



DIABETES AND THE WORKPLACE: HOW EMPLOYERS CAN IMPLEMENT CHANGE



Taking on Diabetes is supported by an unrestricted educational grant from:



ABOUT THIS REPORT

What's the Purpose?

- ◆ To encourage employers who have not already done so to develop a diabetes management program.
- ◆ To provide a blueprint for employers on how to design and implement a program.

Key Points

- ◆ Current studies documenting the necessity of glycemic control and the emerging evidence pointing to the effectiveness of diabetes management programs.
- ◆ A step-by-step process for estimating the costs of caring for employees with diabetes to be used to assess the need for a diabetes management program.
- ◆ A comprehensive approach to designing and implementing a program tailored to each employer's specific needs.
- ◆ A discussion of what each type of vendor—health plans, pharmacy benefit managers, and disease management companies—offers in establishing a diabetes management program.

Overall Goals

- ◆ To encourage employers to consider implementing a diabetes management program as a way to contain costs, increase productivity, and improve the quality of life at the workplace.
- ◆ To make the task easier by providing guidance on every aspect of program design and implementation.

For More Information

Check out the following Web sites:

www.emhca.org

www.Takingondiabetes.org

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PREFACE

For the past two years, the Employers' Managed Health Care Association (MHCA), an organization representing more than 100 companies committed to fostering a more productive, accountable, and cost-effective health care delivery system, has been working with the American Association of Health Plans (AAHP) and the American Diabetes Association (ADA) on an initiative called *Taking on Diabetes*. The goal of the program is to improve the lives of people with diabetes by combining the knowledge and experience of ADA with the special strengths of managed care plans to promote screening, early intervention, and state-of-the-art treatment for the populations they serve. MHCA's contribution to this effort has been to learn about and report on employers' involvement in diabetes management for their employees and help develop strategies for early intervention and prevention.

To accomplish this goal, MHCA has developed several products. The first was a monograph entitled *Taking on Diabetes: What Employers Can Do*, which can be found on www.Takingondiabetes.org. Published in 2000, the monograph highlighted four companies that had developed successful diabetes management programs. This report was immediately followed by a needs assessment conducted throughout 2000, which was designed to learn what additional companies were involved in diabetes management. The result of this effort was an online directory, launched in 2001, which profiled 12 companies engaged in diabetes management. The directory can be found at www.emhca.org and www.Takingondiabetes.org.

Diabetes and the Workplace: How Employers Can Implement Change is MHCA's final product of the *Taking on Diabetes* initiative. Designed to be an interactive tool much like a student's workbook, it is a comprehensive document outlining what employers need to do before implementing a diabetes management program, how they can work to sustain such a program, and what they can do to ensure its success. (Note: Throughout, the product will be referred to as a workbook.) The Workbook includes state-of-the-art knowledge on diabetes management in the workplace. It also represents the first time that anyone has compiled this essential information in one place in an easy-to-use format.

As more and more studies are being completed, it is becoming increasingly clear that controlling blood sugar through either medication or lifestyle changes can prevent the onset and progression of complications associated with diabetes. A pivotal study conducted in 1993, the Diabetes Control and Complications Trial (DCCT), showed that controlling blood sugar can prevent the onset and progression of diabetes complications affecting the eyes, kidneys, and nerves.¹ These improvements in the quality of life also can reduce costs. We encourage companies with a significant number of employees with diabetes and with risk factors for the condition to consider establishing a program. It has the potential of reaching many employees and improving their lives, as well as increasing productivity in the workplace.



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INTRODUCTION

Diabetes is on the rise in epidemic proportions. In fact, it is the seventh leading cause of death in this country. Each day, about 2,200 people are diagnosed with diabetes, totaling 15.7 million people—almost 6 percent of the U.S. population—living with this disease. About 5 to 10 percent of people with diabetes have type 1, while 90 to 95 percent have type 2. (These terms are defined in the Glossary, found on page 59 of this Workbook.) The average age of onset of type 2 diabetes is 51 years old, but an increasing number of younger people are being diagnosed. Since 1990, the number of people with type 2 diabetes has increased in each major ethnic group—from 7 percent to almost 9 percent for African Americans, from 4.6 percent to almost 6 percent for Caucasians, and from 5.6 percent to almost 8 percent for Hispanics.² What’s more, it’s estimated that about one-third of people with diabetes have not yet been diagnosed, so they don’t even know they have the disease.

“Corporate America is in a unique position to address some of the health problems that arise from diabetes. With people spending more than one-third of their waking hours on the job, employers can help raise awareness of proactive steps people can take to prevent the onset of diabetes.”

—Tim McDonald

While at first glance this information may appear to have little to do with employers, it is in fact imperative that employers be aware of the ramifications of these data. Employees spend more than a third of their time at work; therefore, the status of their health does have an impact on the workplace. If employees with diabetes get sick, employers often bear the brunt of the cost. Not only do they pay for the health benefits of people with diabetes, they also spend about \$37.1 billion in disability for people with diabetes and other health problems. In 1997, people with diabetes accounted for a loss of nearly 14 million disability days, as well as an average of 8.3 days off from work, compared with 1.7 days for people without diabetes or other chronic conditions.³

In other ways as well, we are all paying a price for the steadily growing increase in diabetes. Diabetes can cause a number of life-threatening complications, including blindness, kidney disease, nerve disease, and circulation disease leading to amputations. People with diabetes are two to four times more likely to have heart disease and stroke than

people without the condition. Needless to say, these complications are expensive. In 1997, the direct and indirect costs of treating diabetes totaled \$98 billion. Overall, the medical costs of people with diabetes is four times those of people without diabetes or other chronic conditions.⁴

