborative Care Treatment) has produced impressive results in giving both patients and providers the help they need to successfully tackle mood disorders in primary care.

### Inside This Month...

- *With progress comes new challenges in the battle against cystic fibrosis. The median age of survival among CF patients has risen from 14 to nearly 40 over the past three decades, but these individuals have many different medical and psychosocial needs than the pediatric population. To better meet these needs, Atlanta-based Emory University Medical School has developed a distinct program for adult patients that provides multi-disciplinary care to older CF patients from throughout the Southeast ..... Page 28*
- *Getting patients primed for DM. Recognizing that a large percentage of chronically ill patients are simply not ready or willing to make meaningful behavioral changes, Ann Arbor, MI-based HealthMedia has developed a web-based program aimed at getting these patients to the point where they can take full advantage of the benefits that traditional DM programs have to offer. It's an automated but personalized approach, and early results suggest it is making an impact ..... Page 30*
- *Low-cost interventions deliver big-time dividends. That's the conclusion of two new studies that looked at different aspects of heart disease. Both found that low-cost pharmaceutical agents offer substantial preventive impact, but both also determined that there is ample room for improvement in prescribing patterns. One other intriguing result: higher spending does not necessarily correlate with higher quality or better outcomes ..... Page 34*

### Team-care approach

Depression in the elderly is a much bigger problem than most providers realize. The National Institute of Mental Health indicates that out of the 35 million Americans over the age of 65, an estimated 7 million are suffering from depression. And even though studies show that treatment can be effective in 80% of cases, only a small percentage of the elderly get adequate treatment either in primary care or from a mental health provider.

The IMPACT approach addresses this problem by introducing a collaborative team to the primary care setting including a nurse or mental health specialist who has been trained in the concept, a consulting psychiatrist, and the PCP.<sup>2</sup> (See **Figure 2 on page 27.**) Also part of the model is a computerized tracking system that is used to monitor progress.

"The key thing here is that patients are not allowed to languish in a state where they aren't getting better," stresses **Enid Hunkeler, MA**, the lead author of the study and an investigator with the Kaiser Permanente Division of Research in Oakland, CA. "The nurses can tell very quickly how

they are doing and change their treatment -- often based on [that assessment]."

### Continuous monitoring

Under the IMPACT model, patients are typically identified for intervention based on the results of a standard depression screen. The nurse or mental health specialist enters these baseline results into the tracking system, and a treatment plan is developed in consultation with the PCP and the patient. "It often starts with antidepressants, but there is also the option for patients who do not want to take antidepressants to start with problem-solving therapy," explains Hunkeler. Treatment decisions are guided by an algorithm that was developed by specialists, many of whom have contributed to practice guidelines for the treatment of depression.

From this point forward, the nurse is in frequent contact with the patient to monitor how the treatment is working and guide the patient in developing strategies he or she can use to better manage the disease. This contact may include in-person visits as well as phone calls. At regular intervals, the depression screen is re-administered, and the results are entered into the tracking system.

"If the patient is progressing well, the nurse is

unlikely to alter the treatment regimen. However, if it turns out that the patient is not progressing or getting better after six weeks, for example, she will recommend to the PCP that the medicine be changed, or that perhaps problem-solving therapy be added to the mix," notes Hunkeler. In cases where added assistance or expertise is needed, the psychiatrist is available for consultation.

### Primary care setting is key

Over the course of the study period, patients randomized to IMPACT care responded favorably to the approach. "They were quite happy that the specialist or nurse followed them quite closely, and in the beginning many of the follow-ups were weekly," says Hunkeler. "The patients felt there was really somebody in the medical care system who knew them, was close to them, and had time for them."

In fact, under this model, most of the one-on-one care for depression is delivered by the nurse or mental health professional, but it is done in the primary care setting, and Hunkeler emphasizes that this aspect is key. "They are an extension of the PCP, who the patient knows. They have this kind of expertise, and they don't have patience," she emphasizes. "By that, I mean that they don't wait for a patient not to do well."

Patient satisfaction is important, but most impressive are the sustained clinical results achieved in patients receiving care in the IMPACT model. In Hunkeler's study, 1,801 depressed patients were followed for two years at 18 primary care clinics across the U.S., with half of the group randomized to receive standard treatment and the other half given IMPACT care. On a range of outcomes, investigators found that the intervention group did significantly better than the group receiving usual care -- and these

**Figure 1: Unadjusted and Adjusted Estimates of the Effects of Psychological Distress on Elderly Receipt of Various Preventive Health Services**

	Unadjusted Estimates				Adjusted Estimates	
	2001 National Estimates* of Percentage of Elderly Using Service				Multivariate Odds Ratios, Controlling for All Predisposing, Enabling, and Need Factors	
	Overall Sample	Depressed Sample	Nondepressed Sample	P <sup>†</sup>	Odds Ratio	95% Confidence Intervals
Blood pressure	97.0	98.9	96.7	0.52	1.49	(0.42-5.29)
Influenza vaccination	66.4	61.1	67.5	<0.01	0.70 <sup>§</sup>	(0.55-0.88)
FOBT or sigmoidoscopy	47.6	44.4	48.2	0.12	0.88	(0.71-1.10)
Mammography	75.7	66.9	77.4	0.08	0.68	(0.34-1.37)
Routine checkup	78.9	79.0	78.9	0.95	1.05	(0.82-1.34)
Dental checkup	54.5	42.1	57.3	<0.01	0.77 <sup>‡</sup>	(0.61-0.97)
Clinical breast examination	70.9	61.4	73.2	<0.01	0.73 <sup>‡</sup>	(0.57-0.94)
Cholesterol screen	72.3	73.5	72.0	0.50	1.13	(0.86-1.48)
Prostate-specific antigen Test	60.4	59.0	60.8	0.68	0.95	(0.61-1.48)

\*Percentages are weighted to the 2001 United States community-dwelling elderly population.

<sup>†</sup>Depressed versus nondepressed by  $\chi^2$ .

<sup>‡</sup>Significant at  $P < 0.05$ ; <sup>§</sup>significant at  $P < 0.01$ .

FOBT indicates fecal occult blood test.

Source: Thorpe J, Kalinowski C, Patterson M, et al. Psychological Distress as a Barrier to Preventive Care in Community-Dwelling Elderly in the United States. *Medical Care* 2006; 44:187-191.

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results persisted even one year after the program ended. (See Figure 3 on page 28.)

The success of the model may be due, in part, to its ability to put care of mental health on a much more equal footing with care of physical health than is typically the case. "It has the urgency of the PCP who is used to making decisions ... and getting a result quickly," she explains. "And it has the expertise in medications of the psychiatrist who is almost a bit of an artist, putting together an appropriate medication regimen for a patient, guided by an algorithm. So I feel that it gives patients the best of both worlds."

