



Wellness, Disease and Care Management: *Background for Developing a Business Strategy*



An Employer Toolkit

PRESENTED BY:

DMAA

NAM National Association
of Manufacturers

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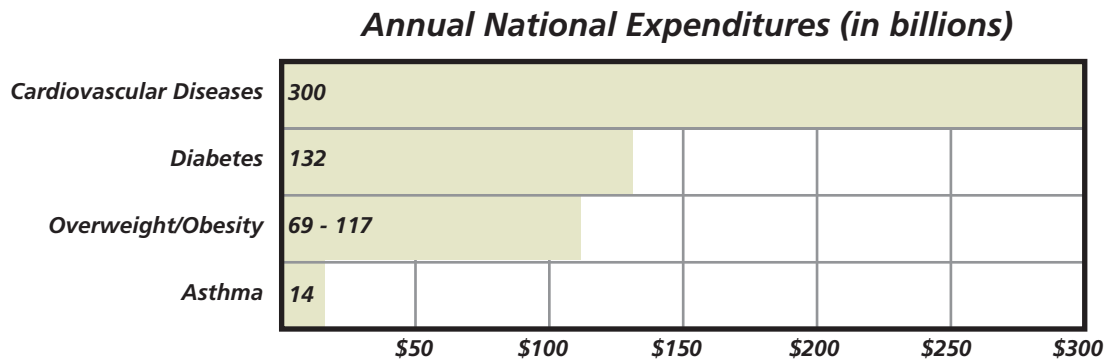
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Executive Summary

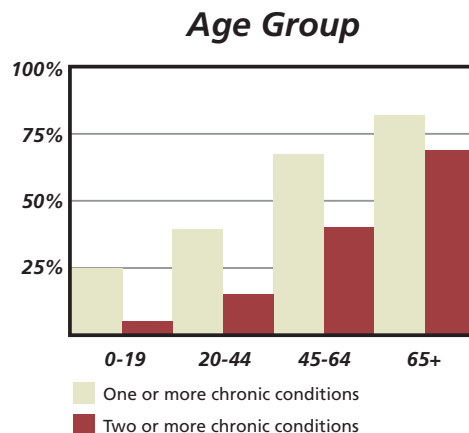
Rising Health Costs Demand Innovative Solutions

The rapid rise in health care costs nationally over the past decade has affected employers and their workers as profoundly as any segment of society. By some estimates, employee benefit costs represent the typical company's third-largest expense, and health insurance is the fastest-growing component. A recent report suggests that, unless the trend changes, "by 2008 the average Fortune 500 company may be spending as much on health benefits as it earns in profits."¹

National data put the cost and prevalence of chronic disease in perspective:



SOURCE: "PREVENTION MAKES COMMON 'CENTS,'" U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, 2003



SOURCE: MEDICAL PANEL EXPENDITURE SURVEY 2001, AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

The outlook for a continued escalation of health plan costs has forced employers to sharpen their focus on how costs relate to an unhealthy workforce with numerous chronic conditions. As a result, many employers, especially Fortune 500 employers, are integrating disease management and health promotion programs into their existing health care initiatives. These employers are experiencing improved health outcomes and reduced costs, both direct and indirect, through the use of population-based health management approaches, including wellness, prevention and chronic disease management.

Employers use disease management and care coordination to identify workers with diabetes, asthma, obesity and other chronic conditions, and help them avoid a worsening of their condition and complications that could result in costly acute care. Likewise, companies use the same programs preemptively to identify individuals who are at-risk for developing chronic conditions and for becoming the majority of their ensuing high-cost group. Research has shown that individuals at higher risk for developing chronic conditions are associated with increased medical and pharmacy costs and decreased productivity. Further, evidence shows that changes in health care costs, positive or negative, follow changes in risks and changes in participation.

Disease and care management programs can ensure higher quality care, including better adherence to physician care management plans and pharmaceutical therapy; greater efficiencies through coordination of care for employees with one or more chronic conditions; and application of evidence-based medical practices.

Investments in health care integration and chronic disease management can mitigate costs and poor-quality care. Employers can better manage their bottom line risks and costs by helping workers and their dependents, through an integrated health, disease and care management program, make healthful choices that lower their risk of developing chronic conditions.

How This Toolkit Can Help

DMAA and the National Association of Manufacturers have developed this important resource to assist employers in the adoption and application of wellness, prevention, and disease and care management programs to improve health care quality and outcomes for employees and dependents and to reduce direct and indirect costs.

Components of this toolkit include:

I. EXECUTIVE SUMMARY

II. ISSUE BRIEFS: STRATEGIES TO MANAGE AND IMPROVE HEALTH

This section of the toolkit helps you understand the landscape of health promotion and chronic disease care:

Understanding the Care Continuum and Common Strategies explores various approaches to helping chronically ill workers manage their conditions and prevent new chronic disease cases in the workforce. The spectrum of options,

from wellness and prevention to intensive case management, offer employers multiple pathways to a healthier, more productive employee base.

An Overview of Common Program Components details the tools and methods for identifying workers with existing conditions and those at risk. Newer tools, such as predictive modeling, give employers an effective way to not only look back at the factors driving costs today, but forward to areas likely to increase costs further and that could benefit most from disease management and health promotion initiatives.

An Overview of Common Delivery Models outlines key opportunities for disease management programs and health care professionals to intervene at the individual patient level. Various delivery models and intervention pathways exist for disease management and care coordination programs. These programs are distinguished by the integration and coordination of interventions across the service population to prevent adverse health events and reduce health care costs in a manner independent of level of service or location.

Education and Outreach to Employees describes the challenges employers face changing behavior in the workforce and encouraging healthful lifestyle changes; and techniques used to modify behavior, such as health coaching. This section also addresses the role of incentives in driving employee behavior.

Measuring Return on Investment provides guidelines for measuring the success of your care management initiatives. DMAA is a leader in outcomes measurement and has developed industry-, stakeholder- and accrediting organization-supported guidelines on evaluating clinical and financial outcomes in disease management and care coordination. This section provides an overview of the DMAA consensus guidelines for evaluating disease and care management programs.

Addressing Legal and Compliance Considerations in Wellness, Disease and Care Management Programs highlights key legal issues to be addressed and compliance concerns under several federal statutes and regulations.

III. GETTING THE MOST FROM THE RFP PROCESS

Choosing disease management and other health promotion services, whether through a health plan or from a third-party vendor, presents a complex and sometimes confusing proposition. This section arms employers with valuable questions to consider in the request for proposal and contract development process. Employers will gain the knowledge to construct an effective request for proposals and evaluate responses in the context of cost savings and a healthy workforce.

IV. CASE STUDIES: APPLICATION AND RESULTS CHANGING CORPORATE CULTURE

Learn how other companies have successfully carried out disease management initiatives, using innovative approaches and forward-thinking strategies to promote health and rein in rising costs.

V. EDUCATION FOR EMPLOYEES AND OTHER PLAN MEMBERS

Succeeding in disease management and health promotion depends largely on understanding the many conditions that affect the workforce. Employee education is crucial to changing unhealthful behaviors and taking appropriate action to keep chronic conditions in check. This section provides an overview of approaches to employee education and sample educational tools, such as posters and pocket cards.

VI. COMMON DEFINITIONS IN POPULATION HEALTH MANAGEMENT

Implementing successful health and wellness programs requires an understanding of commonly accepted terminology associated with employer-provided programs. These terms come from the “DMAA Dictionary of Disease Management Terminology, 2nd Edition.”

Issue Briefs

Issue Brief: Understanding the Care Continuum and Common Strategies

The care continuum for managing chronic conditions spans multiple strategies, beginning with simple preventive services—general wellness programs and educational outreach—and ending with “high-touch” approaches, such as coaching and case management, that involve higher-intensity contact to help individuals understand factors contributing to their sense of illness and assistance to improve their self-care behaviors and ongoing disease condition management. An employer’s choice of one or more approaches depends on multiple factors, including the size of the covered population, prevalence of chronic conditions within the workforce, employee readiness to change and other considerations.

WELLNESS AND PREVENTION

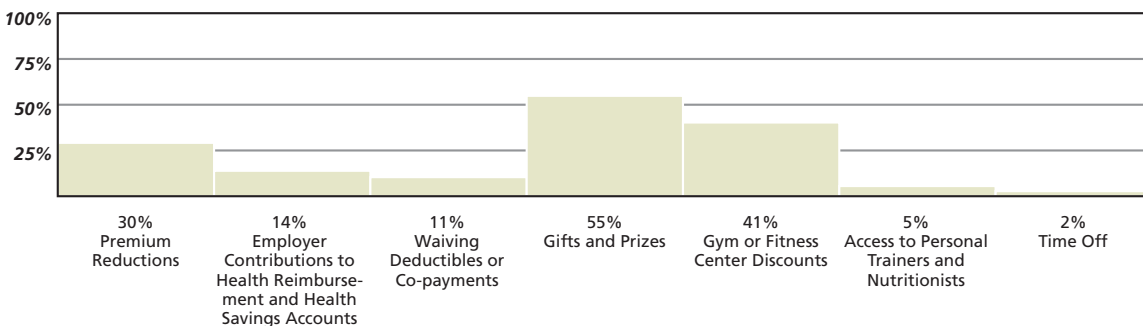
Wellness and prevention programs, also known as health promotion, seek to promote healthful lifestyle choices to prevent physical and mental illness. Much of the emphasis in health promotion is on self-care—that is, what an individual can do on her own to improve health. From the employer’s perspective, wellness programs can lower costs through reduced use of health, disability and worker’s compensation benefits; lower absenteeism; increase productivity; reduce injuries; improve employee morale; and make the company more attractive to job prospects.

Wellness programs commonly focus on smoking cessation; exercise and fitness; proper nutrition and weight reduction; and eliminating sources of stress. Approaches to health promotion run the gamut—from simple educational brochures, newsletters and onsite/online workshops to individualized coaching and counseling to fully equipped exercise facilities.

By most accounts, employers have embraced health promotion. A 2006 Deloitte Consulting survey of 152 major U.S. employers found that 93 percent of respondents reported offering some wellness program, with provision of flu shots the most popular². About half the respondents offered a smoking cessation program (45 percent) and 40 percent provided fitness opportunities, including onsite workout rooms or subsidies for offsite gyms, and diet groups.

Incentives to encourage participation in wellness programs are almost as varied as the programs themselves. The Deloitte survey found that 31 percent of employers offer rewards for program participation. Employers also have show increasing interest in using the Internet and intranets to deliver educational content, communications about wellness programs and health assessment tools.

Included Incentives



POPULATION HEALTH IMPROVEMENT AND RISK MANAGEMENT

Population health management aims to improve the health status of an entire population and reduce health inequities among population groups. As practiced today by leading companies, population health management focuses on reducing health care expenditures for the portion of a population that generates the majority of costs and avoiding costs by directing care to those most at risk of being a part of the high-cost group and developing high-cost conditions.

Population health management programs are holistic in their approach, recognizing that a variety of physical, environmental and socio-economic factors—what population health managers call “influencers”—contribute to health. By successfully managing health influencers, population health seeks to improve the overall physical, mental and social well-being of a population.

What sets population health management apart from traditional disease management programs are three key elements: a focus on a broader scope of “influencers” and chronic conditions and diseases; a strong emphasis on centralized care, so that patients with multiple conditions are managed through a single point of contact and coordination; and the rigorous application of predictive modeling techniques to forecast future needs and resource use.³

A primary focus in population health management is to equip individual members within the population with the necessary tools to make appropriate choices and decisions about their health and medical care, so as to achieve and maintain optimum health and reduce unnecessary medical expenses for the population. A key component of success is behavioral change.

Other population health management approaches may include comprehensive assessments of actual and potential physical, social, psychological, economic and environmental needs; proactive health promotion programs that increase awareness of the health risks associated with certain personal behaviors and lifestyles; patient-centric health management goals; and self-management interventions aimed at influencing the targeted population to make behavioral changes.

DISEASE MANAGEMENT

Chronic diseases—diabetes, obesity, congestive heart failure, asthma and many others—affect millions of individuals worldwide and place a substantial burden on society through lost productivity and increased health care costs. Disease management empowers individuals, in concert with physicians and other care providers, to effectively manage disease and prevent complications through adherence to medication regimens, regular monitoring of vital signs and healthful diet, exercise and other lifestyle choices.

DMAA defines disease management as “a system of coordinated health care interventions and communications for populations with conditions in which patient self-care efforts are significant.” This widely referenced definition goes on to state that disease management:

- supports the physician or practitioner/patient relationship and plan of care;
- emphasizes prevention of exacerbations and complications through evidence-based practice guidelines and patient empowerment strategies; and
- evaluates clinical, humanistic and economic outcomes on an ongoing basis with the goal of improving overall health.

Disease management components include:

- Population identification processes
- Evidence-based practice guidelines
- Collaborative practice models to include physician and support-service providers
- Patient self-management education (may include primary prevention, behavior modification programs, and compliance/surveillance)
- Process and outcomes measurement, evaluation, and management
- Routine reporting/feedback loop (may include communication with patient, physician, health plan and ancillary providers, and practice profiling)

Full-service disease management programs must include all six components, under the DMAA definition. Programs consisting of fewer components are disease management support services.

Early in its development, disease management focused on the “big five” chronic conditions: ischemic heart disease, diabetes, chronic obstructive pulmonary disease (COPD), asthma and heart failure. Today, disease management organizations (DMOs) typically offer a broader scope of services. This change reflects the importance of recognizing relationships between co-morbid conditions—obesity and diabetes, for example—and movement toward a whole person model.

Disease management programs commonly deliver ongoing services telephonically, with a strong emphasis on education. Registered nurses, licensed practical nurses and other trained professionals call program participants to monitor compliance with medication regimens, assess biometric data, encourage healthful dietary choices and exercise, and answer questions. Program participants are expected to play an active role in the management of their condition.

Employers have played an important role in the evolution of disease management. Employer discontent with steeply rising health care costs in the past decade and demands for innovative approaches to controlling employee health care expenditures helped fuel growth in traditional disease management. Further, the employer community stimulated development of other fields in disease management, including wellness, preventive medicine, workplace productivity and absenteeism.

The Deloitte survey of 152 major U.S. companies found that the majority—74 percent—offer employees disease management services, typically through health plans. Diabetes programs were most prevalent, offered by 90 percent of companies providing disease management benefits, Deloitte found. Also popular were programs for asthma and cardiovascular disease.

Large employers are taking an increasingly active role in managing employee health benefits and health promotion programs, including disease management. Although a majority of self-insured employers offer disease management through health plans, many show an increasing interest in contracting directly for it. Companies with multiple health plans, for example, see benefits in contracting for a single, coordinated disease management program available to all employees and dependants, regardless of health plan choice.⁴

CASE MANAGEMENT

The Case Management Society of America defines case management as a collaborative process of assessment, planning, facilitation, and advocacy for options and services to meet an individual's health needs through communication and available resources to promote quality cost-effective outcomes.

Case management services often focus on individual patients with acute and/or catastrophic conditions. Candidates for case management are often identified during inpatient stays, with post-discharge planning starting immediately and case management continuing when the patient leaves the hospital. Case managers assess the patient's needs and, based upon this assessment, identify and coordinate needed services. Case managers monitor the patient's progress, identify barriers to quality cost-effective care, and facilitate overcoming these barriers. The case manager will assess the patient's needs both in the hospital and upon discharge. They may coordinate home care resources and advocate for insurance benefit exceptions that might help the patient to be discharged from the hospital sooner while still receiving optimal care. There is a significant overlap between disease and case management.

A case manager performs many functions, including:

- evaluating a patient's needs for recovery and helping the patient understand the recovery plan's goals and expectations;
- coordinating care to ensure patient access to services and continuity from one provider to another;
- monitoring patient progress and developing a timeline for recovery; and
- serving as a patient advocate as questions of care or coverage arise.

For occupational injuries or illness, a case manager might work with an employer to ease a patient's transition back to the workplace and minimize the likelihood of a repeat injury or illness. Case management can benefit employers by increasing the odds that an employee will return to work early and avoid new injuries or illness; helping supervisors track an employee's progress toward recovery; and reducing costs through increased efficiency and reduced redundancy of services.

Issue Brief: Overview of Common Disease Management Program Components

This issue brief provides an overview of the program components in the disease management process and the value and necessity of each step.

Disease management provides the structure to support the delivery of evidence-based medicine to people with chronic diseases and other conditions in support of their physician's treatment plan. Disease management organizations (DMOs) are health services companies and organizations that deliver disease management services. DMO staff comprises nurses, physicians and other health services professionals who use a variety of techniques and tools to monitor, educate and provide continuous support and reinforcement for behavior change to promote better self-care skills, ensure adherence to clinically appropriate treatment plans and encourage patients to take greater responsibility for their health.

