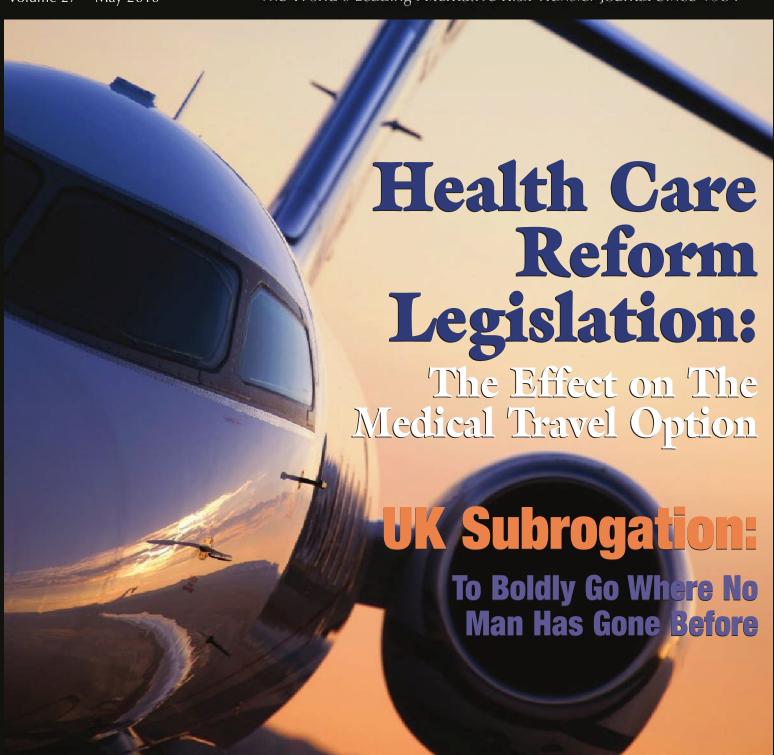
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Predictive Modeling, Incentives are Keys to Effective Wellness Programs

That Successfully Improve Health Outcomes, Contain Costs

By Kathleen Sullivan

aring for the 133 million Americans with one or more chronic conditions consumes 75 percent of the nation's healthcare expenditures. That's according to the Centers for Disease Control and Prevention (CDC), which also reports that these conditions are responsible for seven out of every 10 deaths each year.

Costs aside, the real tragedy is that the majority of these diseases can be prevented or controlled with proper diet and smart lifestyle choices. That is why there is a growing interest in designing and deploying wellness programs that are truly effective at providing individuals with the tools and incentives necessary to effect behavioral changes for improved health.

A Preventable Epidemic

The nation's healthcare system is staggering under the burden of the \$1.6 trillion cost to treat chronic conditions — an obligation that is expected to grow to \$4.2 trillion in 10 years. But it's not just healthcare that is breaking under the weight of this preventable epidemic. Businesses are also impacted.

An analysis by Pricewaterhouse-Coopers found that productivity losses associated with workers suffering from chronic conditions are up to 400 percent more than the cost of treating those diseases. Further, individuals with chronic diseases account for approximately 40 percent of total lost work time.

Chronic diseases such as diabetes, asthma, heart disease, mental illness and cancer, plague American society. They are the most costly and, in many

cases, the most treatable and controllable of all health problems. Yet the number of individuals diagnosed with one or more of these conditions continues to escalate because the nation's healthcare system has taken a reactive approach focused on treatment rather than prevention.

This reactive approach cannot work, largely because the problem is not just the ailments themselves; it is also the four underlying behaviors responsible for much of the illness, disability and death associated with chronic conditions. These include smoking, lack of physical activity, poor dietary habits and excessive alcohol use.

Despite a constant barrage of educational messages designed to warn people of the risks of these behaviors, they remain a significant problem:

- More than 43 million U.S. adults and one in five high school students smoke, the direct and indirect costs for which exceed \$193 billion annually.
- Since 1980, obesity rates for adults have doubled to more than 72 million and tripled for children, carrying an estimated annual cost in excess of \$117 billion.
- More than one-third of all U.S. adults fail to meet minimum recommendations for aerobic physical activity and only one in three high school students participate in daily physical education classes.
- More than 60 percent of children and adolescents eat more than the recommended daily amounts of saturated fat, while just 24 percent of adults and 20 percent of high school students eat five or more servings of fruits and vegetables per day.

Approximately one in six Americans aged 18 and older engaged in binge drinking in the past 30 days, and nearly 45 percent of high school students report having had at least one drink of alcohol in the past 30 days.

The reality is that an average of \$7,920 is spent annually on medical care for every man, woman and child, while only \$1.21 is spent on awareness and prevention. In many cases, the latter is done in the form of disease management and wellness programs, which today are offered by 90 percent of private insurance carriers and 88 percent of large employers. Clearly, as evidenced by the statistics cited above, the majority of these current programs are simply not working.

To have a meaningful impact on the prevalence and costs of chronic conditions, disease management and wellness programs must do a much better job of facilitating widespread participation and delivering the incentives necessary to drive real change in consumer behavior. It also requires arming consumers with the tools necessary to help them understand the impact of diet and lifestyle choices on chronic conditions, and support them in making the necessary incremental behavioral changes.