### Financial advantages

At first glance, the model appears to be expensive, but an economic analysis of the approach suggests that IMPACT is more cost-effective than usual care, and it may even produce savings over

the long term.<sup>3</sup> "If you follow patients for over two years, you see that there are actually three months of additional days of depression-free time for the patient," stresses Hunkeler. "That is a whole season of depression-free days for the patient at the same cost as usual care."

Investigators estimate that the per-patient cost of implementing the model is about \$580 per year, but they point out that this is a modest investment considering that the total medical costs for a depressed older adult are about \$8,000 per year.

As a result of these findings, at least ten major health care organizations in the U.S. and Canada are implementing the IMPACT model, and some of these organizations are expanding the approach to include all adults with depression. Further, with support from the John A. Hartford Foundation, specialists in the IMPACT approach are providing training to health care providers interested in incorporating the model into their own settings.

**Figure 2: Key Components of the IMPACT model of Depression Care**

Key Components of Effective Depression Care	IMPACT Model of Depression Care	Adaptations
<b>Diagnosis and Proactive Tracking of Depression Outcomes</b>	Uses PHQ-9 to help diagnose depression and track depression outcomes. Advantages of the PHQ-9: short, administered in person or by telephone, facilitates diagnosis of major depression and measures depression severity and treatment response over time, effective in a medically ill / geriatric population. (see Löewe B, et al, 2004, <i>Medical Care</i> )	Screen for depression with PHQ-2 and add the other 7 PHQ-9 items for patients who screen positive.
<b>Electronic Tracking / Reminder System</b>	Uses an electronic 'Clinical Information System' to track treatments and outcomes and prompt clinicians if patients are not responding as expected. (see Unützer J, et al, 2002, <i>Psychiatric Services</i> ).	Excel, Access, or PDA-based 'registries' or tracking / reminder functions of electronic medical record systems (EMRs).
<b>Care Manager</b>	A dedicated depression care manager (CM; usually a nurse, social worker or psychologist) in primary care performs an initial assessment, provides education, prepares care plan, monitors depression symptoms and treatment response, supports antidepressant therapy prescribed by the primary care provider, coaches patients using behavioral activation, offers a brief course of evidence-based psychotherapy, facilitates referral to needed medical / social services, creates a relapse prevention plans for patients who are improved and stable – all in consultation with a team psychiatrist and the patient's PCP (see Saur et al, JAPNA 2002).	Care manager can be 'on site' in primary care (ideal) or by telephone. Care manager may be supported by a medical assistant who measures depression symptoms and does follow-up with patients whose symptoms have stabilized. Care manger may refer to another provider for psychotherapy.
<b>Education</b>	A patient education videotape and booklet about depression designed for a geriatric audience with comorbid medical illnesses. The video tape features actual patients telling their stories.	Other educational materials (print, video, DVD, or web-based). Education can be offered in a 'class' format.
<b>Behavioral Activation</b>	CM uses behavioral activation / pleasant events scheduling at each patient contact.	Patient activation, health coaching / promotion, motivational interviewing.
<b>Antidepressant Medication Management</b>	CM uses evidence-based treatment algorithms and dosing guidelines for antidepressants to support primary care provider (PCPs) who is prescribing antidepressant medications, to ensure treatment adherence, minimize side effects, and facilitate dose titration and change of ineffective treatments as needed.	Consulting pharmacists or psychiatrists can help with this task.
<b>Brief Psychotherapy</b>	CM offers Problem-Solving Treatment in Primary Care (PST-PC), an evidence-based, brief psychotherapy designed for use in medical settings.	CM may refer to other clinicians for psychotherapy or use other evidence-based brief psychotherapies such as IBT or CBT.
<b>Benchmarking and Stepped Care</b>	CM closely monitors treatment response and facilitates change in the treatment plan in consultation with team psychiatrist if patient is not at least 50% improved (as measured by PHQ) within 8-12 weeks.	Electronic disease registry with 'tickler system' to identify treatment failures.
<b>Psychiatric Consultation</b>	A designated team psychiatrist provides regular (scheduled) back-up and consultation to the CM and the PCP, particularly in cases where patients do not improve with first or second line therapies. This is a common problem in depressed older adults with significant comorbid medical illnesses. In IMPACT, the care managers also had a monthly conference call that promoted peer consultation.	Consultation can be done in person or by telephone. Consulting psychiatrist may see patients for consultation or refer for additional specialty mental health treatment.

### Environment matters

The need for interventions like IMPACT that help to identify and address depression in older adults is quite clear, according to **Joshua Thorpe**, PhD, MPH, the lead author of the Duke study. He links the treatment of depression to improvements in other health issues, since psychological distress is a frequent barrier to preventive care in older adults. Thorpe notes that health care providers need to be much more vigilant in screening their patients for emotional distress and looking for depression risk factors. "It should go right along with asking someone how their knee feels, or how their back pain is," he stresses. "[PCPs] should be asking how the patient feels emotionally -- whether the patient is feeling sad. There are probing questions they can ask, and these can be incorporated into a routine visit."

It is not enough to just ask a few questions. Thorpe emphasizes that health care organizations and individual providers need to create an environment where patients are at least as comfortable dis-

Source: <http://www.impact.ucla.edu/keycomponentsofdepressioncare.html>

cussing their emotional health as they are talking about their physical ailments.

“Sometimes there is a stigma on the patient’s end that it is okay to talk about a sore hip, but that it is not acceptable to say that he is feeling sad or has feelings of hopelessness,” he says. “We want to encourage providers to really screen, and we want to start interventions and education programs for our patients, encouraging them to talk about feelings of sadness and depression, and to let them know that this is not a normal part of aging. Sometimes people feel that depression just goes along with the usual aging process, but that is just not true.”

**Editor’s note:** A web site devoted to the latest research and findings regarding the IMPACT approach to depression care can be accessed at [www.impact.ucla.edu](http://www.impact.ucla.edu).

## Research

1. Thorpe J, Kalinowski C, Patterson M, et al. Psychological Distress as a Barrier to Preventive Care in Community-Dwelling Elderly in the United States. *Medical Care* 2006; 44:187-191.

2. Hunkeler E, Katon W, Tang L, et al. Long-term outcomes from the IMPACT randomized trial for depressed

elderly patients in primary care. *British Medical Journal* 2006; 332:259-263.