To further enhance quality of care, DMOs provide patients' personal physicians with up-to-date information about best practices and how the patients are doing in between office visits. Disease management programs are sponsored by health plans for their members; employers for employees and their families; and governmental agencies, such as state Medicaid programs, for their beneficiaries.

The clinical guidelines that form the foundation of disease management have been developed over the years by respected national and international academic and professional organizations. The efficacy of disease management programs in improving quality and reducing utilization has been validated time and again in peer-reviewed, randomized control studies published in well-respected medical journals—the *Journal of the American Medical Association* and *New England Journal of Medicine*, for example. By applying these guidelines to populations of patients with chronic conditions and their co-morbidities, disease management has been shown to reduce complications, slow disease progression, keep patients healthy and reduce health care costs.

Just as a physician's treatment of a patient's medical condition will vary based on factors such as the severity of the condition, the individual patient's tolerance for certain therapies (drug allergies, for example) or the physical characteristics of the patient (age or weight, for example), disease management approaches vary from patient to patient and population to population. There are, however, some common components to the disease management process, which are described below:

1. Patient identification
2. Stratification
3. Physician engagement
4. Patient engagement and assessment
5. Intervention
6. Evaluation

PATIENT IDENTIFICATION

First, in a HIPAA compliant process, a target population of individuals with the disease diagnosis is identified. This target population can be identified within a health plan's membership, an employee or retiree population, or a government-sponsored health program. DMOs have sophisticated information systems that can combine administrative data, such as medical claims, pharmacy claims and demographics, into a single data set and run it through algorithms (sets of rules) that identify a target population of people with the condition or conditions to be managed. These algorithms reveal data elements that tend to indicate a particular diagnosis—hospitalizations or emergency room visits for a particular condition or laboratory tests and prescriptions appropriate for the condition. DMOs generally run one to two years of data on the entire population through these algorithms. Based on this analysis, a target population consisting of everyone with the diagnosis is identified, regardless of the severity of their disease or the intensity of their health care utilization. Higher risk individuals are included because they need the intervention immediately. Lower risk individuals are also included because they may become high-risk in the relatively near term if some intervention is not provided.

If data identifying the patient's primary physician is available (for example, in a managed care plan in which a primary care physician or specialist must be selected), it is matched with the patient data. If such data doesn't exist (in a PPO or fee-for-service scenario), the DMO runs the claims data through another algorithm to impute a principal physician based on whom the patient has seen most often.

This process continues on a regular basis. DMOs receive and process data as frequently as weekly (although monthly is more the norm) to continue identifying new candidates for the program and to look for gaps in care for their engaged population, such as the lack of a claim for an appropriate lab test or a break in a pattern of prescription drug claims (indicating that the patient has failed to adhere to a medication regimen).

Risk Assessment: Disease management programs frequently utilize a health risk assessment (HRA) tool—commonly, a questionnaire—or method to assess an individual's health status and likelihood of experiencing an adverse health event, such as development of a chronic condition. An estimate of the adverse event's magnitude and costs can flow from the HRA, which integrates science and self-reported information. HRAs allow employers to identify high-risk individuals and direct them toward the most appropriate wellness and disease management interventions.

The HRA, also known as a health risk appraisal, can be conducted with a printed or Web-based questionnaire, or interview (face-to-face or telephone). Questionnaire topics usually fall in three groups:

- behaviors that affect health, such as level of physical activity, use of alcohol or tobacco products, and dietary habits;
- family medical history, such as history of diabetes or heart disease; and
- the member's current health status—age, weight, cholesterol levels and blood pressure readings.

The risk computation compares patient responses with statistics from large patient populations (National Institutes of Health data, for example). While an HRA typically determines lifetime risk or, at least, risk beyond the immediate future, it can be modified to identify risk factors suggesting an imminent adverse event. HRAs are particularly useful for evaluating a new population, for which claims data can be scarce. Several companies are now using more sophisticated health assessments that include questions that foster higher value in the use of this self-reported data for predictive modeling.

STRATIFICATION/DATA ANALYSIS

Once the population is identified, the DMO then runs patient-specific data through another set of algorithms to organize patients into a range of low- to high-risk strata and assign each program participant to an appropriate intervention level. These algorithms look for various risk indicators, such as multiple prescriptions (which puts them at high risk for adverse reactions or overdosing, for example); multiple hospitalizations or frequent emergency department visits; or multiple conditions and co-morbidities. Multiple criteria may be used to make the stratification decision. As these processes mature, predictive modeling technologies are being deployed to add other stratification criteria (such as gaps in standards of care) to further enhance the sensitivity of the process. Stratification is different than predictive modeling in that “stratified” individuals are placed in a certain category of people versus predictive modeling, which generates a “risk score” that is predictive of an individual’s probability of being a member of a future high-cost group. In general, stratification employs retrospective classification, while predictive modeling generates prospective future high-cost group identification. The industry has increasingly recognized the need to move from stratification or rules-based classification to predictive modeling.

Predictive Modeling: Employers eager to get ahead of a rising health care cost curve have turned increasingly to predictive modeling, a set of tools used to show where spending will go, rather than where it went, as with traditional retrospective claims review using stratification tools. While predictive modeling techniques vary and can be developed in-house or purchased from a vendor, all share a common goal: to forecast future health care expenditures, resource utilization and adverse clinical events, and to create a much more accurate assessment of which individuals have the highest probability of being a member of the high-cost group. As such, predictive modeling offers a powerful approach to identifying high-risk cases and ensuring they receive effective care now to avoid more costly treatment later.

Health care risk adjustment tools, such as predictive modeling, have been available for about a decade, with the federal Centers for Medicare and Medicaid Services (CMS) among the first to explore their use⁵. CMS conducted research into risk adjustment to understand how the health risk of beneficiaries who select Medicare health maintenance organizations compared with those in the traditional fee-for-service program. Today, employers and others use predictive modeling widely to predict high-cost, high-risk cases—information of great value in directing and prioritizing resources. The strategy is best carried out in concert with specific health and care management interventions—it is good to predict high-cost cases, but even better to predict high-cost cases that can benefit from specific and proactive management strategies.

An important objective of predictive modeling is the accurate allocation of health, disease and care management resources based on the risk and impactability of health plan participants. With the predictive modeling technique, individual patients are assigned a risk score based on their likelihood of using health services in the near future. In addition, predictive modeling techniques can be used to identify patients for control and intervention groups for disease management program evaluation.

With predictive modeling, an employer can:

- more accurately forecast, by plan type (HMO vs. PPO, for example), how costs will change and make appropriate adjustments to payments, premiums and employee contributions;
- evaluate how the addition or removal of plan options would affect costs;
- identify emerging high-cost cases most likely to benefit from health, disease and care management services;
- improve its position in negotiations with health plans and better evaluate plan performance; and
- develop approaches to recognizing employee selection of plans with disease management and care coordination components.

Predictive models can incorporate a variety of data sources, including claims data, pharmacy and lab data and self-reported data gathered from health plan members. Employers should consider the quality and administrative ease of available data and privacy issues when deciding on a predictive modeling approach. Employers also can discern the predictive value of the outcome of such models by asking questions about the sensitivity, specificity and positive predictive value evidence behind the model.

PHYSICIAN NOTIFICATION AND ENGAGEMENT

The DMO makes initial contact with the primary or principal physician by mail, telephone or, in some cases, in-person to tell them about the program, provide copies of letters or other program materials the patient will receive and give them an opportunity to offer additional information to the DMO about the patient. Many disease management programs interact regularly with the physician, including apprising them of their patients' clinical status or providing them with updated information on best practices for the conditions being managed. Disease management programs work collaboratively with the patient's own physician (or group of physicians if the patient is seeing multiple specialists) to reinforce the treatment plan the physician has prescribed.

PATIENT ENGAGEMENT

The DMO contacts the patients or, with their consent, their caregiver directly. In most cases, a letter is sent to each patient explaining the program and giving the patient the opportunity to opt out by calling a toll-free telephone number. If the patient doesn't opt out within the specified amount of time (generally, several days), a DMO employee will call the patient and discuss the program in more detail. The objective of this call is to welcome the patient into the program, gain additional information about the patient to add to the profile already developed through the identification and initial stratification process (generally through a form of health risk assessment) and secure the patient's agreement to participate in an intervention consistent with the patient's needs. While DMOs generally seek to place higher-risk patients into intensive programs (for example, frequent telephone calls, in-home vital signs and symptoms monitoring, reminders about upcoming lab tests and prescription drug refills), ultimately, the level of interaction must be agreeable to the patient.

INTERVENTION

Once patients have been engaged, the intervention is delivered to them in a variety of ways. Generally, patients who agree receive regularly scheduled educational and supportive telephone calls from a nurse or other health care professional. These calls can be weekly, biweekly, monthly or quarterly, depending on the severity of the patient's condition. The purpose of these calls is to educate the patient about the condition; reinforce the importance of adherence to medication regimens and timely laboratory testing; establish behavior change goals (such as smoking cessation, weight reduction or lowered salt intake); provide ongoing support for the achievement of those goals; and continue to collect information useful to the DMO for measuring clinical outcomes. The patient usually is assigned to his or her own health care professional or to a small team of health care professionals to establish a bond of trust.

Patients also may receive materials on a periodic basis, such as educational newsletters and brochures, videos and reminders. Some DMOs offer interactive Web sites that allow patients to contact their nurse or health educator by e-mail and get in-depth educational information about their conditions. In some cases, high-risk patients also receive equipment, such as electronic scales and blood pressure cuffs, to send vital signs data to the DMO, which monitors this information and alerts the physician if the patient's condition appears to worsen. All the data collected from these calls, from the monitoring equipment and from the continual claims analysis described above, are maintained in a HIPAA compliant, confidential, longitudinal database allowing the DMO clinical staff to customize the interaction with the patient and the DMO to measure outcomes.

EVALUATION

Evaluation is another common, and necessary, program component. Program evaluation should include measures of process, satisfaction, clinical and financial outcomes. Purchasers and program providers should agree in the contracting process on key measures of importance to individual employers based on factors such as population demographics, program intensity and delivery models. These issues are discussed in greater detail in the "Measuring the Return on Investment" Issue Brief (page 21) and in "Getting the Most from the RFP Process" (page 28).

Issue Brief: Overview of Common Delivery Models

Disease management has become widely accepted as an essential approach for improving care outcomes for consumers and payers, with broad agreement on the many opportunities to improve care for consumers with chronic conditions. Disease management is unique by virtue of the integration and coordination of interventions across the service population to prevent adverse health events and reduce health care costs in a manner independent of level of service or location. Disease management, in practice, focuses on delivering a specific array of services and support that the consumer needs to stay healthy over time. Various delivery models and intervention pathways exist for disease management and care coordination programs. This issue brief outlines key opportunities for disease management programs and health care professionals to intervene at the individual patient level.

EDUCATION AND AWARENESS

The worksite can be an effective location for disease management and wellness education. Education efforts supplement, rather than replace, education and treatment protocols provided by the employee's physician and other providers.

Educational tools and approaches take on numerous forms, from simple pamphlets and fliers to workshops and direct counseling of individual employees. Electronic delivery of information has gained prominence in disease management as the World Wide Web, e-mail and emerging technologies expand an employer's reach outside the corporate walls and provide technological opportunities—multimedia presentations, for example—not easily or inexpensively obtained only a decade or so ago. Intranets, which are Web-based document repositories available within an organization and only for employees, offer another avenue for effective communication and education.

Innovative approaches in education that encourage more than a passive reading of program literature can prove particularly effective—a calendar for daily recording of weight, blood pressure and other vital measures for heart failure patients, or a booklet and pedometer to encourage regular walking for exercise. The approaches are as varied as the companies that use them and the employees they target.

Raising awareness of health risks is a key element of educational efforts. Activities can include distribution of a toolkit for healthy living, online risk assessments for employees and health screenings supported with educational literature so employees can understand their current health status in the context of health risk.

ONSITE NURSING AND CLINICS

A growing number of large employers are bringing to the workplace integrated health clinics staffed by nurses or physicians, or both. These clinics can reduce time away from work, increase employee participation in wellness and prevention programs, such as flu vaccines, and provide care for common illnesses and chronic conditions. Workplace clinics can reduce absenteeism and ensure a healthier workforce. Several studies of employer-sponsored workplace clinics have indicated significant savings in both health care cost and employee productivity measures.

TELEPHONIC

A predominant approach to delivering integrated health and disease education services has been through use of the telephone, both to initiate contact with at-risk people and to accept their inbound calls for support. It's no surprise that many health, disease and care management organizations operate call centers, given the widespread prevalence of and familiarity with the telephone among program participants.

Nursing professionals—registered nurses or licensed practical nurses—most often conduct telephonic communication. Other health support professionals, such as registered dietitians, physician assistants and social workers are playing an increasingly important role in the call center model. Their activities involve over-the-phone triage and education, coaching, scheduling and health status monitoring.

Telephonic communication can extend beyond simple voice calls. Some systems employ prompts that allow patients to report health data with the keypad. Other systems integrate the telephonic component with computer-based applications, displaying a participant's case record automatically for the nurse upon receipt of an inbound call. Advancements likely will continue as new telephonic technologies, such as voice over Internet protocol (VoIP), gain acceptance and usage.

BIOMETRIC

Many disease management programs monitor critical health status data remotely, through biometric monitoring systems based in a patient's home and linked to call centers, nursing stations and other centrally located health professionals.

Such systems transmit blood pressure readings, pulse rate, blood glucose measurements and other physiological data through conventional telephone lines and broadband Internet connections to physicians, nurses and other health professionals. They remind patients to comply with medication and other treatment regimens; and they collect qualitative information on the program participant's condition through assessment questions.

In doing so, the systems increase the efficiency of health data reporting, eliminating the need, in many cases, for often inefficient and higher-cost face-to-face evaluations of program participants. The systems allow physicians and other providers to better manage time, compiling patient data automatically for review at the provider's convenience and flagging data that falls outside a pre-determined range so providers can focus on readings of greatest concern.

The growth of the Internet has fueled use of remote monitoring systems and opened the door to innovations that provide not only data transmission, but video conferencing and other enhancements. It's also expected that remote monitoring systems will mesh well with electronic health records and other health information technologies.

INTEGRATION

Integration of health, disease and care management across all a company's health care benefits has become a popular approach in recent years, reflecting recognition of the need to prevent disease, identify high-risk individuals and encourage healthful choices among all members of the covered population, not just those with existing conditions.

Integration combines health plan, disability and pharmacy benefits with disease and care management and other health promotion efforts into a unified program. Central to the model is strong coordination between the various components to ensure efficiency and employee access to services across all corporate health benefits. There are a number of companies emerging that offer the entire continuum of health and care management services fully coordinated under one entity. These emerging companies are fueling employers' choice to have a claims payer plus one vendor that manages the full continuum of total population needs.

The integration model emphasizes customization, as differences from company to company in corporate culture, employees' health status and workplace environment make a one-size-fits-all approach impractical and potentially ineffective. Advances in information technology have aided the movement toward greater integration by allowing an easier exchange of information between once-isolated program components. The emerging one-stop-shop companies are investing their working capital into the development of member-centric software platforms that fuel complete integration of health, disease and care management services.

Issue Brief: Education and Outreach to Employees

In the end, chronic disease management in the workplace is about reaching and engaging employees, and educating them about behavior and care that will improve their health. No intervention will succeed unless the employee is ready to change, responsive to outreach and engaged in the intervention program.

The outreach and education process can challenge employers, but also can yield significant rewards in improved employee health and productivity. First, of course, employers need to identify workers who could benefit most from health promotion and disease management efforts. With that information in hand, the process continues through a broad variety of outreach strategies—from distribution of simple educational pamphlets to personalized, one-on-one health coaching and other “high-touch” interventions.

HEALTH RISK ASSESSMENTS

A health risk assessment or health risk appraisal (HRA) is a survey tool used to assess an employee’s current health risks, likelihood of developing a chronic disease or suffering some other adverse health event and the expected magnitude or cost of that change. These important tools use employee-provided information to help employers determine and implement appropriate population health management or disease management programs. New generations of these assessments add questions that serve as powerful predictor variables in helping these surveys become supercharged predictive models that help identify the right group of people (the near-future, high-cost group) to target with intensive health, disease and care coaching support.