Truly Effective Wellness Programs

The positive impact of incremental behavioral changes on chronic conditions has been demonstrated scientifically. Most recently, a study out of Germany found that, through the cumulative effects of just four healthy lifestyle factors, 78 percent of the 23,000 participants reduced their risk of developing a chronic disease over a seven-year period.

These healthy factors included: 1) not smoking; 2) regular exercise, at least 3 hours per week; 3) following a healthy diet that includes the recommended daily allotment of fruits and vegetables; and 4) maintaining a healthy weight.

In addition to preventing chronic conditions, making these lifestyle changes resulted in:

- A 36 percent reduction in the risk of cancer
- A 93 percent reduction in the risk of diabetes
- An 81 percent reduction in the risk of heart disease

Wellness and disease management programs that utilize predictive modeling, early intervention and personalized education and support have demonstrated their value in altering these unhealthy behaviors. Further helping the cause are programs that provide incentives that maximize individuals' engagement in healthcare and the management of their chronic diseases.

Health risk assessments and personalized wellness communications are also important tools for motivating participants and promoting healthier lifestyles. The result is improved compliance with recommended follow up and clinical tests, which delivers a measurable decline in emergency room visits and inpatient admissions, as well as significant savings in prescription medication expenses and costs associated with provider networks.

However, knowing the statistical benefits isn't typically enough to convince consumers to make necessary lifestyle changes. That requires education and support, something Med-Vision, LLC recognized early on.

Based in Tampa, Fla., Med-Vision provides medical consulting, health-care planning, risk management, and wellness services designed to help employer groups achieve optimal employee health and productivity. The company focuses primarily on self-funded employer plan sponsors and currently impacts more than 75,000 health plan members.

In evaluating the root causes of its clients' escalating healthcare costs, Med-Vision found that most lacked awareness of what was driving both costs and care outcomes. Convinced that state-of-the-art healthcare datagathering and analysis capabilities would empower it to deliver the solutions employer groups needed, Med-Vision opted to deploy the D2Explorer from Verisk Health Inc.

With D2Explorer, a web-native analytics software solution, benefits management companies and employer groups are able to analyze medical and pharmacy data to identify, educate and coach individuals in need of care management interventions.

The clinical intelligence and predictive modeling within the D2Explorer allowed Med-Vision to identify the most important and actionable cost drivers and client trends. This then led to innovative strategies and solutions that would ultimately realize significant spending reductions and overall improvements in employee health.

For one client, an 8,000 employee school district, Med-Vision assessed the financial impact of eliminating wellness visit copayments to encourage regular preventative care and improve employee health behavior. It also modeled the effects of covering the costs for chronic conditions to find that savings far outweighed costs.

From there, Med-Vision created an employee-based wellness committee to communicate the value of healthy lifestyle choices and links between risky behavior and health. Employees completing chronic illness management education programs were also rewarded with lower copayments and subsidized supplies.

Early results are promising, with healthcare costs decreasing 10 percent to 12 percent in two years.

Another example of this model's effectiveness can be found in the wellness programs offered by my own company, First Service Administrators, Inc., in partnership with Verisk. Our programs utilize predictive modeling to analyze employee populations and identify excessive healthcare costs and their drivers. Best-of-class risk management tools and cost containment strategies are then utilized to reduce a client's overall healthcare spend.

Verisk's D2Explorer provides us with actionable data that enables us to administer preemptive care before the onset of serious disease or before an existing disease state worsens. Other programs FSAI has implemented include wellness and compliance education, drug costs analysis, member compliance initiatives and incentive-based benefit design.

By deploying this proactive model, we have successfully lowered the health-care cost trend across our client base by 5 percent and reduced emergency room use by 10 percent. Other cost savings for clients include a 10 percent reduction in hospital admissions and an increase in mammogram compliance from 46 percent to 72 percent.

Empowered to Change

To reduce the costs associated with chronic conditions and to prevent future generations from following the trend of increasing prevalence and severity, wellness and disease management programs must be reevaluated and methods identified to implement them on a higher level.

Critical illnesses can be prevented by treating, or preventing chronic illnesses before they reach their clinical end-

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■ Predictive Modeling (continued from page 9)

point. The key is to educate the population on the dangers associated with chronic conditions, inform them of the most effective prevention techniques, and encourage them to apply these practices to their life.

By empowering individuals to take responsibility for their overall health, truly effective wellness and disease management programs will effectively facilitate the behavioral changes necessary to improve quality of life and ease the burden chronic conditions have on our nation's healthcare system.

Kathleen Sullivan, R.D., is executive vice president of business development for First Service Administrators, Inc., (FSAI). Based in Lakeland, Fla., FSAI is a leading risk management company providing third party benefits administration and innovative cost containment solutions to the healthcare industry, mid to large-sized public and private self funded employer groups and government Medicaid programs. FSAI offers a flexible approach to benefits administration tailoring its suite of superior healthcare cost management services to each client's

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