3. Katon W, Schoenbaum M, Fan Ming-Yu, et al. Cost-effectiveness of Improving Primary Care Treatment of Late-Life Depression. *Archives of General Psychiatry* 2005; 62:1293. ♦

**Figure 3: Depression outcomes by study group at baseline, 12 months, 18 months, and 24 months**

Depression outcomes	Usual care (n=895*)	Intervention (n=906*)	Difference in percentages between groups (95% CI)	P value	Depression outcomes	Usual care (n=895*)	Intervention (n=906*)	Difference in percentages between groups (95% CI)	P value
<b>SCL-20 depression score (range 0-4):</b>					<b>PCS-12 (range 0-100):</b>				
Baseline	1.67 (0.61)	1.68 (0.61)	0.01 (-0.05 to 0.07)	0.7368	Baseline	40.36 (6.33)	40.18 (6.44)	-0.18 (0.78 to 0.43)	0.5648
12 month follow-up	1.39 (0.68)	0.97 (0.67)	0.42 (0.49 to 0.35)	<0.0001	12 month follow-up	39.26 (7.21)	40.98 (7.33)	1.72 (0.96 to 2.47)	<0.0001
18 month follow-up	1.37 (0.68)	1.08 (0.64)	0.29 (0.35 to 0.22)	<0.0001	18 month follow-up	39.61 (7.42)	40.74 (7.44)	1.14 (0.34 to 1.93)	0.0050
24 month follow-up	1.34 (0.68)	1.11 (0.63)	0.23 (0.30 to 0.16)	<0.0001	24 month follow-up	39.51 (7.64)	40.34 (7.56)	0.83 (0.01 to 1.64)	0.0481
<b>Overall functional impairment (range 0-10):</b>					<b>Confidence in managing depression (range 0-10)†:</b>				
Baseline	4.59 (2.56)	4.68 (2.65)	0.09 (0.15 to 0.33)	0.4690	12 month follow-up	6.17 (2.14)	6.94 (2.20)	0.77 (0.55 to 0.99)	<0.0001
12 month follow-up	4.51 (2.74)	3.49 (2.78)	1.03 (1.31 to 0.74)	<0.0001	24 month follow-up	6.28 (2.17)	6.67 (2.20)	0.39 (0.16 to 0.62)	0.001
18 month follow-up	3.93 (2.52)	3.46 (2.65)	0.47 (0.74 to 0.19)	0.0009	<b>Response (at least 50% drop in SCL-20 depression score from baseline):</b>				
24 month follow-up	3.80 (2.66)	3.69 (2.86)	0.11 (0.41 to 0.19)	0.4632	12 month follow-up	134 (18.41)	348 (45.25)	26.85 (22.34 to 31.35)	<0.0001
<b>Overall quality of life (range 0-10):</b>					18 month follow-up	146 (21.01)	277 (38.00)	16.99 (12.34 to 21.64)	<0.0001
Baseline	5.33 (1.94)	5.35 (2.01)	0.02 (-0.16 to 0.20)	0.8302	24 month follow-up	157 (22.99)	239 (33.85)	10.87 (6.16 to 15.57)	<0.0001
12 month follow-up	6.02 (2.14)	6.62 (2.16)	0.60 (0.38 to 0.82)	<0.0001	<b>Remission (SCL-20 depression score &lt;0.5):</b>				
18 month follow-up	5.94 (2.13)	6.29 (2.11)	0.36 (0.14 to 0.58)	0.0015	Baseline	20 (2.24)	15 (1.66)	0.58 (1.86 to 0.69)	0.3699
24 month follow-up	6.08 (2.22)	6.34 (2.21)	0.26 (0.03 to 0.49)	0.0296	12 month follow-up	62 (8.49)	200 (25.97)	17.48 (13.78 to 21.18)	<0.0001
<b>General health (range 1-5, 5 is worst):</b>					18 month follow-up	64 (9.18)	135 (18.49)	9.31 (5.77 to 12.85)	<0.0001
Baseline	3.33 (1.09)	3.29 (1.06)	0.05 (0.15 to 0.05)	0.3694	24 month follow-up	70 (10.22)	112 (15.86)	5.65 (2.12 to 9.17)	0.0018
12 month follow-up	3.47 (0.99)	3.15 (1.00)	0.32 (0.42 to 0.22)	<0.0001	<b>Satisfaction with depression care (excellent/very good)‡:</b>				
18 month follow-up	3.45 (0.96)	3.26 (1.00)	0.19 (0.29 to 0.09)	0.0002	Baseline	137 (49.10)	161 (52.79)	3.68 (4.43 to 11.79)	0.3738
24 month follow-up	3.40 (0.99)	3.23 (0.99)	0.17 (0.27 to 0.06)	0.0015	12 month follow-up	231 (48.23)	518 (76.18)	27.95 (22.45 to 33.45)	<0.0001
					18 month follow-up	234 (51.09)	326 (65.20)	14.11 (7.91 to 20.30)	<0.0001
					24 month follow-up	211 (49.30)	287 (62.26)	12.96 (6.48 to 19.44)	0.0001

Values are means with standard deviations for the first six outcomes and numbers with percentages for the last three outcomes

\*Total numbers of patients randomised to each study group at enrolment. Numbers of respondents at each follow-up varied and were less than 895 for the group receiving usual care and less than 906 for the intervention group because of missing data. Numbers of respondents for any one item ranged from a total (usual care and intervention patients combined) of 1379 to 1797 because of missing data.

†Assessed only at 3, 12, and 24 months.

‡Assessed only in individuals who reported depression care in past three months at baseline (n=584) and individuals who reported depression care in past six months at follow-up (at 18 months:n=958; at 24 months:n=889).

Source: Hunkeler E, Katon W, Tang L, et al. Long term outcomes from the IMPACT randomized trial for depressed elderly patients in primary care. *British Medical Journal* 2006; 332:259-263.

*As lifespan increases, health needs evolve*

## Innovative CF program responds to the unique needs of adults

Over the past three decades, the median age of survival among people with cystic fibrosis has more than doubled, from age 14 in 1969 to age 35 in 2004. Such progress is clearly a result of vastly improved therapies and interventions aimed at better managing the genetic disease. However,

given the unique medical, emotional, and social needs of adult patients, specialists at Atlanta, GA-based Emory University decided to build a distinct program designed solely for CF patients over the age of 18 -- a group that now comprises nearly 40% of all CF patients.

Unveiled in 2002, Emory’s Cystic Fibrosis Adult Program now serves more than 140 CF patients from throughout the Southeast with a multidisciplinary approach that includes intensive monitoring, patient education, and the kind of

social support that is required for patients charged with such a high level of self-care responsibility. Built into the approach is an unusually high level of intensity that is aimed not just at reducing exacerbations of the disease, but also working toward the day when the typical CF patient can expect to have a normal life span.

### ***Responding to a mandate***

In creating the program, Emory was responding to a mandate from the CF Foundation that CF centers across the country develop distinct programs for their adult patients, explains **Lindy Wolfenden**, MD, a pulmonologist at Emory who is actively involved with the program. "There are certain challenges that are present for the adult stage of the disease that aren't there in the pediatric stage," she explains, noting that adult patients tend to be sicker than younger patients. "However, the bigger picture is that adults have needs that simply aren't met in pediatric medicine."