Today, health and disease management programs integrate HRAs into various program and intervention aspects, including participant identification, risk stratification, predictive modeling and assignment to intervention. HRAs typically consist of a paper or electronic questionnaire, an algorithm to evaluate health risk or probability of becoming high-cost based on questionnaire responses, a personalized report detailing health and risk status and direction on next steps for the participant based on those findings. That last element is crucial, as the HRA is as much a means to motivate employees to participate in health promotion programs as it is an assessment and stratification/predictive modeling tool.

The link between HRAs and successful efforts to spur healthful lifestyle choices and participation in health and wellness programs has been documented. A study by the Fitness Research Center at the University of Michigan, Ann Arbor, showed “strong statistical evidence” of a link between risk as assessed by an HRA and health care costs.⁶ Results of another study provided support for the “efficacy of HRA when incorporated into a periodic health examination at the worksite.”⁷ A pioneering study in the use of health assessment data in predictive modeling documents the improved targeting of outreach that can be gained through the use of these data.⁸

READINESS TO CHANGE

Studies have documented that an individual’s readiness to change (willingness to adopt new, healthful behaviors) plays an important role in successful behavioral modification and effective disease management efforts. But bringing employees to a point of readiness is easier said than done.

A DMAA qualitative study in 2005 highlighted this reality, as employee benefits managers from large- and mid-sized companies discussed the challenges of employee engagement in disease management and other health promotion initiatives.

Participants in a study focus group expressed a need for confidence in a disease management program's ability to engage employees in both the short- and long-term. Some suggested that, when evaluating vendors, they include among their selection criteria a program's track record in achieving engagement.

Large employers noted the difficulty engaging employees in health coaching and disease management programs, and mid-sized employers were even less optimistic. Still, they reported success with various strategies, all relying on direct contact with potential program participants, including a call from a disease management nurse and outreach by employee assistance programs.

Generally, participation in wellness and disease management programs can suffer when enrollment relies primarily on self-directed employee access to these resources. More often than not, employees know little about the programs—if anything at all—and have little motivation to participate. Active outreach is key, as indicated by focus group members who stressed the importance of calls and other direct contact with candidate employees. Education and person-to-person communication can overcome barriers to an individual's readiness to change and contribute to the long-term success of disease management and care coordination efforts. Employers are increasingly understanding the importance of well-executed communications strategies as well as linking program participation to strong incentives to achieve the engagement levels necessary to have program impact and ROI.

BEHAVIOR MODIFICATION

Behavior modification is the dynamic process of helping program participants change behaviors that contribute to actual or potential adverse health events—smoking or poor nutritional habits, for example—and adopt beneficial lifestyle practices. Programs use various methods to modify behavior, but all depend on individuals responding in a positive fashion to supplied information and interventions. Disease management programs usually embrace an informational and empowerment approach to encourage these changes. However, direct positive or negative reinforcement strategies also may be applied.

The stages of change model offered by psychologists James O. Prochaska, PhD, and Carlo C. DiClemente, PhD, underpins much current work in behavior modification. It describes six distinct stages that reflect the readiness and motivation of an individual to change behaviors:

- Pre-contemplation—not contemplating change and, possibly, unaware of the need for it.
- Contemplation—aware of the needed change and considering it.
- Preparation—making specific preparations for the change; setting a date to quit smoking, for example.
- Action—practicing new behavior, generally for three to six months.
- Maintenance—sustaining behavior beyond the action period.
- Relapse—resumption of old, adverse behaviors.

Behavior modification techniques and stages of change theory are typically incorporated into the health coach function of a disease management intervention. Health coaches support program participants in identifying behaviors—smoking or lack of compliance with a treatment, for example—that require change to meet goals, such as improved health or mobility and reduced risk of illness or death.

Health coaches then work with participants to establish commitment to change through the establishment of change goals. Throughout this process, the health coach assesses the participants' readiness to change and tailors their support to enhance their readiness or, if ready, work with the participant directly on the behavior change. In some programs, readiness to change assessment is incorporated into a survey process, serving as a triage mechanism, to focus limited resources on individuals ready for change and theoretically more likely to be affected.

Behavior modification is crucial to disease management and health promotion, as even the best programs can fail for patients who refuse to modify unhealthful behaviors to meet program goals.

HEALTH COACHING

Health coaching can help an employee identify and meet his or her health needs through a collaborative, proactive process. It differs from traditional education efforts in that the coach is not placing emphasis on imparting new ideas, but rather focusing on supporting others in their efforts to reach a new goal⁹. Health coaching can improve health care outcomes for at-risk individuals earlier in the care management continuum. It is an individualized process typically delivered in two phases: the planning phase and the health coaching phase.

The planning phase of health coaching typically focuses on establishing a therapeutic relationship with the employee. The health coaching phase focuses on assisting that employee by providing information; coaching health responses to stress, health behavior changes and optimal management of chronic conditions and acute and chronic physical symptoms; and referring employees to appropriate programs and services.

While education-based interventions have a significant role in self-management of chronic conditions, they may not be enough. The role of behavior change-focused coaching also has been shown to be an important factor.¹⁰

ROLE OF INCENTIVES

Incentives—and disincentives—have gained significant support in recent years as a way to encourage completion of health risk appraisals and boost participation in health promotion and disease management programs. A 2006 Hewitt Associates survey of 460 respondents covering more than 6 million employees found that 38 percent of respondents had incentives in place and 48 percent said they were considering incentive programs.

Incentives take various forms, including discounts on health plan premiums, free merchandise, extra time off, cash and credits. At the other end of the spectrum is an emerging practice among some employers to penalize workers who fail to complete an HRA or participate in a health promotion program. These disincentives can include higher cost-sharing requirements or, even, denial of coverage.

The power of incentives—even token rewards—should not be underestimated. Recent data from the University of Michigan Health Management Research Center showed a three-fold increase in HRA participation rates with modest cash incentives. The data also showed significant increases in use of preventive services—blood pressure and cholesterol screenings, Pap tests, mammography and others—during incentive years compared with non-incentive years.

Issue Brief: Measuring the Return on Investment

Strategies for the evaluation of outcomes in wellness and disease management programs have been evolving for more than a decade. Early evaluation designs varied considerably in scientific rigor and, as a consequence, both the metrics used and the estimates of financial outcomes for these programs varied widely.

Recently, a continuing emphasis on improving evaluation methods resulted in publication of the DMAA Outcomes Guidelines Report in 2006 and a second volume of the report in 2007. The report represents consensus efforts by all stakeholders to create a standardized method for determining wellness and disease management outcomes based on current industry best practices and that meets suitability and acceptability requirements across a wide variety of populations and circumstances.

DMAA, through its membership and key strategic partnerships, continues to expand and refine the outcomes measurement guidelines. Research continues on the most effective measurements for wellness and health promotion programs. An important example of the benefits of wellness and health coaching programs can be found in a case study included elsewhere in this toolkit.

DMAA's topline guidelines are reprinted in this Issue Brief. Copies of the full reports are available for purchase on the DMAA Web site, www.dmaa.org.

OUTCOMES MEASUREMENT

Disease management organizations and health plans are held accountable for improving the clinical status, satisfaction and financial costs of the populations they manage. Using the initial patient identification data, baselines are established for the entire initial population. For cost, all health care costs for the identified population are calculated and converted to a per member per month (PMPM) cost.

For example, If there are 10,000 diabetics and their health care costs totaled \$60 million for the previous year, the baseline would be \$500 PMPM ($\$60 \text{ million} / 12 / 10,000$, assuming all members were eligible for the entire year). To determine the financial outcome of the disease management intervention, this same exercise is performed after certain periods of time have elapsed—generally after one or two years. The health care costs of the population engaged in the program are converted to a PMPM cost and compared with the baseline. First-year savings are typically apparent even before adjusting for other trends that affect health care costs. Over time, it is important to look at health care costs compared with trend. To account for regular medical inflation (over which the DMO has no control), the baseline is adjusted upward by the rate of inflation experienced by the entire health plan population (to estimate costs expected without the program) before this comparison is made.

Overview of DMAA Evaluation Guidelines

METHODS

Evaluation design: DMAA recommends the use of a pre-post study design that incorporates an equivalent concurrent comparison group. DMAA recognizes, however, that a comparison group that is both equivalent and concurrent may not always be available in applied settings. Accordingly, DMAA recommends that evaluations using a pre-post study design make explicit efforts to control potential biases and error introduced by the design, and that the potential impact of the design on the interpretation of the findings be made clear.

Evaluation Design Comparison: Recognizing the need for clarification on study design methods, DMAA, as a follow-up to the study design recommendation developed in the Volume I Guidelines Report, has developed a study design matrix and recommends a review of the matrix information to gain a better understand of study design methods. Methods reviewed in the matrix include (Please refer to Volume II Guidelines for the complete matrix):

- Pre-post design with equivalent comparison group (DMAA Recommended Approach)
- Pre-post design with randomized concurrent control group
- Pre-post with matched control group
- Pre-post with non-participating individuals as comparison group

Population Identification Methodology: DMAA recommends the Annual Qualification methodology as the method of choice for population identification.

Comparing Methods that Define Outliers: DMAA has expanded its initial Volume I recommendation by developing a matrix that reviews the following methods commonly used for defining outliers (Please refer to the Volume II Guidelines Report for the full matrix):

- Stop-loss
- Percentile Distribution
- Standard Deviation

Small Population Considerations: DMAA has expanded its guideline for small populations developed in Volume I to include the following consideration (Please refer to the Volume II Guidelines Report for the complete narrative):

- Measuring medical cost savings in small populations poses significant challenges to the disease management industry.
- In small populations, the effects of even a very small number of large claimants can make interpretation of medical costs savings assessment results difficult.
- In general, medical cost data are highly variable; in large populations, the variability in the data becomes much easier to manage than it is in small populations.

Measurement period: DMAA recommends one year for baseline and subsequent years.

Criteria for inclusion in measurement: DMAA recommends that the member population be enrolled with the commercial buyer for six or more member months and with Medicaid TANF for one member month or more.

Look back period: DMAA recommends 12 months of measurement period, as well as at least 12 months of the preceding period for the purpose of program evaluation.

Defining a member month: DMAA recommends that a member month be defined as members enrolled on the 15th of the month for commercial and Medicare populations, when possible.

Claims Runout Period: DMAA recommends three months with completion or six months with no completion, contingent upon consistent payment patterns.

FINANCIAL MEASURES

Financial metric: DMAA recommends using health care cost outcomes as the metric for assessing the financial impact of the program. Health care cost outcomes would be measured using medical and pharmacy claims (where available) to calculate changes in total dollars, and also expressed as per-member-per-month charges.

Which costs to use: DMAA recommends using paid and/or allowed costs.

Trend Recommendation: DMAA recommends the use of a non-chronic population to calculate trend. For this purpose, the non-chronic population is defined as those members not identified as having any of the following “common chronic” conditions: diabetes, CAD, heart failure, asthma and COPD. In addition, when warranted and mutually agreed upon by the parties, members with certain other conditions may be excluded from the non-chronic population if these conditions are also being managed by another disease management program outside of the five common chronic conditions listed previously.

DMAA recommends the use of the average difference between historical chronic and non-chronic trends to adjust current year non-chronic trend.

Utilization Recommendation: DMAA recommends the following measures as a minimum set of useful utilization metrics to complement and corroborate the financial outcomes measures for DM program evaluation:

- All-cause admission rates per thousand members per year and ER visit rates per thousand members per year for the “diseased” or eligible population
- Condition-specific admission per thousand members per year and ER visit rates per thousand members per year for the entire insured or covered population (using principal diagnosis only to define condition-specific events)

Risk Adjustment Method Recommendation: DMAA has expanded its risk adjustment recommendation developed in Volume I to include the following. In deciding (1) whether and (2) how to approach risk adjustment for a particular disease management program for a specific population, it is useful to categorize outcomes of interest into one of the following 2 categories:

- Category 1: Those believed to be impacted only by exogenous confounders and not the DM interventions, where there is no concern that program impacts will be altered by risk adjustment (e.g., non-chronic trend)
- Category 2: Those believed to be impacted by exogenous confounders as well as by program interventions that potentially may be inappropriately distorted or discounted by risk adjustment (e.g., condition prevalence or severity, case mix)

Selection Criteria

Guiding Principles for Selecting Populations for Evaluation

- Approved selection criteria will apply to both program evaluations and comparative performance evaluations.
- Selection criteria will be consistent with recommendations already approved by the OSC.
- Selection criteria will apply to all non-clinical measures. In addition, selection criteria for clinical measures will be synonymous with the specific denominator criteria of the endorsed clinical measures.
- The development of algorithms and the codes to implement them will be an iterative process.
- A core algorithm will be developed to apply across conditions but where necessary additions will be made to accommodate condition-specific issues.
- The workgroup will consider all of the following data sources for use with the five conditions that are the current focus of this report (diabetes, CAD, asthma, heart failure, COPD). The workgroup will be mindful of issues of availability and consider expanding the list of acceptable data sources in future years.
- Selection criteria will address clinical exclusions as recommended in 2006 as well as participants with multiple-chronic conditions.

CLINICAL METRICS

Guiding Principles for Evaluation and Comparability of clinical measures are developed for the following areas.

- Reporting level
- Data sources
- Eligibility
- Risk Adjustment
- Sample size
- Calculating results
- Verification

Clinical Measure Set Categories for Individual Program Evaluation and Program Comparability:

DMAA has collaborated with NCQA to develop clinical effectiveness measures for both individual program evaluation and program comparability across vendors. Categories of measures have been developed for the following chronic conditions (Please refer to the Volume II Guidelines Report for measure details):

- Diabetes
- Coronary artery disease
- Asthma
- Heart failure
- COPD

Exclusions: DMAA recommends that there should be three types of exclusions from the evaluation for financial and utilization measures:

- Patients with conditions such as:
 - ESRD
 - HIV/AIDS
 - Transplants
- Non-skin cancers with evidence in claims of active treatment
- Hemophilia
- Claims for diagnoses such as: (but not the person with these claims)
- Trauma with hospitalization
- Skin cancers
- Stop-loss at member level; such as removing claims above \$100,000 annually, indexed to grow at future years concurrent with an appropriate trend

WELLNESS

Wellness Program Definition: Wellness programs target the total population and participation is not primarily driven by disease state. This approach differs from a disease management total population approach which could offer programs across the entire health spectrum of the population including both wellness and disease specific components. (Please refer to Volume II Report for complete definition.)

Wellness Program Model of Impact: The DMAA Wellness Program Model of Impact outlines the areas that could be impacted by a wellness program. These areas include (Please refer to Volume II Guidelines Report for a complete review):

- Process
- Behavior change and modifiable risk factors
- Productivity and quality of life
- Utilization and medical cost

ADDITIONAL METRICS

Consider use of one of the short-form health surveys (e.g., SF-8™, SF-12®, SF-36®) to measure general mental and physical health status.

Consider assessing participant satisfaction using the DMAA Participant Satisfaction Survey and Usage Guidelines.

Consider inclusion of standardized measures in the behavioral category of lifestyle behaviors.

Consider inclusion of standardized measures in the behavioral category of medication adherence.

Issue Brief: Addressing Legal and Compliance Considerations in Wellness, Disease and Care Management Programs

This issue brief describes legal compliance issues that may arise in designing and implementing wellness, health promotion and/or disease management program for employee populations. This issue brief is designed as a guide for further corporate counsel consideration and should not be cited or relied upon as legal advice.

Many employers offer some level of incentives, financial or other rewards, to promote and ensure employee engagement and continued participation in wellness, health promotion or disease management programs. These incentives can result in compliance concerns and legal issues to be considered and addressed under:

- The Americans with Disabilities Act (ADA)
- The Age Discrimination in Employment Act (ADEA)
- Health plan coverage continuation (COBRA) requirements
- HIPAA nondiscrimination and confidentiality concerns
- The federal income tax code

ADA¹¹

Generally, the Americans with Disabilities Act (ADA) prohibits discrimination against qualifying individuals with a disability based on a known (or perceived) disabling condition. The ADA generally prohibits employers from requiring medical examinations or from making inquiries as to disabilities. However, the Equal Employment Opportunity Commission (EEOC) has recognized, in rulings on the ADA, that a health-based inquiry may be appropriate in connection with certain voluntary wellness programs. EEOC guidance provides that employers may, under the ADA, conduct “voluntary medical examinations and activities” through their health programs, including voluntary medical histories (such as health risk assessments) provided the medical records are kept confidential and separate from personnel records.

ADEA

The federal Age Discrimination in Employment Act (ADEA) prohibits employers from discriminating against individuals (age 40 or older) with respect to the “terms, conditions, or privileges of employment” because of age¹². This guidance generally has been interpreted to include employee benefits.