For example, Wolfenden points out that she frequently discusses such issues as cancer screening, reproductive concerns, and transplant alternatives with her adult patients, and these are issues that would not come up with pediatric patients. Further, as awareness of the disorder grows, an increasing number of patients are not even becoming aware of their diagnosis until they are adults. "If you have a patient who has recurrent sinus disease and asthma that never quite normalizes or is very difficult to treat, this could be a mild manifestation of CF, because CF is a very heterogeneous disorder. Not everybody has the same course by a long shot," adds Wolfenden. "We have patients who live into their 50s and even their 60s with the disease."

There are some patients with severe disease who have not been diagnosed until adulthood, but most often the patients who are diagnosed as adults differ medically from younger patients in that the disease is milder, and they tend to have normal pancreatic function and better nutritional status, explains Wolfenden.

### ***A challenging disease***

As in many other DM programs, a prime focus of the Adult CF Program is to prevent exacerbations of the disease, thereby improving quality of life and limiting unnecessary utilization. This is a particularly tall challenge in patients with CF because optimal control depends on a high level of patient self-care.

"We ask a lot of our patients to do airway clearance on a daily basis, we ask them to take inhaled medicines on a daily basis, we ask them to take pancreatic supplement enzymes with every

meal, and we ask them to come to the doctor's office four times a year, which is four times more than most people go," says Wolfenden. "If you look at a day in the life of a CF patient, if they are to do all of their treatments, that requires 30 to 60 minutes out of every day."

To equip patients with the skills they need to manage their disease, and to provide the appropriate ongoing care and support, the CF Adult Program enables patients to meet with a variety of specialists on a routine basis. Typically, pulmonologists see patients at least four times a year to monitor lung function and overall health status. However, in this program, patients also see a nutritionist and a social worker at least annually.

### ***Multidisciplinary care***

While sinus infections, upper airway disease, and other pulmonary problems are the primary manifestations of CF, patients also typically have difficulty absorbing nutrients because of problems with pancreatic function. This is where the nutritionist has a major role to play in helping patients adhere to appropriate food choices and a regimen of enzymes that can help with food absorption.

"We are learning more and more about the link between body weight and lung function," says Wolfenden, noting that unlike the problems with obesity in the general population, most CF patients struggle to maintain optimal weight. "Most patients succumb to CF because of lung disease, so the guidelines now include BMI targets of 23 for men, and 22 for women. The goal of the nutritionist is to make sure that everyone meets those goals."

Additionally, because a significant number of CF patients develop diabetes, the nutritionist is involved with establishing an appropriate treatment plan. "The type of diabetes that people with CF develop is like a hybrid of type 1 and type 2 diabetes," says Wolfenden. "Type 2 diabetes has to do with insulin resistance, and that appears to be somewhat the case in patients with CF, but there is also more of a type 1 component as well." Wolfenden adds that while practitioners don't yet have strategies for preventing onset of diabetes in CF patients, early identification is important, so screening for the disease is part of routine care in the program.

Given the highly burdensome nature of CF management, the social worker has a significant role to play as well in facilitating end-of-life discussions, screening for psycho-social difficulties, and assisting with employment decisions or obtaining disability. "As CF patients reach adulthood, issues like health insurance become very important because they know they are going to be living with a chronic illness, and they will need a lot of health

care, so simply choosing the right health insurance is a major factor in their lives," says Wolfenden.

### **Charting progress**

The patients and providers involved with the Adult CF program are doing a remarkably good job of tracking health status and improvement over time, emphasizes Wolfenden. One important tool helping them is a web-based registry offered through the CF Foundation and pioneered by **Arlene Stecenko, MD**, director of the CF Center at Emory.

"We enter in clinical information about our patients, and using the web-based tools we can print out in live time that patient's trend in lung function over the past several years -- or even [over] several visits," explains Wolfenden, noting that the tool can also track BMI trends over time. "We have a log on every chart of the person's individual best lung function number, which is measured through the use of a pulmonary study. So we take all the data from each year, and take the best, that that becomes each person's personal best for that given year."

Sharing this information with patients at every visit facilitates a discussion around goal setting

and helps give patients a sense of control over their disease. "Frequently, patients will ask for a copy of their pulmonary function studies, and I have a couple of patients who actually bring in their laptops so they can plot their lung function every time they come in. They are very much a partner in their care," adds Wolfenden.

### **Looking ahead**

As an arm of a large academic medical center, the Adult CF Program is involved with several quality improvement initiatives, and research into new and better treatment strategies is given high priority. However, while most of the progress over the past three decades has been due to improved drug therapies, Wolfenden believes the next few years will tell a different story. "We have drugs available to treat exacerbations that we didn't have 30 years ago. Now, I think that is not so much what is driving success. Now, it has more to do with preventing complications as much as treating them."

**Editor's note:** For more information about Emory's Cystic Fibrosis Adult program call 404-727-5728, or visit Emory's web address at [www.emory-healthcare.org](http://www.emory-healthcare.org). ❖

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#### *Emotional, behavioral issues targeted*

### **New web-based program gets patients primed for DM**

When disease management efforts fail, it is often because the patient is not ready or receptive to making changes. And studies suggest that this is an all-too-common occurrence, resulting in poor outcomes and wasted resources. It's a tough problem to get around because there are often many different factors or barriers involved, but developers at Ann Arbor, MI-based HealthMedia believe they have devised a cost-efficient solution to this dilemma that offers benefits to both payers and providers.

HealthMedia specializes in the development of online DM and wellness programming, so it is no surprise that the company's approach to this problem is in the form of an Internet-based program called Care for Your Health™. Specifically designed for patients with any type of chronic illness, the program focuses not so much on the specifics of any disease, but rather on the emotional and behavioral factors that play such a strong role in a person's ability to develop effective self-management skills.

Care for Your Health is just now being released to the marketplace, but results from pilot testing of the approach at four large health plans

suggest that it may well provide a critical element of care that has been missing for a large percentage of chronically ill patients.

### **A 'pre-processor' to DM**

No one program will work for everybody, but developers at HealthMedia saw evidence that traditional DM messaging was simply falling on deaf ears for a significant number of patients, according to **Ted Dacko**, the company's CEO. "We know why people will and won't change their behavior, and we recognized that classic DM approaches were preaching treatment strategies to people who weren't ready to accept their conditions. They did not have the right motivation, they didn't have the right self-confidence, and they didn't have the skills to use the programs that were developed," he explains. "As a behavioral health company, it was perfectly obvious to us that you needed to put these things on the front end of DM in order to boost the efficacy rates of traditional DM programs."

While the program may well offer benefits to chronically ill patients at all acuity levels, Dacko emphasizes the program's value at the front-end of the DM process. "Consider it as a pre-processor to DM that gets the patient in the right frame of mind to then go off and deal with their condition," he says. "It is not a classic DM approach where we are trying to just focus on how to treat diabetes. We are

actually teaching patients what their role is in chronic illness self-management so they can take the next step."

For example, the program delves into such issues as the doctor-patient relationship -- helping patients communicate more effectively with their providers, and offering strategies on how to take a more active role in their care. Additionally, the program covers emotional issues such as depression and stress, and it includes guidance and tools relevant to pain management, fatigue, medication compliance, and social support.

"The program is designed to help the person with chronic illness understand and accept their condition, and the role they play on the treatment team," notes Dacko. In fact, he stresses, the aim of the approach is to equip patients with the skills they need to become the quarterback of that team.

### Individualized feedback

In order to tailor the guidance and support offered through the program to each individual's needs, the process begins with a health risk assessment (HRA) that queries patients on a range of issues such as their experience with providers, adherence levels, their understanding of the disease process, self-efficacy, and their emotional health. "Based on how participants answer those questions, the technology writes an individual plan for them that is literally down to the sentence fragment or word level based on those responses," explains Dacko, noting that health care professionals have essentially trained the technology to respond to the various answers in specific ways.

For example, if a user has indicated on the HRA that she does not feel that her provider spends enough time with her, and that she does not understand her provider's instructions, the patient may receive a suggestion that she prepare a list of questions before her visits, as well as guidance and strategies for communicating more effectively with the provider.

Alternatively, if a patient indicates that side-effects or medication costs are a problem, he will receive guidance on how to address those issues. "It is literally like the patient is working with a counselor who has asked him a series of questions around these issues and then provided specific advice," notes Dacko. "The tech-

nology tailors [the response] in such a way that it looks like a personal letter or program from a counselor. Many patients have no idea that it is actually written by computer technology." (See Figure 1.)

### Impressive outcomes

While the intensity of the program is focused on the front end where patients complete the HRA and then received a tailored plan, it is not unusual for users to return the web site for several months, either to explore new content areas or to take advantage of self-management tools that the program provides. These include various tracking instruments, a medical library, exercise videos, and even recipes.

"The focus of the program is around a structured intervention which is longitudinal, but it is not something that they have to come back to over and over again," says Dacko. "Once we teach patients these self-management skills, then we are going to try and move them into making sure they are talking to their DM counselor, funnel them into another web-based program, or otherwise move them along the continuum."

Dacko acknowledges that there are always some people who will not respond to an automated or web-based approach. However, he suggests that the reach of such programs is so large, and the cost of delivery is so economical, that this type of option is an attractive alternative for health plans or large employers. Further, pilot testing of

**Figure 1**

The screenshot shows the 'My HealthMedia' website. At the top, there is a navigation bar with 'Home', 'Programs', 'My Account', and 'Log Out'. Below this is a 'Welcome' message to 'Henry!' with a list of personalized facts: 'You are 60 years old.', 'You're living with 3 chronic conditions.', 'You're especially concerned about your high blood pressure.', and 'You want to live an independent life.' To the left is a 'Structure' menu with categories like 'Care for Your Health', 'My Plan For Better Health', 'Welcome', 'Getting Started', 'Moving Forward', 'Meet Thomas', 'Taking the Next Step', 'When Wories Spin Out of Control', 'Your Healthcare Team', 'Gaining Control', 'Your Medication', 'Taking Control', 'Your Pharmacist', 'SMART Goals', 'Taking Flight', 'Resources', and 'Your Friend Plan'. Below the menu is a 'Tools' section with items like 'Newsletters', 'Pain Calendar', 'Goal Setting', 'Medical Library', 'Stretching Library', 'Exercise Library', 'Refill Reminder', 'Cookbook', 'Health Tools', 'View Your Questionnaire', 'Care for Your Health Survey', and 'About Care for Your Health'. On the right, there are two promotional boxes: 'Did you know?' with a laptop image and 'Inspiration' with a person walking image. The 'Inspiration' box contains a quote: 'A journey of a thousand miles must begin with a single step' - Lao-Tzu.

**Structure**

**Tools**

**Highly Individualized, Personal Tailoring**

Source: HealthMedia, Ann Arbor, MI.

the program on chronically ill members of four large health plans has yielded impressive early results based on self-reported data, including high satisfaction rates, improved patient-provider relationships, and improvements on a number of parameters related to patient self-efficacy. (See Figure 2 on pages 32-33.)

### Sustained motivation

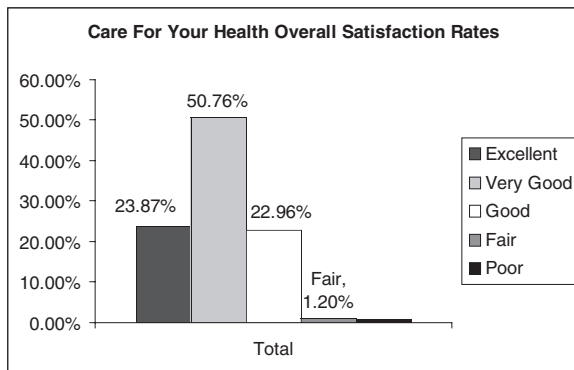
Based on these results, at least one of the health plans that participated in pilot testing of the program, Pittsburgh, PA-based Highmark Blue Cross and Blue Shield, is now making the program

available to its entire book of business. Interestingly, while Highmark already offers a full complement of traditional DM services, administrators believe that Care for Your Health will enhance what is already in place.

“What is different about this program is that it digs a little deeper into the motivation and self-efficacy piece,” explains **Anna Silberman**, MPH, VP of preventive services for Highmark BCBS. “I think most diabetics are somewhat familiar with the information that will keep them from developing complications, and keep their disease from progressing as quickly as it otherwise would. This program, though, deals with the barriers that we all have inside us that keep us from doing what we set out to do.”

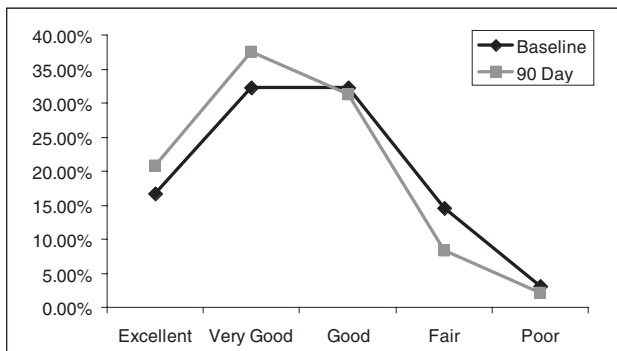
Of particular interest to Silberman, for example, were the outcomes indicating that participants were more motivated at the end of the program than they were in the beginning. “When you look