However, no ADEA issues arise if wellness and disease management programs terminate at retirement. In circumstances where differences already exist in retiree medical program design based on Medicare entitlement, employers may have little risk associated with limiting wellness and disease management programs for retirees eligible for Medicare coverage. Employers offering retiree health benefits are encouraged to see special legal counsel prior to implementing or reducing wellness or disease management programs for retiree populations.

COBRA

The Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) provides that an employee who might otherwise lose coverage under an employer-sponsored group health plan that provides medical care can pay to continue that coverage for a limited time. Employers must consider a number of issues when analyzing whether COBRA continuation coverage must be extended for a particular wellness or disease management program. These considerations include: whether the program is considered to provide medical care; the type of incentives offered; whether the program is an integrated part of the health plan or a free-standing program; and how widely the program is offered among the employee population. Employers are encouraged to seek legal counsel regarding the structure of a wellness or disease management program to determine the exact application of COBRA in each situation.

HIPAA

The Health Insurance Portability and Accountability Act (HIPAA) portability provisions generally prohibit employers from varying benefits based on health status. However, HIPAA does permit employers to establish “premium discounts or copayments or deductibles in return for adherence to programs of health promotion or disease prevention.”¹³

HIPAA’s administrative simplification requirements affect the privacy and security of employee-related and reported health information. Disease management programs are specifically referenced in the federal HIPAA guidance to permit the sharing of protected health information (PHI) with a disease management program for purposes of health care operations provided that the disease management program has entered into an appropriate business associate agreement with the employers group health plan. Employers are encouraged to seek legal counsel regarding the determination of a disease management program’s status as a “health care operation” versus “health care provider” for purposes of HIPAA Privacy Rule application.

INTERNAL REVENUE SERVICE GUIDANCE

The increasing popularity with employers of Health Savings Accounts (HSAs) and Health Reimbursement Arrangements (HRAs) requires employers to understand recent IRS guidance on incentives offered to employees participating in these programs.

Employers are generally permitted to make contributions to employee-held HSAs, provided the employer contributes the same amount or same percentage of the deductible to all eligible employees. Commonly referred to as the HSA “comparability” requirement, this regulation does not allow employers to use HSA-based financial incentives to drive or reward participation in an employer-sponsored wellness or disease management program. Employers offering Section 125 cafeteria plans should consult legal counsel for guidance on possible exclusions to the comparability requirements outlined above.

IRS guidance on employer-provided HRA contributions are more complex and employers are cautioned to understand carefully the HRA indirect funding rules when designing financial incentives for wellness and disease management programs.

Getting the Most from the RFP Process

This section is designed to assist employers and other purchasers of wellness, prevention and disease and care management programs in developing useful request for proposal (RFP) documents, ensuring appropriate information from interested respondents, providing program design comparisons and establishing the expectations of both program purchaser and provider.

These questions are designed to elicit general corporate information, outline experience with similar employee or patient populations, describe program design and philosophy of engagement and management and determine basic process and outcomes measurement strategies.

Employers are encouraged to review the valuable questions presented in this section of the toolkit with an eye toward developing a set of questions most relevant for the needs of the specific population to be served. These questions are designed to provide a clear understanding of the employer's needs, as well as of the programs offered by the potential respondents.

Questions have been divided into the following segments:

- Company Overview
- Experience
- Health Risk Appraisal/Wellness/Health Promotion
- Lifestyle Behavior Change/Health Coaching Programs
- Medical Management
- Care Management
- Call Center Operations and Staff
- Physician Support
- Implementation and Integration
- Data Exchange
- Quality Management
- Privacy and Security
- Information Technology
- Outcomes
- Financial

Company Overview

1. Please list all company locations, including headquarters and call center locations.
2. What is the name and title, telephone number, e-mail address and postal address of the contact person for this RFP?
3. Is your organization independently or publicly owned? When and in what state is your company incorporated?
4. How long has your company been in business?
5. Provide a brief history of your organization and your status with respect to any merger/acquisition activity that your organization has been involved in over the past two years.
6. Are other services provided by your company besides disease management? If so, please describe.
7. Does any health plan or pharmaceutical company have equity ownership in your organization? If so, please explain why and how these organizations obtained equity in your company.
8. Are you operating at a profit? If not, when do you anticipate realizing a profit? Please provide balance sheets and income statements for the current year and the last three years of operation.
9. Provide detailed information about any long-term debt owed by your company.
10. Provide detailed information about money owed to and the relationship with venture capital organizations.
11. What differentiates your company and/or your services from your competitors?
12. Is your organization a member of the Disease Management Association of America (DMAA)? List all professional organizations of which the company is a member.
13. Please list any relevant accolades, awards or other distinctions your organization has received in the past three years.
14. What has your organization done to contribute to the development of the disease management industry? (for example, has your organization developed any programs or interventions that have influenced the design of disease management programs or interventions offered by others?)
15. What is your organization currently doing (research & development) to refine and enhance your disease management services for the future?
16. Do you currently have full-time physicians or a Medical Director on staff? Describe their role.
17. Do you have Medical advisory committees? Please describe the committee(s) structure and their role.
18. Provide an overview of your organizational structure, including key executives and the account management team who will be responsible for this relationship.
19. Has your organization been the subject of legal action in the past two years?
20. Outline your organization's liability insurance coverage.

Experience

21. Describe how you accommodate large health plans with nationwide coverage. List customers who fit this category and how many lives they represent.
22. Describe the services performed on a contracted or affiliated basis. List full name and address of any subcontractors involved in the services to be performed.
23. Describe your customer retention history.

24. Please fill in the table below for all current customers. Be sure to indicate the number of lives actively being managed under each contract. (“Actively” is defined as telephonically reaching out to members at least twice a year.)

| <i>Health Plan Customer</i> | <i>Condition(s) Managed</i> | <i># of Lives Actively Managed</i> | <i>Year Program Began</i> | <i>What programs were added and when?</i> | <i>Date of Contract Renewal</i> |
|-----------------------------|-----------------------------|------------------------------------|---------------------------|---|---------------------------------|
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |

25. Please complete the following table for all your programs. Add new rows as necessary.

| <i>Disease / Condition</i> | <i>Number of Individual Lives under Management by Disease by Year</i> | | | |
|-------------------------------------|---|-------------|-------------|-------------|
| | <i>2004</i> | <i>2003</i> | <i>2002</i> | <i>2001</i> |
| <i>Diabetes</i> | | | | |
| <i>Cardiac</i> | | | | |
| <i>Asthma</i> | | | | |
| <i>COPD</i> | | | | |
| <i>ESRD</i> | | | | |
| <i>Other:</i> | | | | |
| <i>Other:</i> | | | | |
| <i>Total Lives under Management</i> | | | | |

26. Has a customer replaced your services with those of another disease management company in the past three years? If yes, please list the customer, program and replacement vendor.
27. Have you ever replaced another disease management vendor in the past three years?

Medical Management

28. Does your company offer a total population management approach? If not, please explain your delivery model.
29. Describe the range of products and services provided by your organization today and any products that are currently in development.
30. Describe the clinical guidelines or protocols that were used to develop each program.
31. Describe the process to update guidelines or protocols.
32. How does your program address co-morbidities?
33. Describe how your program differs when you do and do not have lab data.
34. Have your programs or program components been evaluated and approved by reputable third-party organizations?

Care Management

35. Describe how you identify members for the program.
36. What data is required from the health plan to support member identification?
37. Are all identified members included in the program? If so, are all the members' health care costs included for measurement purposes?
38. Does the vendor exclude any members from participating (i.e. transplants, AIDS, non-compliance)?
39. Are all identified members added on the first day of the program or are they phased in over time? Please explain.
40. Is the program an opt-in or an opt-out model?
41. Do you continue to reach out to members that opt-out? If so, how?
42. Describe your method for stratifying members into risk groups based on their severity level or other criteria.
43. How often are members stratified?
44. Is predictive modeling used to identify future high risk? If so, how is it used in the delivery of disease management programs?
45. Briefly describe your predictive modeling technology and level of predictability.
46. How are interventions delivered to members (i.e. telephonically, mail, e-mail)? What is the typical frequency of these interventions?
47. What percentage of the identified members do you attempt to contact by phone?
48. Describe your typical process for member education, counseling and interaction.
49. Describe the variation in intervention by stratification level.
50. Describe how you ensure that all services you provide are accessible to all members, including those with limited reading skills or with disabilities.

51. Do you have multi-lingual capabilities?
52. How are your program interventions determined? How customized or individualized are your care plans?
53. Do you provide biometric monitoring for members? If so, what type of devices, for whom and how is eligibility determined?
54. Do you screen for depression? If so, what is the process when a member screens positive?
55. How do you address emergency situations?
56. Do you monitor potential prescribing errors, drug interactions and adherence with drug regimens?
57. Describe any Web-based or online services provided to members and physicians. Is an online member assessment provided?
58. Provide sample communication and educational materials provided to members and physicians.

Call Center Operations & Staff

59. What are your call center hours of operation in terms of hours per day and days per week? Identify the process for members/physicians to contact clinicians after hours.
60. What is the percentage of calls that are outbound to members or physicians? How do you ensure that calls to the member are made at a convenient time for the member?
61. Is the member's clinical information available during each call with that member or the member's physician? Explain.
62. Explain how member clinical information is captured and stored.
63. Describe your call center technology (i.e. predictive dialer, health management system).
64. Describe the background, qualifications and experience of the clinical staff (i.e. nurses, dietitians, etc.).
65. Describe the education level of your care management staff that interacts directly with members and physicians (i.e. registered nurses, LPNs, non-clinical). How many nurses does your company employ?
66. Is non-clinical staff used to deliver the disease management program? If so, please explain their role.
67. Are the care managers employed by you or contracted?
68. Describe the training and credentialing process.
69. Will a team of clinicians be dedicated specifically to our account?

Physician Support

70. Does your program require physician consent? If so, how do you acquire physician consent?
71. Explain how your program engages network physicians in the program.
72. How does the program support the physician-patient relationship?
73. Describe your process for engaging national and local physicians.
74. Describe the frequency and type of interaction your program has with the member's physician.
75. Do you provide in-market support to physicians? What is their role?
76. How do you communicate with physicians and other providers regarding member specific needs and interventions?
77. How do you incorporate physician feedback into the disease management program?

Implementation & Integration

78. Describe your program implementation timeline. Provide an implementation work plan.
79. Describe the account management team that will be provided to the health plan.
80. What resources would be required from the health plan for a successful implementation?
81. Has your company missed any implementation deadlines? If so, please explain.
82. Describe your largest implementation process. How many disease lives were added and in what period of time?
83. Describe your willingness and capability to integrate with other vendors. Please specify your ability to accept data from other organizations. Describe any data integration problems you have had in the past.
84. How will your program interface with the health plan's existing pharmacy benefit management programs?
85. How will you integrate with existing case management, utilization management, etc.? Describe your experience.
86. Will the vendor provide customized branding for the health plan?

Data Exchange

87. What data (e.g. claims) do you require from the health plan to support program components?
88. How are you able to receive this data?
89. Describe your data warehouse.
90. Describe your system for collecting and maintaining member and physician data.
91. Provide a listing of reports that are available to the health plan and the provider.
92. How flexible is your system in meeting ad hoc reporting needs? Is there an extra charge for these reports?

Quality Management

93. Describe how you evaluate the quality of the program.
94. Is your organization certified or accredited by NCQA, URAC and JCAHO?
95. How often are your programs reviewed and updated?
96. How do you monitor the quality of your clinical staff's work?

Privacy & Security

97. How do you ensure that your disease management program and all related programs are HIPAA compliant?
98. How do you ensure confidentiality and integrity of data, medical records and documents?
99. Do you require employees to read the Code of Conduct and sign an acknowledgment?
100. Does your company have a Privacy or Compliance officer? If so, please name.

Information Technology

101. How many people are employed in your IT department? What percentage of your IT staff is dedicated to disease management?
102. Give detailed information about the company's health management software. Describe the software used to identify, stratify and track patients.
103. Do you provide members with access to an online health assessment? Describe functionality.
104. What is your company's Web address?
105. Does your program include any Web-based components?
106. What policies and procedures are in place for disaster recovery in the event that one or more of the call centers are not operable?

Outcomes

107. Do you adhere to the DMAA Outcomes Guidelines Report?
108. Has a mechanism been established to adequately trend base period cost to account for health plan activity? The measurement methodology should isolate the impact of the disease management program from all other trends.
109. Have your outcomes been validated by a third party?
110. Does the reconciliation process include both plan and vendor calculating all pertinent variables and reconciling any differences?
111. How do you measure the success of each of your programs? Explain.
112. How often are program activities and outcomes reported?

Financial

113. How are fees calculated? Per Member Per Month or Per Disease Member Per Month?
114. What is your current methodology for calculating financial savings for each disease management program currently offered?
115. For multiple disease programs, how are members identified for billing and measurement purposes?
116. Are you willing to put a portion of your fees at risk tied to financial and/or clinical performance targets?

Health Risk Appraisal/Wellness/Health Promotion

117. Can your organization administer and monitor a "health risk appraisal"? Can your programs handle a Web-based, paper-based or any other type of health risk appraisal?
118. When, what and how are the results of health risk appraisals reported to the client?

119. Describe any educational materials you provide to members to assist them in being better consumers. Identify if the materials are Web-based, hard copy or both.
120. Briefly describe the types of wellness programs you offer.
121. Do you currently administer any wellness programs that offer financial incentives for member participation? If so, please describe.
122. Has your HRA been validated as a predictor of future disease or cost? If yes, please provide details and results of the validation, including any peer-reviewed publications of the tool and its use in the practice.
123. How does your organization's HRA questionnaire evaluate and incorporate participants' "level of readiness" for behavior change?
124. Describe how you implement, distribute and process the HRA.
125. What type of assistance is provided to a participant with questions regarding his/her HRA result?
126. Since the inception of your HRA tool, how many have you sent and what is the average return rate?
127. Describe the process for obtaining accurate phone numbers and mailing addresses.
128. How does your HRA monitor and report individual changes from year to year?
129. How do you measure program effectiveness?
130. Provide a detailed description of the process for ensuring continued validity and reliability of the HRA tool.
131. Describe how you would work with physician advisory committees and ensure support and provider cooperation for HRA programs.
132. In your company's experience, what elements are essential for a successful wellness program?
133. If we are interested in expanding our health care services, can you offer us further product options in disease management and telephonic counseling for population health management? Please briefly describe your other services.
134. List the types of biometric and behavioral health risks your HRA assesses.
135. Can your HRA support a follow-up program focused on behavioral risk reduction?
136. How are high-risk diseases identified for telephonic counseling/coaching follow-up on the HRA? Please explain the criteria for identification.
137. What differentiates your products from the rest of those on the market?

Lifestyle Behavior Change/Health Coaching Programs

138. Do you offer Web-based Lifestyle Behavior Change Programs?
139. Are these structured programs? Please describe the curriculum for the programs.
140. Are the programs dynamic and interactive? Define what that means for your offering.
141. Do the programs continue to tailor to the needs of the user through ongoing participation in the program?
142. Are the programs personalized? Define what that means for your offering.
143. How does an individual access the programs?
144. Are your programs integrated into the HRA? If so, please describe how they are integrated.
145. How do you track program usage?
146. Can participants track their own progress?
147. How do you keep individuals engaged in the programs?

148. Do you offer telephonic counseling/coaching in-house? If not, what counseling/coaching organization do you integrate with?
149. What lifestyle areas do your telephonic coaches/counselors cover?
150. What are the qualifications of the coaches/counselors?
151. Do the coaches/counselors specialize in different areas, such as weight loss, smoking?
152. Who do you target for receiving personal health coaching?
153. How are the potential participants contacted?
154. Please describe your protocols and how they were developed.
155. How many sessions are typically offered to participants?
156. If a participant has multiple health risks, how do the coaches/counselors prioritize which lifestyle area(s) to address first?
157. What are the methods of accessing a coach/counselor?
158. Do you provide an ongoing education/maintenance program to guide the participant to be self-sufficient?
159. Can your program coordinate with a disease management program to ensure that participants receive consistent coordinated advice?
160. Explain your experience designing incentive systems to drive participation, including your suggested system.
161. What types of reports can your system generate, and how often are these reports produced? Please provide samples of standard reports.
162. Detail your organization's standard approach to measuring program success.
162. What platform do you currently leverage to deliver content/services?
163. How is claims information used to augment the identification of candidates for disease management or case management programs?
164. How is health assessment data used to identify participants for intervention?
165. How are your health coaching, disease management and case management programs linked?
166. How do hand-offs/referrals occur between programs (e.g. from disease management to case management)?
167. Describe the procedures used to identify members who are candidates for health coaching, disease management, case management or other interventions.
168. How do you use predictive modeling technology to identify individuals who are either in the earlier stages of disease or at risk to develop the disease condition?
169. Do you utilize survey-based predictive modeling or is your predictive modeling claims-based?
170. Please describe your program's approach to "primary care coordination."
171. Please describe the data and information used to stratify program participants, data used in the identification process, and how frequently this information is used in the stratification process. Please consider initial stratification and ongoing stratification.
172. Are your intervention programs protocols-driven or member needs-driven? Please describe.
173. Please identify the approaches you will use in assisting the client's members in becoming better consumers of health care services, including information support, incentive structures and assistance.
174. How do you measure participant satisfaction within your program?
175. What is the average participant satisfaction with your program for the past 12 months?