Figure 2

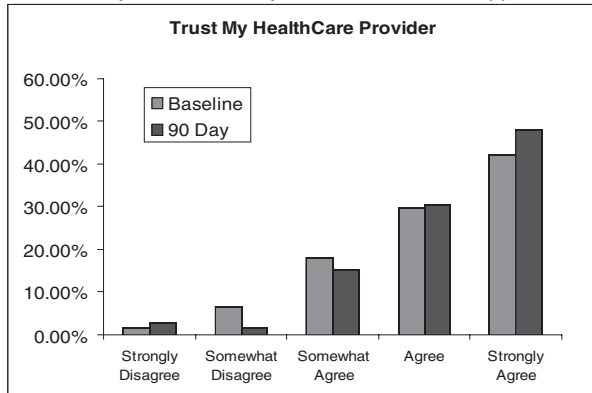


97% of Care™ for Your Health participants rated the program Good, Very Good, or Excellent

Reported Quality of Health: Baseline vs. 90 Day



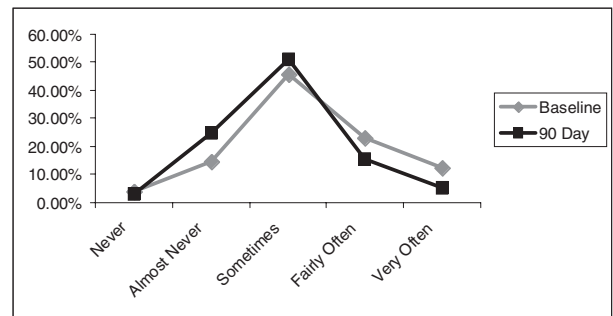
Improves Relationship With Healthcare Provider(s)



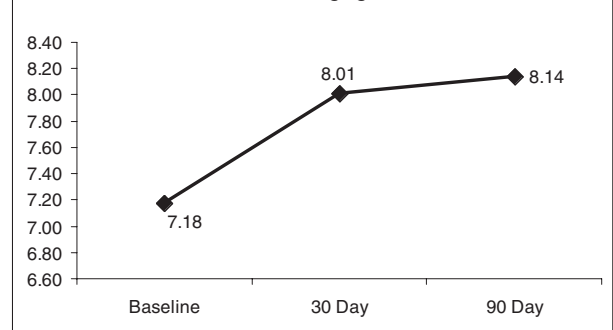
Source: HealthMedia, Ann Arbor, MI.

Figure 2 (continued)

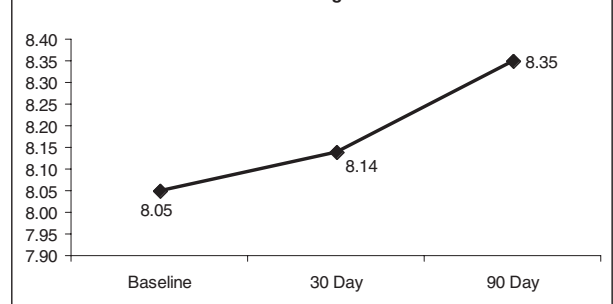
Improves Health and Stress Management



Overall Confidence in Managing Chronic Condition



Overall Motivation to Manage Chronic Condition



Source: HealthMedia, Ann Arbor, MI.

at the typical result of a health management or health promotion program, what you find is that going into the program you have practically 100% attendance, and people are at the peak of motivation," she explains. "Yet, in this program, from 90 days out people were more motivated than they were in the beginning, and that is across the board. That is very telling about the impact and the efficacy of a program."

### The value of prevention

By addressing chronically ill patients at lower-acuity levels, Dako suggests that programs such as Care for Your Health have the potential to deliver huge savings over the long term. "A traditional DM firm is only going to focus its outbound calling on people with high acuity; and [patients] are going to get structured interventions that are

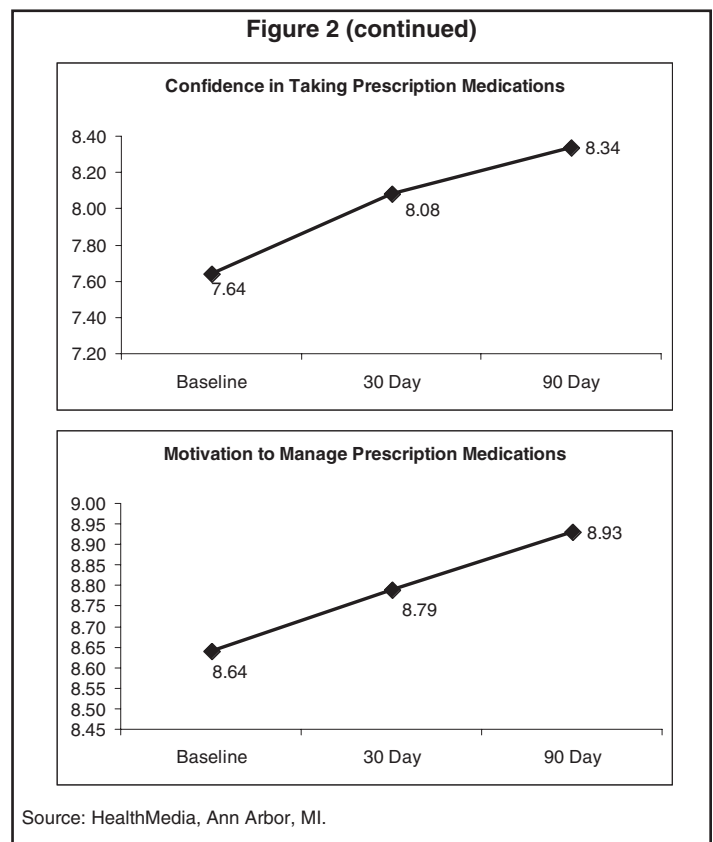
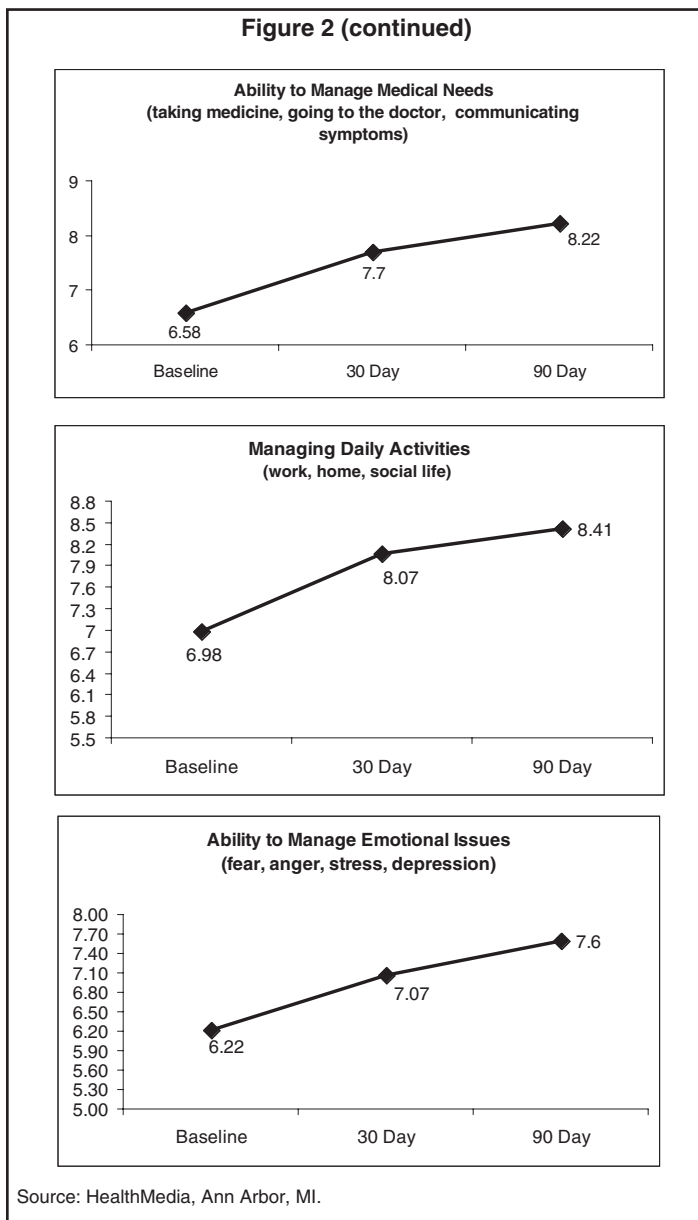
pretty high quality," he explains. "What we are trying to do is prevent the acuity Level 1 one patients from becoming Level 2s, and the acuity Level 2s from becoming 3s. And that is where the rise in DM is right now."