176. Please identify the types of reporting you are able to provide the client and the frequency of when the client will receive such reports.
177. Please provide the average annual claims trend for your clients based on your overall book of business (medical & Rx) before the implementation of your services and since your services have been effective net of any benefit plan or network changes.
178. Please share your independently validated research studies addressing the efficacy of your program.
179. Explain what type of performance-based fee structure you are willing to offer. If this is different based on program, please provide detail.
180. Please outline in detail the implementation process for your services. Please detail any contract requirements, dependencies, system interfaces, technical requirements, communication, staffing requirements and data requirements.
181. Do participants in the intervention programs continue to work with the same health coach or nurse throughout the program?
182. Can participants self-refer and ask to speak with a health coach or nurse? Please describe.
183. What are your typical engagement rates for participants in your intervention programs? Be specific.
184. How do you define engagement?
185. What percentage of the population do you typically intervene with and how?
186. What separates your identification and engagement methodologies and results from your competitors?
187. What percentage of your client base continues or expands with you after the first year?
188. Please provide one example of a client that canceled your service in the past year and explain why.
189. Can your services be purchased cafeteria-style?

Case Studies: Application and Results Changing Corporate Culture

Case Study One:

DISEASE MANAGEMENT AND HEALTH AND WELLNESS PROGRAMS IN MID-SIZED EMPLOYER GROUPS: UNIQUE CHALLENGES AND RESULTING REWARDS

Employers of all size companies know that disease management and health and wellness programs are key to cost management because cost shifting and changes in benefit design can no longer carry the day. Employer groups of 500 to 2,000 employee lives, often with multiple sites around the United States, face unique challenges. They might have smaller budgets for this type of programming or small groups of people in multiple sites—or both—and might not have the ability to negotiate lower pricing because of size. They require programs provided by fewer vendors rather than more, tightly integrated utilization management (UM), case management (CM), maternity management (MM), disease management (DM) and health and wellness (H&W) programs that include health risk assessments (HRA) to maximize efficiency and success. Robust reporting must support the “value proposition” of these programs and there must be an effective balance of health impact with cost of delivery. To summarize, employers want the following from care management programs:

- Cost management
- Right care for their employees
- Ease of implementation
- Customized solutions for their population
- Individualized solutions for their employees
- No “noise” when programs are implemented
- Vendors who deliver with robust reporting capabilities
- Integration of programs by one or multiple vendors

Three employers described in Table I came together in a panel in December 2006 to discuss “their company story.” They discussed why they started these programs, issues of company culture, corporate and member buy-in, and results to date. The panel was joined by two industry experts¹⁴ who provided general commentary.

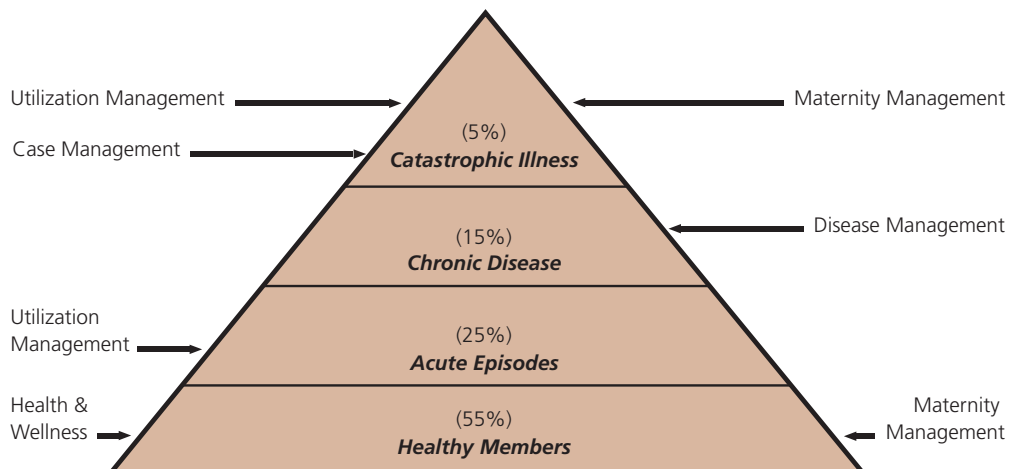
Table I

| | EMPLOYER 1 | EMPLOYER 2 | EMPLOYER 3 |
|---|----------------------------------|--|---|
| Employer | Winterthur U.S. Holdings | Searles Valley Minerals | Menominee Indian Tribe of Wisconsin |
| Size | 2,200 employees | 640 Employees | 1,366 Employees |
| Location | 23 with 4 to 800 employees | 2 with employees in Mohave Desert and 40 in Kansas | 41 departments in 24 locations on the reservation in Wisconsin |
| Programs | UM, CM, DM, MM, HRA and Coaching | UM, CM, DM, MM, Smoking Cessation, Wellness | UM, CM, DM, MM, HRA and Coaching |
| Vendor Providing Care Management | Fiserv Health | Epoch, SHPS, Interactive Health Solutions | Fiserv Health |
| In-House Programs | Wellness Programs | | Onsite clinics, Onsite screenings, smoking cessation, stress, fitness, self-care, Health Ed, diabetes |

Scope of discussion is visualized by the population pyramid in Figure I.

Care Management Programs to Manage a Population (Figure 1)

Figure I



Employers desire programs that cover every member of their population. These members will “live” in a different slice of the pyramid at different points in time. The programs must have effective coordination of referrals so that reactive programs, such as UM and CM, receive and send members to the proactive, population-based programs for preventable conditions (H&W) and chronic conditions (DM) in a timely and system-enabled process.

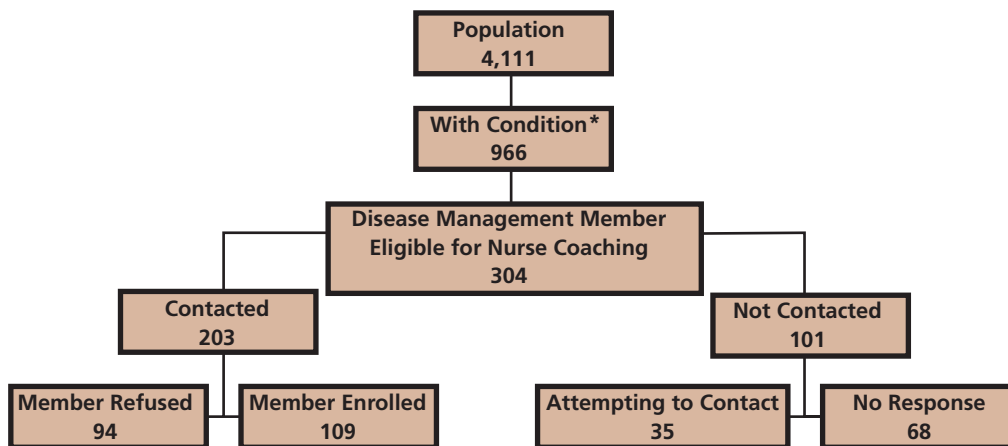
CASE STUDY #1

Jennifer Tratnyek, benefits manager, Winterthur US Holdings, focused on how to use a timeline approach to implementing these programs when the decision has been made to purchase them. The company has been a property and casualty insurer since 1925. They have a direct written premium of \$1.5 billion. In January 2002, the company went from multiple health maintenance organizations nationwide to a self-funded plan with high, medium and low benefit options. The goals of the change were more bargaining power, consistent plan components and costs, broad choice of health care providers, access to data on the entire population, ability to monitor usage and quality and the ability to conduct disease management programs. They chose a TPA to provide services because all services were provided by the TPA, the TPA would customize the programs, simplicity of administration was possible with the help of the TPA and data would be provided on all programs. The company implemented UM, CM, DM and MM.

In 2004, the wellness program was launched. In 2005, employees completed health risk assessments (HRA) and the company began offering health coaching. The HRA is now an annual program. Table II shows the participation of high-risk individuals in the DM program from Jan. 1, 2002, to Aug. 22, 2006. Of the high-risk members eligible for one-on-one telephonic nurse coaching, 67 percent were contacted and 54 percent of those enrolled. Thirty-three percent were in the unable to contact category. To encourage participation in all care management programs, Winterthur planned for 2007 to offer \$250 single and \$500 employee plus spouse premium reductions for participation in HRA and all recommended care management programs.

Table II

Opportunity For Engagement In Disease Management Program*



* CAD, CHF, Diabetes, Asthma, COPD, Hypertension, Depression

Winterthur has seen savings from these programs. Short-term results from the switch to a single, self-funded plan showed a 5.2 percent increase in cost for health benefits in 2003, when nationwide the cost increase was 15 percent to 18 percent. The disease management program has been in place from 2002 to 2006. Using an industry trend of 7 percent annually, the program produced a combined three-year return on investment of 3.7:1.

CASE STUDY #2

Beth Sloan, Benefits Manager from Searles Valley Minerals, represents a company that provides customers worldwide with soda ash, sodium sulfate and boron minerals from the desert of the western United States. Its advanced solution mining and crystallization techniques yield approximately 2 million tons of these minerals each year. The company needed to provide disease management and health and wellness programs to its employees. Six hundred employees work in the harsh environment of the Mojave Desert, there is limited access to doctors and hospitals in the region, the population is predominantly male with an average age of 46 and there is low turnover. The company needed cost savings from disease management and health and wellness, as well as healthy, productive workers. They chose a TPA to provide services because of close integration between the care management programs and network management solutions.

Participation data for the disease management program is early, but encouraging. Disease management candidates were identified in 35 percent of the population because of the unique characteristics of the employee population (age, industry, work environment, job sites). Usually, 15 percent to 20 percent of a population is identified. Of all of the identified lives in both high- and low-risk groups, 39 percent are participating with an expected participation of 35 percent to 40 percent. Fourteen members engaged in and completed the Smoke-free Tomorrow Smoking Cessation Program.

CASE STUDY #3

Ann Marie Berg, Occupational Wellness Manager, Menominee Indian Tribe of Wisconsin, needed a culturally appropriate program with multiple modes of engagement. The population is 4,857 lives, with 4,257 American Indian lives. The reservation is in rural northeast Wisconsin. The Menominee Tribe is a government organization providing services such as a medical clinic, police protection, housing, tribal school, child care, casino/bingo/hotel operation, lumber mill, and post-secondary education. The need for disease management and wellness programs was emphasized by health care spending/employee in 2005 of \$11,890, more large claims coming from preventable conditions, the population being an at-risk minority population living in the county in Wisconsin rated as having the worst health in the state, and the fact that employees and spouses were not getting routine wellness care and early detection tests.

Action items to improve the health of members and better manage costs were the following:

- Redesign of the health plan to include disease management and wellness programs.
- Increase of wellness coverage to 100 percent for exams and early detection tests.
- Initiation of an Occupational Wellness program with onsite and virtual-based programs.
- Addition of \$50 incentive for doing HRA and early detection tests or participation in disease management and other wellness activities.
- Annual reassessment of health with an HRA.

Disease management and wellness participation to date, which includes phone-based counseling, worksite programs, clinic programs or other programs, such as health clubs and weight loss programs, shows 19 percent participating in disease management nurse counseling, 33.5 percent participating in wellness programs and 150 members doing other activities. Table III lists the challenges faced when introducing these programs to this population. The expectation is that by offering a multifaceted approach to all members, everyone will find a program that meets their individual needs.

Table III

Our Toughest Challenges

Communicating with all employees

- Unable to contact by phone
- Not reading materials sent or posted

Programs need to have cultural sensitivity

- Smoking (part of traditional ceremonies)
- Diabetes
- Alternative medicine (medicine Man)
- Marketing materials

Lifestyle

- Diet
 - Food fundraisers: chili, brats, indian tacos, fry bread & fish fries

Tough Life

- Low income, many employees are working two jobs
- Depression and stress
- Alcohol abuse

Rural Community

GENERAL COMMENTS:

As mid-sized employers consider disease management and health and wellness programs from the standpoint of value delivered and effectiveness of cost management, the following principles must be kept in mind:

- Efficiency and cost savings are gained by searching out vendors who offer the entire range of services.
- Some vendor offerings lack design and execution capability, as evidenced by intensity of interventions, participation rates and results.
- Program design and execution is more important than return on investment calculations. Measure of participation rates and improvement in clinical status are valuable when looking at program effectiveness. High participation and improvement in clinical status lead to cost savings.
- When evaluating vendors, key parameters to research are program design, scope of services/diseases managed, clinical resources of the vendor, risk sharing/performance guarantees, IT/technology, enrollment processes, communication assistance and reporting capabilities.

Table IV provides a checklist of disease management and health and wellness vendor differentiators. Vendors should provide concrete descriptions of process and measurement of outcomes in all areas.

Table IV

| <i>Disease Management and Health and Wellness</i> |
|--|
| <input type="checkbox"/> Risk identification process (HRA tool, assigning risk factors) |
| <input type="checkbox"/> Health care coaching model (outreach, interventions, consistency) |
| <input type="checkbox"/> Track record on connecting and engaging targeted individuals |
| <input type="checkbox"/> Technology (Portal, personalized programs, flexibility) |
| <input type="checkbox"/> Web content |
| <input type="checkbox"/> Integration with employer plans and vendors |
| <input type="checkbox"/> Participation incentives (ability to administer) |
| <input type="checkbox"/> Metrics |
| <input type="checkbox"/> Communications |
| <input type="checkbox"/> Future initiatives/enhancements |

Case Study Two:

PREDICTIVE MODELING AND HEALTH COACHING KEEP EMPLOYEES HEALTHY, HAPPY—AND AT WORK CASE STUDY ON CITY COUNTY INSURANCE SERVICES IN SALEM OREGON

As with most health plans, City County Insurance Services (CIS), a program of the League of Oregon Cities and Association of Oregon Counties, was facing the problem of an unabated rise in health spending. As a matter of fact, its health care costs had increased at double-digit rates.

Faced with such steep cost increases and a drain on its reserves to offset benefit increases, the CIS Board of Trustees decided to invest in a total population health management strategy called One Care Street. The One Care Street system combines predictive modeling science and health coaching support to identify people who are likely to use large amounts of costly health care services before they need such services over the coming six- to 12-month period.

This predictive modeling and health coaching program began rollout in 2005 to CIS' 9,341 employees and retirees and was aimed at finding high-risk employees that would require health care in the coming year and intervening before a crisis would occur.

CIS was determined to have outcomes independently analyzed versus control group results. As part of the process, CIS selected Ariel Linden, DrPH, MS, to conduct six- and 12-month studies so that real improvements in health improvement and health savings could be measured along the way.

CIS faced unique challenges in the rollout of One Care Street. CIS had to reach employees with a new program who are dispersed geographically and represent a wide spectrum of employees in many small cities and counties, from police, fire and city workers to unionized employees. Further, unlike other health plans, CIS is entrusted with public money and is held accountable for programs and their success or failure. Despite the risk, CIS followed its core values and implemented a new approach to help employees manage their health proactively, and as a result, has experienced phenomenal results.

To boost participation in the One Care Street survey and health coaching program, CIS employed a variety of measures. First, effective communication and training were key, as was a set of incentives for completing the predictive modeling survey and coaching. CIS offered incentives—drawings for iPods—for completing the survey. By adding the drawings and through word of mouth, the survey completion rate increased and CIS achieved a 90 percent completion rate in coaching by 2007.

Another important strategy was integrating the survey with the CIS online benefits enrollment program. The OCS survey is the first step in the enrollment process and accessed directly from the CIS enrollment Web site with a single sign-on that links CIS, OCS and a benefits enrollment vendor seamlessly.

The One Care Street program furthered CIS's goal to create a culture of wellness, and the financial impact has been astounding, considering previous cost trends and the national trend for health care cost increases.

From 2005 to 2006, CIS experienced a negative 7 percent trend in plan net claims paid, resulting in benefit rates for 2006 that were 2.5 percent less than 2005.

Further, an independent matched control analysis performed by Dr. Linden showed that those participating in One Care Street's program at CIS also impacted the number of professional visits (-26 percent), emergency room visits (-23 percent) and admissions (-64 percent), compared with a matched control group of non-participants at six months post OCS-deployment.

CIS has invested close to \$1 million annually toward implementing and managing the One Care Street program, and directed substantial efforts to communicating and educating employees about the value of the program. Via employer meetings and quarterly newsletters, employees are reminded during open enrollment and year-round about the value of the survey and coaching program and how they can get the most value out of participating. CIS is looking to increase its commitment in the 2008-09 year by offering insurance rate reductions tied to participation in One Care Street.

Positive results also have turned skeptics into believers. One city manager had initially encouraged employees not to participate, doubting the One Care Street system could make a difference. After two years of use, the same city manager came to a CIS awards ceremony to recognize that this community had achieved 100 percent participation, which qualified him for a wellness grant from CIS. The program has and continues to have a financial and a real-world impact for employees.

CIS finds that there are three factors to the program's success. First, the One Care Street survey incorporates powerful predictive factors related to "health perception" to produce the "right" call list. With the right call list, CIS can achieve high engagement levels with the right people who need help, and then link each individual high-risk person to the right "combination" of disease education and coaching services.

Second, health coaching makes a difference. Health coaches trained in behavioral science work one-on-one with high-need employees to help them avoid a crisis health situation. The approach differs from traditional disease or case management, since interaction with employees is more member-need driven versus protocol-driven. Health coaches differ by employing:

- A motivational posture versus telling/advice giving/reminding
- Interventions that quickly and very meaningfully target the key contributing factors with well-demonstrated coaching techniques, such as:
 - Coaching varying levels of readiness to change behaviors
 - Coaching stress and stress emotion management
 - Detecting and influencing perceptual/attributional errors
 - Linking to appropriate resources to address basic need issues

Third, One Care Street is an integral part of CIS's holistic approach to encourage a wellness culture. The program is not only about targeting certain diseases and curing them specifically, but identifying ways to make employees feel better.

When employees, for example, fill out the survey and are found to be high-risk due to weight or smoking, CIS automatically offers free weight control and smoking cessation programs. Additionally, locations that achieve greater than 80 percent participation receive a wellness grant from CIS to be used for any range of wellness options, including biometric screenings and worksite-based programs.

CIS's commitment has endured since 2002, when it started the program, known as "Healthy Benefits." Continued investments in the program, incentives, communication and enhanced program design have continued over the past four years, unabated. The vision to save on premiums, lower rate increases for employees and build a wellness culture have driven CIS to achieve the first-ever negative 7 percent in plan net claims paid from 2005 to 2006 and the ability to offer reduced premiums for employees that begin to participate next year.

Despite the risks at taking public funds to invest in a new health management approach, the Board of Trustees has continued to invest in and grow the program, including plans to include a limited amount of spouse participation, expand incentives regionally to promote more awareness and support among employees in like communities, and offering wellness focus groups for each location. CIS is never satisfied and always sees room for improvement in the program, which has resulted in its ever-growing success.

For further information about these case studies or questions about care management programs, please contact DMAA President and CEO Tracey Moorhead (202-737-5309), who can put you in contact with needed resources.

Education for Employees and Other Plan Members

Succeeding in disease management and health promotion depends largely on understanding the many conditions that affect the workforce. Employee education is crucial to changing unhealthful behaviors and taking appropriate action to keep chronic conditions in check. This section provides an overview of approaches to employee education and sample educational tools, such as posters and pocket cards.

Health informatics plays an integral part in successful disease management and health promotion initiatives. Health Informatics is the convergence of information, science, medical research, finance, education, and business practices. Applying the science of health informatics is often the key to developing disease management and health promotion programs that are meaningful for a given population but also to both providing progress metrics to allow for further ‘tweaking’ of the program and to show successful outcomes for both clinical and business/financial reasons.

With the concatenation of **health risk assessment** information to more traditional health care cost and utilization information such as claims data, a company can really begin to understand the health habits of their employees, evidence-based screening behavior, and severity and prevalence of disease. This helps address health prevention on the primary (lifestyle change), secondary (screening) and tertiary (reducing complications of chronic disease) levels. For instance, health informatics can answer questions - what are the key health risks of the employee population, what percentage of women older than 40 had a mammogram in the past year, and what proportion of diabetics have significant complications.

Disease management and **health promotion** are most successful when they are designed around a full suite of products and services that can be custom fit for their needs and budget. Product suites often include **educational materials, health tracking tools**, health risk assessments (HRA), **health coaching**, and full-fledged disease management. A multi-media approach is often helpful since different messages might be necessary for different employees. There really is no ‘One Size Fits All’ when it comes to health care so employers who want to be successful need to deploy multiple approaches to reinforce messages to encourage healthful lifestyles, obtain appropriate medical services and comply with treatment.

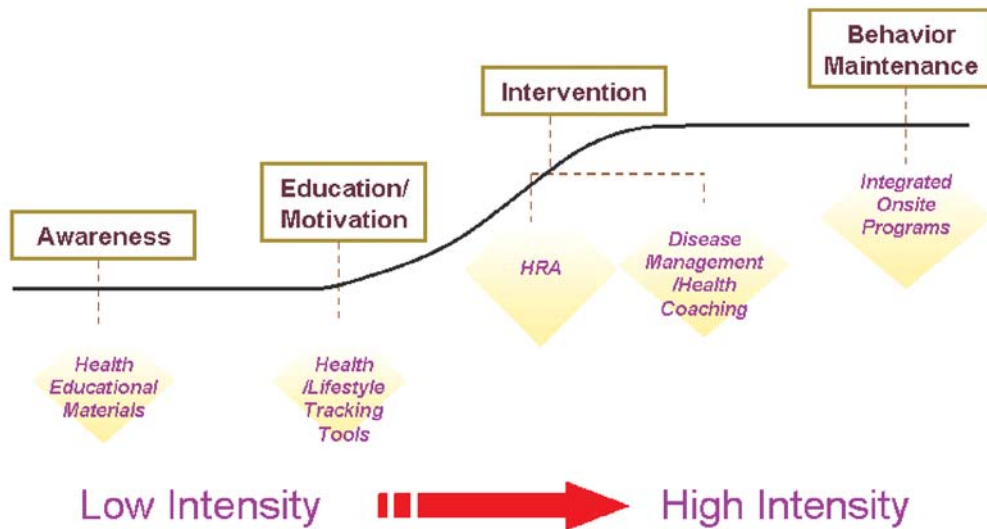
Improving employee health requires a holistic approach. It must recognize the influencers on health and productivity and utilize the science behind “readiness” to change.

The stages of change model is discussed elsewhere in this book so it will not be discussed in detail here but it should be remembered that you have to consider both readiness to change and health status in determining both the service and approach that will be most effective for an employee. Lower intensity services are most appropriate to create awareness for employees who are in the pre-contemplation stage and do not have significant health care issues. Conversely for an

employee who has a chronic disease such as diabetes and who is ready to make changes to improve their health, high intensity disease management and **behavior maintenance programs** are most appropriate. An illustration of the continuum of disease management and wellness services for a typical employee population is shown in Figure 1.

Figure I

CONTINUUM OF DISEASE MANAGEMENT AND WELLNESS SERVICES



Perhaps an issue of equal importance to readiness to change is **health advocacy**. As employers and health insurers promote **consumer-driven health plans**, the employee and his or her dependents will be asked to more actively participate in the medical and buying decisions. Teaching the employee community the important points of navigating the health care system can markedly impact the results of disease management and wellness promotion. Patients who understand how to select a physician or hospital for care will make better choices. Providing them with **comparative provider data and analysis** where available can provide a significant impact. Working with organizations that produce this information or establish “**high performance networks**” can reduce medical costs and improve the quality of care received.

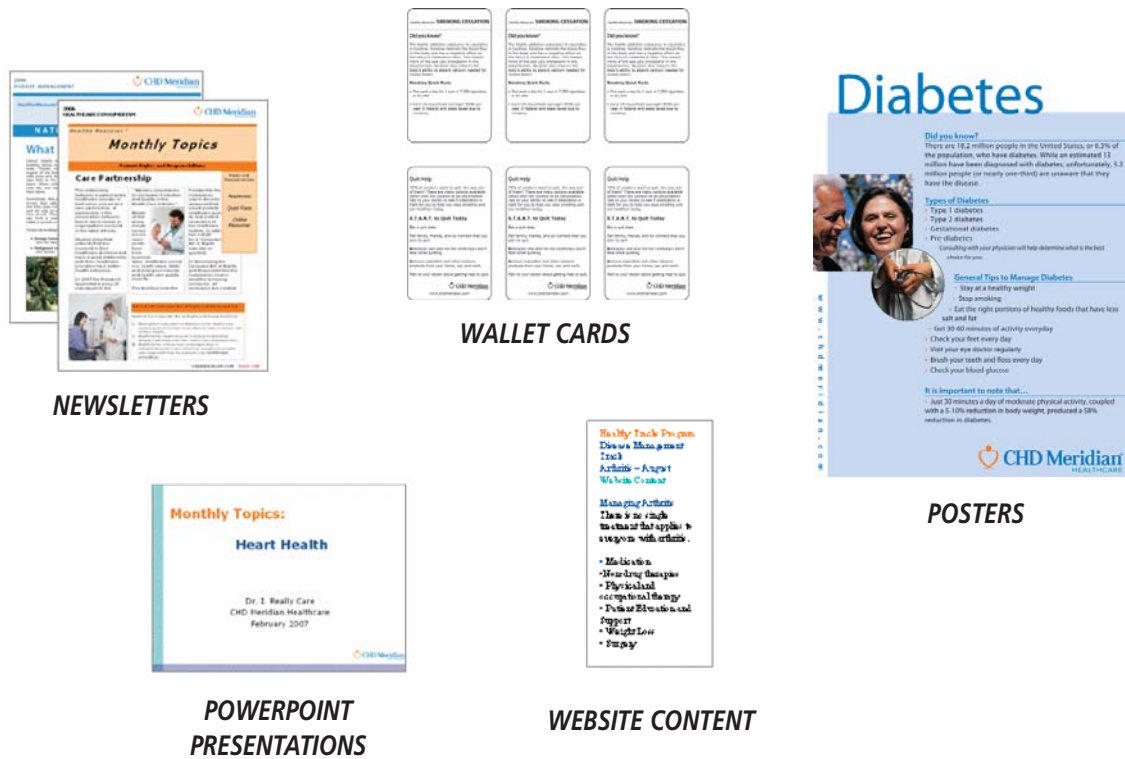
There is an advantage to offering services at the workplace. Lifestyle change is often needed and this can begin with **changing the work environment**. To support healthy employee lifestyles, consideration should be given to developing campus no smoking policies, offering low-cost healthful meals in the cafeteria and healthful snack options in the vending machines, as well as providing a workplace fitness center. For larger employers, **workplace primary care health centers** are an exciting new option that allows employees easy-to-access, dedicated, concierge-like health care. Workplace primary care can also become the hub of integration for services such as disease management, **workplace pharmacy, behavioral health programs**, and **disability management** programs to name a few.

Tools available to support disease management and health promotion

Many tools are available to help employers implement and support disease management and health promotion programs and engage employees who are at different levels in their commitment to change. These include items such as health education newsletters, posters to reinforce the message, wallet cards that the patient can carry with them easily, Web site content that is appropriate and easy to read, and PowerPoint-type patient educational presentations that can be used by clinicians or health coaching staff. Examples of these materials are shown in Figure 2 and, in larger format, on the following pages.

Figure 1

EXAMPLES OF TOOLS AVAILABLE TO EMPLOYEES AND OTHER PLAN MEMBERS



Primary prevention (lifestyle change) may benefit from **incentives or company-based competition**. The former emphasizes individual achievement while the latter fosters employee community improvement and is usually less expensive. Secondary prevention (screening) can be fostered by **health fairs**, the visit of **mobile medical units**, or the presence of diagnostic services within workplace health centers. Tertiary prevention (disease management) is enhanced by **workplace care managers, telephonic outreach** efforts, management tracking tools that support the doctor patient relationship and **support groups**. Placing people together who are all challenged to manage the same chronic illness can be a powerful tool for clinical improvement.

Diabetes

Did you know?

There are 18.2 million people in the United States, or 6.3% of the population, who have diabetes. While an estimated 13 million have been diagnosed with diabetes, unfortunately, 5.2 million people (or nearly one-third) are unaware that they have the disease.

Types of Diabetes

- Type 1 diabetes
- Type 2 diabetes
- Gestational diabetes
- Pre-diabetes

Consulting with your physician will help determine what is the best choice for you.

General Tips to Manage Diabetes

- Stay at a healthy weight
- Stop smoking
- Eat the right portions of healthy foods that have less salt and fat
- Get 30-60 minutes of activity everyday
- Check your feet every day
- Visit your eye doctor regularly
- Brush your teeth and floss every day
- Check your blood glucose

It is important to note that...

- Just 30 minutes a day of moderate physical activity, coupled with a 5-10% reduction in body weight, produced a 58% reduction in diabetes.



w w w . c h d m e r i d i a n . c o m



Healthy Measures: **SMOKING CESSATION**

Did you know?

The highly addictive substance in cigarettes is nicotine. Nicotine restricts the blood flow in the body and has a negative effect on the HDL/LD cholesterol ratio. This means more of the bad LDL cholesterol in the bloodstream. Nicotine also reduces the body's ability to absorb calcium needed for strong bones.

Smoking Quick Facts

- One pack a day for 1 year = 7,300 cigarettes or \$1,460.
- Each US household averages \$596 per year in federal and state taxes due to smoking.

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Healthy Measures: **SMOKING CESSATION**

Did you know?

The highly addictive substance in cigarettes is nicotine. Nicotine restricts the blood flow in the body and has a negative effect on the HDL/LD cholesterol ratio. This means more of the bad LDL cholesterol in the bloodstream. Nicotine also reduces the body's ability to absorb calcium needed for strong bones.

Smoking Quick Facts

- One pack a day for 1 year = 7,300 cigarettes or \$1,460.
- Each US household averages \$596 per year in federal and state taxes due to smoking.

Quit Help

70% of smokers want to quit. Are you one of them? There are many options available either over the counter or by prescription. Talk to your doctor to see if medication is right for you to help you stop smoking and live healthier today.

S.T.A.R.T. to Quit Today

Set a quit date.

Tell family, friends, and co-workers that you plan to quit.

Anticipate and plan for the challenges you'll face while quitting.

Remove cigarettes and other tobacco products from your home, car, and work.

Talk to your doctor about getting help to quit.



www.chdmeridian.com

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2007
HEALTHCARE CONSUMERISM



HealthyMeasures®

Monthly Topics

TALK ABOUT PRESCRIPTIONS

Reducing Medication Expenses

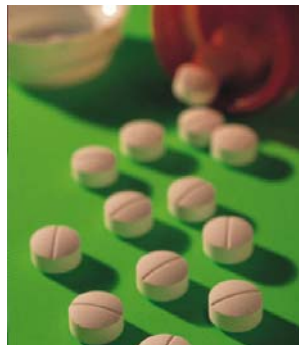
Developing new drugs is a long, expensive process. To recover the expense, the maker gets exclusive rights to sell the drug for 17 years. When that expires, other makers can make the same drug (generics). They don't have to do all the safety testing again since the drug itself has been shown to be safe. The manufacturer does have to prove that their version gives the same blood levels and effects as the original.

This is the reason for the lower cost of generics. The new maker must pass the same manufacturing and quality tests though.

Another way to save money besides generics is by cutting tablets in half.

Sometimes, all strengths of a

drug are priced the same. So if you are taking a 20mg dose, taking half of a 40mg to get that



20mg dose cuts your cost in half too. Lipitor, Zocor, Pravachol, Benicar, Crestor, Avapro and Toprol XL are all safe to split. Dis-

cuss this with your doctor or pharmacist. Remember that not all drugs can be safely split. The most logical way to save money on drugs is to minimize the risk of getting a disease.

Diet, exercise and quitting smoking are ways to reduce your need for prescription drugs. Sometimes a prescription drug is not needed to treat a problem. The over-the-counter (OTC) versions of prescription drugs can still be used for the same conditions and are cheaper.

REDUCING
MEDICATION
EXPENSES

DEVELOPING A
NEW DRUG

TALKING TO
YOUR
PHARMACIST

PERSONAL
ACTION ITEMS

ONLINE
RESOURCES



DEVELOPING A NEW DRUG

The U.S. system of new drug approvals is perhaps the most rigorous in the world.