Dako emphasizes that a web-based option may be the most effective way to reach the acuity Level 3 patients who are often reluctant to engage with a nurse counselor. "They may be too busy, or too ashamed, or they just won't talk to somebody," he says. "In these cases, this program can be applied to acuity Level 3 patients as a secondary strategy."

Believing that the program does, indeed, offer benefits to patients at both ends of the acuity spectrum, Silberman is planning to make it available to any Highmark member with a chronic condition.

"I am often asked how we can afford to provide these kinds of interventions to our members, and if you look at the literature, the real question is how can we afford not to?" she stresses. "How can we afford not to do our very best to prevent what is often preventable? That is really the fundamental principle behind all of this. People really do deserve to know all of their options, and they deserve access to credible information that can help them become expert patients."

*Editor's note: For more information about Care for Your Health or any other programs offered by HealthMedia, visit the organization's web site at [www.healthmedia.com](http://www.healthmedia.com).* ♦♦



## Low-cost therapies deliver big impact in cardiac care

In the quest to capitalize on the latest technology, pharmaceutical breakthrough, or management technique, sometimes tried and true approaches get overlooked. In the case of disease management, it is indeed fortunate when such an oversight merely results in squandered resources. But as the results of two new studies underscore, it can have much more serious consequences as well.

One study, conducted by researchers at Oakland, CA-based Kaiser Permanente, found that in patients with undiagnosed heart disease, taking a simple statin or beta blocker could make a significant difference in whether the initial symptoms of disease consist of chest pain or a full-blown heart attack.<sup>1</sup> The other study, carried out by investigators at Hanover, NH-based Dartmouth Medical School, found that higher spending does not necessarily correlate with better outcomes in heart attack patients. In fact, researchers found that those focusing on simple, cost effective therapies -- beta blockers, aspirin, and/or reperfusion -- tend to have the best outcomes at the lowest cost.<sup>2</sup>

At the very least, such results are a reminder that increased spending will not necessarily result in higher quality or better outcomes. And for a condition as well researched as heart disease, patients can clearly benefit from attention to fundamentals.

### Two dimensions of care

The Dartmouth study is intriguing because the researchers looked at how spending correlates with survival rates among heart attack patients in various regions of the country. To control for any differences in the clinical status of different populations, investigators looked at these factors over time, from 1986 to 2002, and found that survival rates tended to be lower in those regions where spending had increased the most, and the highest survival rates occurred in regions where spending increases tended to be modest. (See Figure 1.)

Probing further into the care of these patients, investigators looked at two dimensions of care. The first dimension dealt with whether patients received aspirin and beta blockers upon discharge, and whether they were given reperfusion therapy within 12 hours of admission. These factors were selected because they are known to be low cost and highly effective.

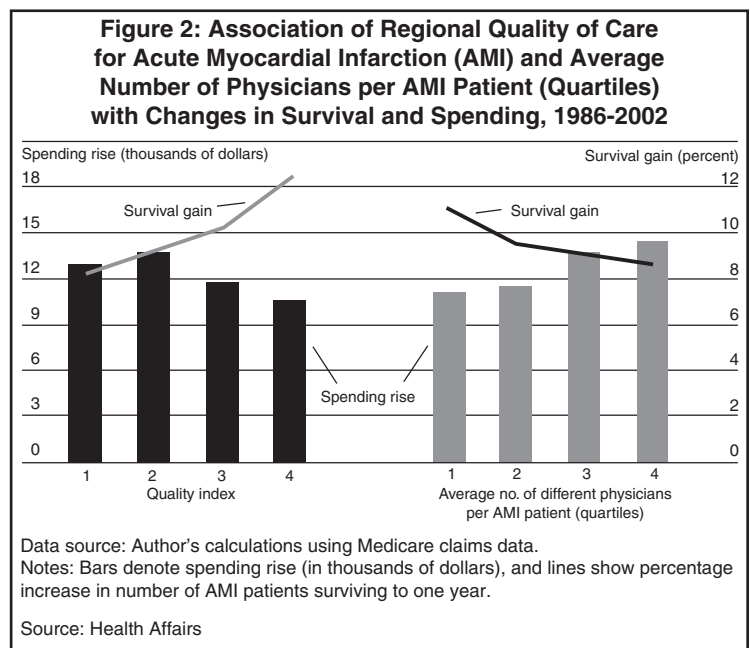
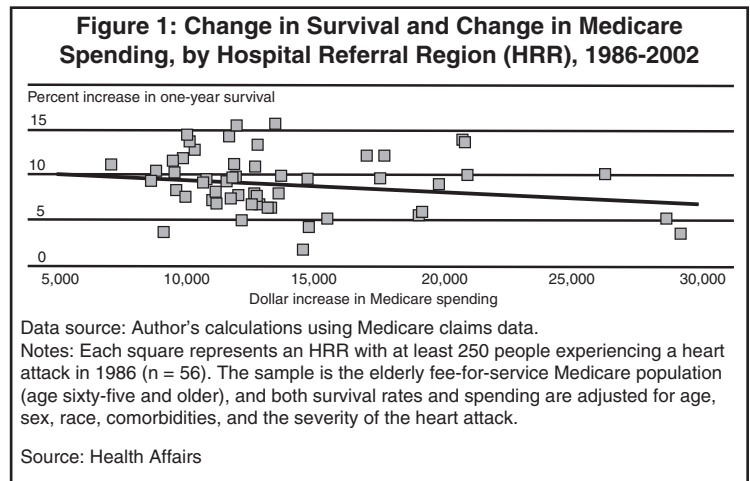
The second dimension consisted of the average number of physicians treating patients within one year of their heart attack. "What we use is not the number of doctors who saw an individual patient,

but the average number of doctors within this large region," explains Jonathan Skinner, the lead author of the study and a professor of community and family medicine at Dartmouth. "It is, I think, a particularly clever measure of a style of care that does not emphasize continuity because it is so hard for a physician to keep track of what other physicians are doing."