- There are 7 steps in the approval process.
- It takes a drug 12 years to go from the lab to your shelf.
- Only 5 of 5,000 compounds that make it to the first phase of testing make it to human testing.
- Only 1 of these 5 tested in humans is approved.
- It costs about \$359 million to get one new medicine from the lab to your shelf.

CHDMERIDIAN.COM PAGE ONE

MONTHLY TOPICS Program

Disease Management
Diabetes - November
Web Content

November Health Focus: Diabetes

Most Americans who have diabetes have Type 2. A much smaller number of people have Type 1, meaning that your body does not produce insulin. Type 2 diabetes means the body does not properly use insulin. Improper insulin use is often times associated with being overweight. Without insulin the body has trouble getting glucose (sugar) into the cells to be used for energy. Glucose then accumulates in the blood causing high blood sugar. Complications of diabetes may include: heart disease, blindness, nerve damage, and kidney damage. More than 15 million Americans have diabetes and there is no cure for this chronic condition. Managing your diabetes, with the help of your provider, is the best way to ensure a long, healthy life.

For more information about diabetes, control, current treatments, and the latest research, see the American Diabetes Association online www.diabetes.org.

Common Definitions in Population Health Management

(SOURCE: DICTIONARY OF DISEASE MANAGEMENT TERMINOLOGY, VOLUME 2, DMAA)

Behavior Modification

Behavior modification is the dynamic process of supporting members in accomplishing tangible beneficial lifestyle changes from a state in which their own behaviors are contributing factors to potentially negative outcomes. Various methods may be applied or be operative to effect this process, but all depend on a group's or individual's decision and motivation to respond to supplied information or interventions. Disease management programs usually embrace an informational and empowerment approach to encourage these changes.

However, direct positive or negative reinforcement strategies may also be applied. The Joint Commission defines behavior modification as: "The targeted outcome of an organized patient education program wherein patients successfully integrate the theory and skills necessary to manage their disease(s) or condition(s)."

THE PROCHASKA AND DICLEMENTE STAGES OF CHANGE MODEL.

This model approaches the temporal and motivational dimensions of behavioral modification by defining five distinct stages that reflect the readiness (commitment) and motivation of an individual to effect change.

"The stages of change are pre-contemplation [person not contemplating change and may be totally unaware of the need to make the change], contemplation [person is aware and is contemplating making the change, e.g. concerned about the health impacts of smoking], preparation [person is making the preparations needed to make the change, e.g. setting a date to quit, enrolling in a smoking cessation program, speaking with the family physician], action [person is taking action to actively make the lifestyle change a part of her or his life] and maintenance [person has successfully made the change and is able to maintain the changed lifestyle]." [Prochaska et. al., 1994]

A sixth stage, relapse, is occasionally operative and is described as a resumption of old behaviors.

The transtheoretical model of behavior change was the result of Prochaska's comparative analysis of 18 major theories of psychotherapy and behavior change, which applies specific stage-matched interventions that take into consideration the advantages and disadvantages associated with the behavior as well as the self-efficacy of the individual.

Behavior modification techniques and stages of change theory are typically incorporated into the health coach function of a disease management intervention. Health coaches support program participants in identifying behaviors (e.g., smoking, lack of compliance to treatment) that require change to meet their life goals (e.g., better health, improved mobility, reduced risk of illness or death). Health coaches then work with participants to establish a commitment to change through the establishment of change goals. Throughout this process, the health coach assesses the participants' readiness to change and tailors their support to enhance their readiness or, if ready, work with the participant directly on the behavior change. In some programs, readiness to change assessment is incorporated into a survey process, serving as a triage mechanism, to focus limited resources on individuals ready for change and theoretically more likely to be affected.

Care Coordination/Care Management

In disease management, care coordination (also called care management) can take on two related but slightly different meanings. The first relates to integration across the providers of care. In this construct, care coordination is the process linking those individuals with chronic health care illnesses/conditions and their families with appropriate education, health care services, and resources in a cohesive and rational way so as to maximize health care outcomes in an efficient manner. The other meaning relates to interrelationships across the spectrum of health oriented strategies—from primary prevention, to acute care, to chronic care management to end-of-life care. Disease management programs aim to fill a vital role in the process of care coordination for each of these by adding efficiencies and connectivity to an otherwise loosely affiliated health care system.

DETAILED EXPLANATION

The concepts of coordination of interventions and the use of collaborative practice models are explicitly included in the DMAA definition. Within the context of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and Centers for Medicare and Medicaid Services (CMS), treatment is the provision, coordination, or management of health care and related services by one or more health care providers, including the coordination or management of health care by a health care provider with a third party; consultation between health care providers relating to a patient; or the referral of a patient for health care from one health care provider to another.

Chronically ill patients may see multiple practitioners who are not fully connected and therefore not completely informed of key aspects of the patient's history or care provided elsewhere. In the United States, coordination of care for the chronically ill can be difficult because there is no central system for tracking or linking patients, their diagnoses, providers, treatments, and pharmaceutical use. This is further complicated by funding constraints and the presence of both public and private payers; community services may also provide certain services for some patients. Socioeconomic and cultural barriers may further hinder synchronization of these disparate providers, payers, and community care givers. Hence, disease management has a role to play in linking these disparate elements into a cohesive care management system.

BACKGROUND

The term care coordination has been used for more than 20 years in relation to managed care, and was conceived with the notion of improving coordination across providers and the spectrum of health care. More recently, The Joint Commission defined care coordination as a process to manage and coordinate health care resource use in the provision of care and services. URAC expanded this to describe the processes that are coordinated—“a collaborative process that assesses, plans, implements, coordinates, monitors, and evaluates options and services to meet a consumer’s health needs through communication and available resources to promote quality, cost-effective outcomes.” The National Committee for Quality Assurance defines clinical care coordination as the mechanisms ensuring that a member and clinicians have access to and take into consideration all required information on the member’s conditions and treatments, to ensure that the member receives appropriate health care services.

EXAMPLES OF WAYS IN WHICH DISEASE MANAGEMENT PROMOTES CARE COORDINATION

1. While it depends upon the setting and the design of the individual disease management program, care managers can promote care coordination in a variety of ways. In discussions with patients, care managers learn of and track use of health care and other services by patients. This data can then be accumulated and communicated by the care manager to physicians and other health care providers working with the patient. Care managers often prepare patients for meetings with specialist by helping them to identify and obtain information from their primary care doctor that will be useful for the specialists. Care managers are often a source of information for patients on community services such as smoking cessation classes or exercise programs that will help patients better manage their chronic conditions.
2. Coordination of chronic care is based on open lines of communication and information transfer. Information technology is incorporated into many disease management programs with the aim of increasing communication across the health care delivery system, disease management program and the patient/caregiver. The linkages offered by disease management produce efficiencies and encourage higher quality via fully informed care management.

HOW DM INTEGRATES INFORMATION TECHNOLOGY INTO CHRONIC CARE COORDINATION

| Technology | Purpose |
|---------------------------------------|--|
| Nurse call lines and static Web sites | Disseminate information |
| Interactive Web sites and telehealth | Two-way communication for enrollment, education, monitoring, and creation of an information platform |
| Biometric devices | Home-based measurement |
| Handheld devices | Daily monitoring—patients and care manager track daily progress |
| Connectivity/work-flow management | Real-time alerts, reminders, and guidelines delivered at point of care |

Consumer-Directed Health Plan

Consumer-directed health plans (also known as consumer-driven health plans or consumer choice health plans) offer health insurance coverage that combines a high-deductible health plan (HDHP) with a health savings account or a health reimbursement arrangement to provide insurance coverage and a tax-advantaged way to help save for future medical expenses. Consumer-directed health plans are intended to provide greater responsibility, flexibility, and discretion over how individuals use their health care dollars.

DETAILED EXPLANATION

The general features of an HDHP include:

- Higher annual deductible than traditional health plans. By law, a HDHP has a minimum annual deductible of \$1,050 for self coverage and \$2,100 for self and family coverage (the deductible amount is indexed every year);
- Annual out-of-pocket limits that do not exceed \$5,000 for self coverage and \$10,000 for family coverage; and
- A HDHP program may be offered with a preferred provider organization, health maintenance organization, or point-of-service plan.

Consumer-directed health plans offer a variety of plan types, including medical savings accounts, health savings accounts, health reimbursement accounts, and flexible spending accounts.

Disease Management

Disease management is a system of coordinated health care interventions and communications for populations with conditions in which patient self-care efforts are significant.

Disease management:

- Supports the physician or practitioner/patient relationship and plan of care;
- Emphasizes prevention of exacerbations and complications utilizing evidence-based practice guidelines and patient empowerment strategies; and
- Evaluates clinical, humanistic, and economic outcomes on an ongoing basis with the goal of improving overall health.

Disease management components include:

- Population identification processes;
- Evidence-based practice guidelines;
- Collaborative practice models to include physician and support-service providers;

- Patient self-management education (may include primary prevention, behavior modification programs, compliance/surveillance);
- Process and outcomes measurement, evaluation, and management; and
- Routine reporting/feedback loop (may include communication with patient, physician, health plan and ancillary providers, and practice profiling).

Full-service disease management programs must include all six components. Programs consisting of fewer components are disease management support services.

- The focus of disease management is on chronic conditions with certain characteristics that make them suitable for clinical intervention:
- Once contracted, the disease remains with the patient for the rest of the patient's life;
- The disease is often manageable with a combination of pharmaceutical therapy and lifestyle change; and
- The average cost to some chronic patients is sufficiently high to warrant the expenditure of resources by the health plan or employer to manage the condition.

Traditionally, disease management has focused on the “big five” chronic diseases: ischemic heart disease, diabetes, chronic obstructive pulmonary disease, asthma, and heart failure. Disease management programs are generally offered telephonically, involving interaction with a trained nursing professional, and require an extended series of interactions, including a strong educational element. Patients are expected to play an active role in managing the disease.

Because of the presence of co-morbidities or multiple conditions in most high-risk patients, this approach may become operationally difficult to execute, with patients being cared for by more than one program. Over time, the industry has moved more toward a whole person model in which all the diseases a patient has are managed by a single disease management program.

Employee Productivity (terms associated with)

ABSENTEEISM:

Absenteeism is the act of physical absence from the workplace on the part of an employee. Absenteeism generally applies to the situation in which an employee is frequently or chronically absent (often as a result of a health condition) rather than infrequent or random absence.

PRESENTEEISM:

Presenteeism is a term used to describe a situation in which an employee is physically at work but impaired by health problems and not performing to optimal productivity while at work.

PRODUCTIVITY:

The Bureau of Labor Statistics defines productivity as: “...the value of goods and services produced in a period of time, divided by the hours of labor used to produce them.”

DISABILITY:

Generally, disability refers to any long- or short-term reduction of a person’s capacity for activity as a result of an acute, chronic, physical, mental, or emotional condition. A strict definition of disability may be found in the Social Security law and is based on a combination of physical condition and inability to work.

The term disability (as defined in Section 223 of the Social Security Act) means –

“Inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months; or

In the case of an individual who has attained the age of 55 and is blind (within the meaning of “blindness” as defined in section 216(i)(1)), inability by reason of such blindness to engage in substantial gainful activity requiring skills or abilities comparable to those of any gainful activity in which he has previously engaged with some regularity and over a substantial period of time.”

An individual is disabled under Social Security rules (and eligible for benefits) if the individual cannot do work that the individual did before and is unable to adjust to other work because of a medical condition(s). Disability must also last or be expected to last for at least 1 year or to result in death. Employers, workers’ compensation programs, and private insurers may apply different standards of incapacity in determining disability. For example, some programs may apply the concept of partial disability when an individual is impaired but able to perform some (but not all) duties, and a partial benefit may be payable.

Health Coaching

Health coaching is the practice of health education and health promotion within an interactive and individualized context, to enhance the well-being of individuals and to facilitate the setting and achievement of their own health and health care-related goals. It is typically performed by a health professional of some type (e.g. nurse, dietitian, pharmacist, respiratory therapist, or social worker). The objective of health coaching is to empower individuals to actively and optimally manage their health, risk factors, and medical conditions in the short and long term and in accordance with their own preferences based on accurate evidence-based information. Within a disease management context, it is intended to complement, not replace, physician-patient interaction.

DETAILED EXPLANATION

Health coaching is an effective modality to achieve sustained behavior change through a structured, supportive partnership between the participant and coach. The coach helps facilitate insights and clarity into the participant's own values and the personal importance of achieving certain outcomes through inquiry, learning, and personal discovery. Health coaching is characterized by the presentation of objective information in a manner that is congruent with the current emotional and physical status of the individual and with empathic consideration for the whole person and the context within which he/she is making health and lifestyle decisions. A trusting and professional relationship between the participant and the health coach as adviser, motivator, and mentor is essential to the effective practice of health coaching.

Health coaching occurs in a variety of settings and modalities (e.g. face-to-face interaction, telephonically, via Internet Web sites and correspondence). It may consist of the following elements:

- Processes and tools for increasing knowledge of health management and treatment options, and the pros and cons and potential outcomes associated with each;
- Access to tools and information that teach self-management and decision-making skills;
- Support for setting realistic goals and expectations for improved health outcomes based upon the individual's situation—health status, level of motivation, resources—and upon the proven effectiveness of treatment options, if any, in question;
- Facilitation of problem solving to identify and overcome barriers to success; and
- Assistance in tracking progress.

Health Risk Assessment

A health risk assessment (HRA) is the tool (questionnaire) or method that is used to catalog, assess, and estimate the probability of an adverse health effect for an individual and the likely magnitude of the health effect and/or cost of that adverse effect. HRAs integrate science with patient-reported information to estimate measurable odds of something happening to any one individual or group over a future time frame. A benefit of the HRA is the ability to identify high-risk individuals whose health status can be closely monitored.

DETAILED EXPLANATION

The HRA has also been referred to as the health risk appraisal. It uses patient-provided information in a systematic way to estimate the risk of future illness, health care utilization, and expenditure. HRAs can be conducted via questionnaire (mail-in or Web-based) or interview (face-to-face or telephone). The HRA often determines lifetime risk or, at least, risk over a less than immediate time frame. The HRA may predict risk and the magnitude of that risk on an individual or group basis for comparison with baselines or benchmarks, as well as predict the need for disease management services. HRAs can be modified to identify risk factors suggesting imminent risk. Some companies claim to incorporate HRA findings into their predictive modeling. One advantage of an HRA, particularly with a new population, is that it provides information that is more a real-time than a claims-based approach.

Lewis C. Robbins, M.D., introduced HRAs in the 1970s as a means of enhancing communications between doctors and patients on the topic of health risks and lifestyle choices. HRA expanded and evolved as more sophisticated health risk estimation methods were developed. Large employee populations were encouraged to complete HRAs with the aim of allowing their employers and health plans to better assess the group's health needs. In the mid-1990s, the Society of Prospective Medicine developed guidelines for users of HRAs. Today, disease management programs integrate the HRA into various aspects of their business—participant identification, risk stratification, and/or assignment to interventions.

Health plans, managed care networks, disease management organizations, and large employers may combine HRAs with national health statistics to project and prioritize group risks and plan health intervention programs. In disease management, predictive modeling capitalizes on the predictive aspects of HRAs.

COMPONENTS OF THE HEALTH RISK ASSESSMENT

HRAs have three standard elements in the area of disease management: questionnaire, computation of risk, and assignment to disease management interventions based on the risk computation.

1. A questionnaire that is completed by the patient or caregiver. These questionnaires typically gather information about family history, patient age, weight, blood pressure, cholesterol levels, etc., and lifestyle behaviors (diet, tobacco and alcohol use, safety precautions, etc.).
2. In the HRA survey, the HRA questions typically fall into three groups:
 - Behaviors that affect health—level of physical activity, use of alcohol or tobacco products, and diet/dietary habits;
 - Family medical history, such as history of diabetes or heart disease; and
 - Member's current health status—age, weight, cholesterol levels, and blood pressure readings.
3. The risk computation compares patient-provoked responses to statistics from large patient populations (e.g., information held by the National Institutes of Health) and findings from studies such as the Framingham Study. Algorithms blend individual risk factors with what is known scientifically about disease precursors (or indicators) such as smoking and sedentary lifestyle in large populations. The relative risk of these indicators is a numerical value that suggests the level of association with a specific chronic disease and costs associated with that disease. Cost data from claims experience are usually included in the algorithm.
4. Identification of and assignment to appropriate disease management interventions (e.g. telephonic contact or post-card reminder) is done, perhaps in conjunction with other information such as that gleaned from claims and pharmacy use data. Several proprietary predictive modeling tools are available with which to undertake this step.

HRAs are tailored by those offering disease management and case management programs to meet their specific screening, patient selection, and intervention assignment needs.

INTEGRATING INFORMATION FROM THE HRA INTO THE DISEASE MANAGEMENT PROCESS

- Identification of risk factor by patient
- Assessment of level of exposure and other factors' contribution to magnitude of risk
- Computation of risk (may include stratification)
- Plan for addressing risk

EXAMPLE

The customer (i.e., health plan or employer) may choose to use the HRA as a front end to the member identification process. In this case it is promoted to the entire population. The HRA may also be offered as a stand-alone product. Those who self-identify with a condition are offered the opportunity to participate in the disease management program. Those who do not are provided an HRA report. HRAs may be offered for wellness programs, such as smoking cessation or weight management.

Many organizations and health plans motivate and educate individuals to accept greater responsibility for their own health. Peterson and Kane identify five basic steps to conducting such an HRA program.

1. Enroll participants in the program.
2. Collect data via questionnaire or telephone.
3. Compute risk.
4. Provide feedback.
5. Offer assistance with risk reduction and lifestyle change.

As noted in step 4, these programs may provide individual risk reports (feedback) directly to the individual. The reports provide information to the individual on his/her risk and possible ways to deal with the risk. The HRA report, for example, may include the individual's calculated risk age, a summary of his/her health risks, suggestions on changes in lifestyle behaviors, and perhaps treatment options for reducing risk for disease.

DISEASE MANAGEMENT-RELATED ISSUES

As with any self-reported information, HRAs are subject to recall and participant bias and have been found to yield inaccurate risk projections for those with cancer and heart disease. HRAs cannot accurately project risks for some populations (e.g., very young or socioeconomically challenged populations) if they are not included in reference population databases.

Health Status

Health status is an indication of the well-being, or risk of illness or death of an individual or groups of patients. It may be based, at least in part, upon the types and number of co-morbid conditions, health service utilization, or self-reports of well-being (see self-reported health status and SF-36). For disease management purposes, a set of health status indicators can be entered into databases or algorithms to better understand the particular health care needs, deficiencies, and opportunities in a population.

SELF-REPORTED HEALTH STATUS

Self-reported health status is an indication of the impact of chronic diseases or conditions on a patient's level of functioning, as reported by the patient (or his/her family). This information helps define the manifestation of symptoms, functional limitations, and quality of life for a particular patient, based on his/her own values and beliefs. It can also be perceived as the gap or discrepancy between actual and desired function, or level of healthiness.

Patient self-reports are an important adjunct to administrative databases, which capture payment and other claims information. Disease management programs address the patient's primary diagnosis and perhaps co-morbidities and work closely with the patient, using evidence-based medicine and education to enhance an individual's overall health status. When reporting their own health status, patients tend to consider a complete range of wellness indicators, good and bad health, and ability to conduct daily activities of living.

Self-reported health status can provide much useful information for care management and predictive modeling. For example, specialist clinicians may not accurately estimate the health status of patients due to their focus on a specific diagnosis or symptom, with less consideration on a patient's perception of their overall health status. There is often a discrepancy between the severity of coronary disease resulting from a coronary angiography test and the patient-reported health status. Self-reported information can reveal clues as to the manner in which the patient manages or feels about the illness and quality of life and may help providers select the most appropriate treatment regimens.

There are a variety of tools used to capture self-reported health status. Health risk assessments, for example, are instruments commonly used by managed care organizations and other payers via interview or questionnaire. As an example of the high degree of subjectivity inherent in self-reported health status, Washington State Department of Health's Behavioral Risk Factor Surveillance System found the proportion of patients self-reporting as experiencing good to excellent health declines steadily by age. Income/education levels were the strongest predictors of self-reported health status, with those with lower incomes and less than a high school education reporting poorer health.

Obesity/Obesity with Associated Co-morbidities

OBESITY

The most widely used and accepted metric for identifying obesity is having a body mass index (BMI) greater than 30. Waist circumference is also being recognized as an important factor in assessing obesity. Men with a waist circumference of 40 inches or greater, and women with a waist circumference of 35 inches or greater, are considered obese.

OBESITY WITH ASSOCIATED CO-MORBIDITIES

Higher body weights are associated with an increase in mortality from all causes. Obese individuals with co-morbidities are those who are at the highest risk because they tend to have multiple risk factors. Being overweight or obese substantially increases the risk of chronic conditions and illnesses such as hypertension, dyslipidemia, type 2 diabetes, coronary artery disease, stroke, gallbladder disease, osteoarthritis, and sleep apnea and respiratory problems, as well as cancers of the endometrium, breast, prostate, and colon.

DETAILED EXPLANATION

The prevalence of overweight and obesity is increasing rapidly in the United States. Sixty-four percent of the U.S. population aged 20 and older is overweight; 30 percent of adults in the United States are obese. Moreover, 15 percent of school age children are overweight and the proportions are even higher among some ethnic groups. All in all, an estimated 97 million adults in the United States are overweight or obese. Many of these individuals exhibit prediabetes and other co-morbid conditions.

The concept of obesity and obesity with associated co-morbidities as manageable, chronic conditions is emerging. Robust epidemiological and scientific evidence clearly demonstrates that obesity should be considered in the context of chronic disease. Disease management offers a new model of care that shifts treatment toward chronic care and proactively interfaces with other existing chronic illnesses common in obese individuals. By recognizing the central role that obesity plays in the development of these illnesses, better care can result.

New thinking suggests the need to focus disease management on those who are at highest risk, are already obese, and have a cluster of risk factors or co-morbid conditions.

The following table from the National Heart, Lung, and Blood Institute (NHLBI) and the National Institutes of Health (NIH) presents categories for overweight and obesity. These are presented as both BMI and waist circumference measurements. Associated risk factors are also shown.

Cut-off points are used to identify increased relative risk for the development of obesity-associated risk factors. While imperfect, these cut-off points indicate the need for management of the clinical issues relating to overweight and obesity to reduce risk factors, improve health overall, and reduce resource consumption.

| <i>Number of Individual Lives under Management by Disease by Year</i> | | | <i>Disease Risk Relative to Normal Weight and Waist Circumference</i> | |
|---|-------------------------------|----------------------|---|---|
| | <i>BMI (kg/m²)</i> | <i>Obesity Class</i> | <i>Men ≤ 102cm (40 in) Women ≤ 88cm (35 in)</i> | <i>> 102cm (40 in) > 88cm (35 in)</i> |
| <i>Underweight</i> | <18.5 | | — | — |
| <i>Normal</i> | 18.5-24.9 | | — | — |
| <i>Overweight</i> | 25.0-29.9 | | Increased | High |
| <i>Obesity</i> | 30.0-34.9 | I | High | Very High |
| <i>Obesity</i> | 35.0-39.9 | II | Very High | Very High |
| <i>Extreme Obesity</i> | ≥ 40 | III | Extremely High | Extremely High |

Claims data collection systems however, were not designed to collect information with which to assess obesity levels. This deficiency has hindered disease management program development. In the future, other methods of identifying the risk associated with obesity may include assessing for signs of insulin resistance, glucose intolerance, and a proinflammatory and prothrombotic state. These might include testing for inflammation through the measurement of serum C-reactive protein, a prothrombotic state by measuring serum PAI-1.

METRICS FOR IDENTIFYING OBESE POPULATIONS

Most often, BMI is used to determine overweight and obesity. Waist circumference is another key measure for identifying obese individuals in chronically ill populations. Both BMI and waist circumference have limitations in assessing obesity and risk. Other methods, which are expensive and not generally feasible in the clinic or home settings, include calipers (skin-fold measurement), underwater weighing, and computerized topography.

BMI: Obesity is commonly assessed by using BMI, defined as the weight in kilograms divided by the square of the height in meters (kg/m²). A BMI of more than 25 kg/m² is defined as overweight, and a BMI of more than 30 kg/m² is defined as obese. These markers provide common benchmarks for assessment, but the risks of disease in all populations can increase progressively from lower BMI levels.

Limitations of BMI: Simple BMI calculations may be misleading. According to the existing definition and calculation of BMI, anyone with a BMI more than 25 would be classified as overweight whether their body is composed of fat or muscle. Athletes, for example, may be considered to be overweight even though they may have very little visceral fat. BMI is an imperfect indicator of risk of disease. People with the same BMI but different amounts of visceral fat face different risks of disease. Furthermore, weight is only one among many risk factors.

BMI is calculated the same for adults and children but is interpreted differently for children. The CDC notes that “for children ages 2–20 years, BMI is plotted on a growth chart specific for age and gender.”

Although some authors use categories such as “moderately overweight” for those with a BMI of 25-30, the NHLBI does not designate overweight with such qualifiers. The extreme obesity classification (BMI > 40) is a commonly used cut-off for determining qualification for bariatric surgery. However, BMI cut-off points for obesity vary around the world.

Waist circumference: NHLBI, part of the NIH, has the following definition of waist circumference:

“[The] presence of excess fat in the abdomen out of proportion to total body fat is an independent predictor of risk factors and morbidity. Waist circumference is positively correlated with abdominal fat content. It provides a clinically acceptable measurement for assessing a patient’s abdominal fat content before and during weight loss treatment.”

Limitations of waist circumference: Waist circumference is valuable in assessing risk in the BMI < 35 range and is particularly useful in ethnically diverse groups, where waist-to-hip ratio may be an even better predictor. Waist circumference in individuals with a BMI > 35 generally exceeds the cut-off points noted above. The relative risk faced by individuals within a BMI or waist circumference range can be estimated compared with the risk that individual would face at a normal weight or waist size. These relative risk calculations do not reflect the individual’s absolute risk, which is determined by adding all of his/her risk factors.

RISK PREDICTION

Predicting risk is essential to disease management. According to the American Obesity Association, “obesity is associated with more than 30 medical conditions, and scientific evidence has established a strong relationship with at least 15 of those conditions.” The American Heart Association also now recognizes obesity as a risk factor for heart attack.

The prevalence of various medical conditions increases with overweight and obesity for both men and women. The following table from the American Obesity Association shows correlations of medical condition to BMI for men.

| Prevalence of Medical Conditions by Body Mass Index (BMI) for Men | | | | |
|--|-----------------------------|------------|------------|-------|
| Medical Condition | Body Mass Index | | | |
| | 18.5 to 24.9 | 25 to 29.9 | 30 to 34.9 | > 40 |
| | Prevalence Ratio (%) | | | |
| Type 2 Diabetes | 2.03 | 4.93 | 10.10 | 10.65 |
| Coronary Heart Disease | 8.84 | 9.60 | 16.01 | 13.97 |
| High Blood Pressure | 23.47 | 34.16 | 48.95 | 64.53 |
| Osteoarthritis | 2.59 | 4.55 | 4.66 | 10.04 |

| Prevalence of Medical Conditions by Body Mass Index (BMI) for Women | | | | |
|--|-----------------------------|------------|------------|-------|
| Medical Condition | Body Mass Index | | | |
| | 18.5 to 24.9 | 25 to 29.9 | 30 to 34.9 | > 40 |
| | Prevalence Ratio (%) | | | |
| Type 2 Diabetes | 2.38 | 7.12 | 7.24 | 19.89 |
| Coronary Heart Disease | 6.87 | 11.13 | 12.56 | 19.22 |
| High Blood Pressure | 23.26 | 38.77 | 47.95 | 63.16 |
| Osteoarthritis | 5.22 | 8.51 | 9.94 | 17.19 |

METABOLIC SYNDROME

Overweight and obesity are associated with insulin resistance and the metabolic syndrome. However, the presence of abdominal obesity is more highly correlated with the metabolic risk factors than is an elevated BMI. Therefore, the simple measure of waist circumference is recommended to identify the body weight component of the metabolic syndrome.

Though the existence of metabolic syndrome is often debated, there does exist a cluster of cardiovascular risk factors often associated with obesity. According to the following ATP III criteria table developed by the National Cholesterol Education Program expert panel, metabolic syndrome can be diagnosed when three of the following five diagnostic criteria are present: abdominal obesity, elevated glucose or triglycerides, reduced HDL cholesterol, and hypertension. Recent evidence suggests that treating patients once metabolic syndrome has advanced to these diseases may not be cost-effective. In a study of adults with metabolic syndrome, researchers found drug costs were four times higher for these patients than the average annual drug costs for patients without metabolic syndrome. Patient outcomes are also suboptimal in those with metabolic syndrome, but new research suggests that treating the underlying causes of the condition could lead to better outcomes.

| ATP III Criteria | | |
|---|-------|-----------------------|
| Risk Factor | | Defining Level |
| Abdominal obesity, given as waist circumference | Men | > 102 cm (40 in) |
| | Women | > 88 cm (35 in) |
| Triglycerides | | 150 mg/dL |
| HDL Cholesterol | Men | < 40 mg/dL |
| | Women | < 50 mg/dL |
| Blood Pressure | | 130/ 85 mm Hg |
| Fasting glucose | | 110 mg/dL |

Population Health

Population health is an approach that aims to improve the health status of the entire population and is often thought by some to reduce health inequities among population groups.

DETAILED EXPLANATION

This approach reflects a shift in thinking about how health is defined. A population health approach applied within disease management recognizes that health is a capacity or resource rather than a conditional state. Population health encompasses the realization that a range of physical, environmental, and socioeconomic factors (influencers) contribute to health. By successfully managing health influencers, population health endeavors to affect the complete physical, mental, and social well-being of a population.

The primary focus in population health management is to equip individual members within the population with the necessary tools to make appropriate choices and decisions about their health and medical care, thereby achieving/ maintaining optimum health and reducing unnecessary medical expenses for the population. A key component of success is behavioral change. Disease management population health management approaches may include comprehensive needs assessments that assess potential/actual physical, social, psychological, economic, and environmental needs; proactive health promotion programs that increase awareness of the health risks associated with certain personal behaviors and lifestyles; patient-centric health management goals; and self-management interventions aimed at influencing the targeted population to make behavioral changes.

Wellness Programs

Wellness programs are designed to increase awareness of the factors that can affect health and longevity and to enable individuals to take increased responsibility for their health behaviors. Wellness programs focus on primary prevention and are designed to prevent or delay the onset of disease as well as to promote healthful lifestyles and general well-being.

DETAILED EXPLANATION

Wellness programs are designed to assist individuals to maintain their current level of health and well-being by identifying health risks and helping individuals to both understand and mitigate these risks. The following are examples of components of wellness programs.

Health risk assessment (HRA) and health (condition) screening: HRAs are questionnaires that assist individuals to assess their level of health risks. They enable members to evaluate which lifestyle habits or risk factors may contribute significantly to their overall health risk and then to improve self-management of their diseases or conditions. Health screenings generally take the form of either questionnaires or tests, often sponsored at the worksite or in the community and administered by a third party, to identify simple conditions such as heart or lung conditions or diabetes.

Smoking cessation: Programs designed to increase awareness of smoking-related health risks, augment prevention and self-care, and thereby reduce the prevalence of smoking and its associated diseases.

Weight loss: Programs designed to promote healthful lifestyle, eating, and weight maintenance.

Stress reduction: Programs aimed at helping employees manage the stress inherent in work and home life.

Fitness programs: Programs aimed at increasing overall health through routine participation in healthful lifestyle activities, such as exercise and walking.

Although wellness programs are sponsored by community-based organizations and health plans, they are most commonly promoted (and purchased) by employers who sponsor them in the belief that they positively affect health costs, employee presenteeism, and productivity. When sponsored by an employer, wellness programs may be expanded to include other components that, together, provide a broad employee health program.

Examples of components in an expanded employee health program include the following.

- **Condition/disease management:** Manages specific conditions such as cancer, diabetes, etc.
- **Onsite clinics:** Clinics, often organized and supported by employers and addressing primarily occupational medicine but also increasingly supporting employee and dependent nonoccupational conditions.
- **Migraine and pain management:** Programs and occasionally clinics that specialize in the management of these conditions.
- **Maternity management program:** Programs directed at expectant mothers aiming to reduce the risks of pregnancy.
- **Ergonomics:** According to the Ergonomics Society, Ergonomics is “the application of scientific information concerning humans to the design of objects, systems and environments for human use.”
- **Workplace safety and safety training:** Programs designed to reduce on-the-job accidents and injury and thereby to reduce work-related absence and illness.
- **Employee assistance program:** These programs make available a professional counselor who will help an employee or a family member assess personal problems, provide short-term counseling, access available resources and make a treatment referral if necessary.
- **Health advocacy:** The primary objective of health advocacy is to direct participants to the most appropriate decision—support tools and care management programs. It is offered on a just-in-time basis with the goal of optimizing outcomes and minimizing costs.
- **Mental health and chemical dependency:** Programs and services for health plan participants who are experiencing emotional, behavioral, or chemical dependency issues.

Endnotes

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