### A question of incentives

What investigators found was that those regions scoring highest (4) on the quality measures included in the first dimension of care tended to have the best survival rates and lowest spending increases. (See Figure 2.) Alternatively, the regions that scored high on the second dimension of care -- meaning that patients in these regions tended to see more treating physicians -- produced lower survival rates at higher cost.

Ultimately, Skinner suggests that quality care delivers higher survival rates, but he points out that



health care delivery systems are not always set up to reward quality care. What is needed, he says, are more accurate measures of cost and quality, and a realignment of incentives so that cost-efficient providers get the recognition and financial dividends they deserve. In fact, researchers at Dartmouth are working toward that goal. "We have several projects in progress where we are trying to get measures of efficiency, meaning better outcomes at lower costs," stresses Skinner. "That is what you want to look for. Try to find institutions that are able to do that, and then reward. That is what I think should be the primary goal of health policy initiatives."

### **Primary prevention**

While Skinner's research focused on cost-effective care following a heart attack, the Kaiser study looked at low-cost interventions that could potentially prevent a heart attack in the first place in patients with undiagnosed heart disease. "We knew from prior studies that certain drugs or having certain characteristics can affect a person's chance of having heart disease, but we knew much less about what would cause a person with heart disease to have a heart attack versus a lower-risk form of heart disease, exercise-induced angina, as the very first symptom of heart disease," explains **Alan Go, MD**, the lead author of the study, and research scientist and senior physician in Kaiser's Division of Research.

Consequently, in this case-control study, investigators evaluated the characteristics and medication use of nearly 1,400 male and female patients initially diagnosed with heart disease -- either because they suffered a heart attack or presented with exercise-induced angina. What researchers found was that the patients whose first warning sign for CAD was a heart attack were only half as likely to be taking a statin or beta-blocker compared with patients whose first clinical presentation of CAD was exercise-induced angina.

Furthermore, among patients in both groups who were not receiving statins or beta blockers, the same proportion of patients were eligible to receive these drugs based on national guidelines. Consequently, it is likely that heart attacks could have been prevented if recommended pharmacological care had been followed.

"For patients who are at increased risk of heart disease overall, if they are actually treated with statins, if eligible, or treated with beta blockers if indicated, this is an additional benefit we think they may get," explains Go. "That is, not only do they decrease their chances of developing heart disease in the first place, but [if they do develop heart disease] we believe they might get the additional benefit of presenting initially with low-risk angina versus a high-risk myocardial infarction."

### **Systematic intervention**

Given the morbidity, mortality, and the high expense associated with heart attacks, Go suggests that it is in the best interests of health care organizations as well as patients to implement decision support programs or other strategies capable of alerting providers when a preventive intervention may be indicated.

"Helping providers and their patients know [in a systematic way] when primary prevention therapies such as statins, beta blockers, and other medications are indicated is generally a more effective approach than trying to do it on a one-by-one basis," he says. "We need to help both providers and patients because we are doing this to prevent [or positively impact] the very first expression of heart disease."

### **References**

1. Go A, Iribarren C, Chandra M, et al. Statin and B-Blocker Therapy and the Initial Presentation of Coronary Artery Disease. *Annals of Internal Medicine* 2006; 144:229-238.
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## **NEWS BRIEFS**

### **New study emphasizes the benefits of CT screening for lung cancer**

A research team at New York-Presbyterian Hospital/Weill Cornell Medical Center has concluded for the first time that smokers and former smokers should be screened for lung cancer, even in the absence of symptoms. The finding is based on data from the International Early Lung Cancer Action project (I-ELCAP), the largest clinical trial ever conducted of lung cancer CT screening.

In the study, researchers screened more than 30,000 men and women at 38 institutions around the world, and concluded that the smaller lung cancer is at the time of diagnosis, the more curable it is. Specifically, the study found that more than 90 percent of the lesions that are smaller than 15cm are in stage 1A, and that almost all of them are curable, but the cure rate drops dramatically as the tumors increase in size.

Lung cancer is the leading cause of cancer death in both men and women, killing more people than breast, prostate, and colon cancers combined, according to the American Cancer Study. Smokers are at high risk of developing lung cancer, and former smokers remain at high risk for developing the

disease for as long as 20 to 30 years after their quit date. The I-ELCAP study is published in the February 13 issue of the *Archives of Internal Medicine*.

## The VA takes on obesity and diabetes

The Veterans Affairs and Health and Human Services departments have launched a massive campaign to promote nutrition, exercise, education, preventive medicine, and weight-loss among the nation's veterans. Called "HealthierUS Veterans," the campaign is designed to counter the epidemics of obesity and diabetes -- diseases that are even more prevalent among veterans than the general population. In announcing the campaign, the VA noted that of the 7.5 million veterans receiving health care benefits, more than 70% are obese, and one out of every five has diabetes.

As part of the effort, VA doctors will begin handing out "prescriptions for health" to patients that include exercises and relevant nutritional information. Additionally, the campaign includes a weight management program and a "Fit for Life Volunteer Corps" that will consist of veterans dedicated to setting a good example in healthy living for others. ❖

### Medicare Disease Management latest product from NHI

"Land grab."

That's how a top executive with a leading disease management company recently described what DM and provider organizations are gearing up for as the ongoing Medicare-sponsored disease management demonstration projects -- designed to test DM concepts with the Medicare FFS population -- begin to document their results.

It is just a matter of time now until 15 million Medicare recipients become fair game for DM providers, and your competitors are racing to stake their claim in this massive new market.

Your organization must begin preparing NOW to make sure you get your share of this massive marketplace, and to make sure you are ready for the many clinical, operational, regulatory, and business challenges you are sure to face.

That's why National Health Information is offering a free trial to our newest newsletter, *Medicare Disease Management*, the first and only publication devoted to helping plans and providers successfully navigate this uncharted territory. Each monthly issue is filled with detailed clinical guidance, success strategies and case studies, business models, contracting opportunities, compliance advice, proven program management initiatives, and much more! Our veteran team of journalists and DM experts gives you a key competitive edge in the battle for market share -- and in the struggle for positive outcomes and ROI in the senior population.

We are offering our customers a \$50 discount and a three-issue free trial subscription. To request a free trial, order online at [www.nhionline.net/products/mdm.htm](http://www.nhionline.net/products/mdm.htm) or call 800-597-6300.

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