Clearly, it is in employers’ best interest to try to work with their employees who have diabetes to both improve productivity and lower their health costs. And there is evidence that controlling blood sugar levels is critical for improving the quality of life of people with diabetes and boosting their overall performance at work. A recent study of 569 individuals with type 2 diabetes found that those who improved their blood sugar were more productive on the job, were able to remain employed longer, and lowered their absenteeism rates.⁵ The 1993 landmark study, the Diabetes Control and Complications Trial (DCCT), also showed that controlling blood sugar could prevent the onset and progression of diabetes complications affecting the eyes, kidneys, and nerves. Even small improvements reduce the risk of complications.⁶

An important study from Finland called the Finnish Diabetes Prevention Study, just published in 2001, has exciting information about prevention for people at risk for diabetes. The study, which included more than 500 overweight middle-aged men and women at high risk for developing diabetes based on elevated blood sugar levels, demonstrated that better diet, increased physical activity, and modest weight loss could substantially reduce the development of type 2 diabetes. After four years, the group who had taken steps to change their lifestyle had a 50 percent reduction in the incidence of diabetes.⁷ The National Institutes of Health (NIH) had similar results in a large study it had been conducting. In fact, on August 8, 2001, the National Institute of Diabetes and Kidney Diseases (NIDDK), the Institute conducting the study, stopped it a year early because results showed clearly that lifestyle changes, such as reducing weight by between 10 and 15 pounds and exercising about a half an hour each day, could reduce the likelihood of high-risk people developing type 2 diabetes by almost 60 percent. A panel convened by NIH and the Centers for Disease Control and Prevention (CDC) is now reviewing these results to determine whether guidelines for both the screening of high-risk people and their treatment should be modified as a result of this information.⁸

These findings have a clear financial return. Based on current data from the American Diabetes Association (ADA), people with diabetes who control their diabetes by keeping their blood sugar down cost employers only \$24 a month, compared with \$115 a month for people with diabetes who do not control their blood sugar. Lost earnings because of restricted activity were also much lower for people with diabetes who controlled their blood sugar. For those individuals, the cost was \$2,660 per 1,000 person—days, compared with \$4,275 for those with poor control.

Diabetes management programs are one way that employers can help empower their employees with diabetes. These programs can help in many ways. They can raise awareness of the dangers of diabetes and the importance of controlling blood sugar so that complications don't arise. The programs stress the importance of regular blood sugar testing, routine follow-up, and screening for complications. They also provide valuable educational materials on the importance of diet and exercise and other elements of a healthy lifestyle, such as not smoking and drinking only in moderation. To reinforce these messages, a number of programs offer the option of one-on-one counseling with qualified health care professionals, such as certified nurse diabetes educators. Overall, diabetes management programs provide an integrated approach to managing prevention, diagnosis, and treatment of diabetes in a particular setting—the workplace—for a particular segment of the population.

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This Workbook is designed for employers who are interested in establishing and sustaining a diabetes management program. The Workbook includes information on the following key areas:

Making the Business Case. Employers will be able to calculate the costs of uncontrolled diabetes for their workforce and project estimated savings attributable to improved care. Issues that are important for employers to consider when deciding whether to initiate a diabetes management program, such as how to assess workforce demographics and stability, prevalence of diabetes in the workforce population, and the overall costs of diabetes to the company.

Diabetes Program Design. A description of program components and issues to think about when making important decisions, such as how to assess readiness of participation; whether to work with health plans, disease management companies, or other vendors; and how to best utilize workforce resources, such as any wellness programs that may already be in place.

Strategies to Prompt Employee Awareness and Participation. Tips on how to raise employees' awareness about the diabetes management program and how to encourage employee participation.

Evaluation of Programs. A summary of issues that need to be considered when evaluating programs, including how to collect baseline data prior to the implementation of a program to allow for the measurement of changes directly attributable to the program, and mechanisms for comparing key factors, such as cost and productivity.

Working with Health Plans, Pharmacy Benefits Managers, and Disease Management Firms. A look at the characteristics of each of these vendors and a description of how each would develop and sustain a diabetes management program.

Glossary of Key Terms. Definitions of important terms used when discussing diabetes and diabetes management programs.

Additional Resources. A list of organizations, Web sites, and publications that may be useful in implementing and sustaining a diabetes management program.

Tools for Developing and Implementing a Diabetes Management Program. Copies of checklists, formulas for calculating your company's estimated diabetes-related health costs, and other charts and summaries to simplify the task of developing and implementing an effective diabetes management program.

How to Use the Workbook

The Workbook is designed to encourage employers to consider implementing a diabetes management program, as a way to contain costs, increase productivity, and improve the quality of life at the workplace. It is not meant to be read cover to cover. Rather, employers should look at different sections at different stages of program implementation. For example, in the early stages, employers may find the sections on *Making the Business Case and Program Design* particularly relevant. As employers progress beyond the implementation stage, they may be interested in reading about evaluation strategies and how to work with outside vendors. Think of the Workbook as a reference book, keep it handy, and use it as the need arises for information and insights.



As you read through the Workbook, you may notice an icon like the one shown to the left of this paragraph. This symbol points to another section in the Workbook that includes additional information on a related subject. Also, Appendix C includes copies of the tools, charts, and checklists that are found throughout the Workbook. Feel free to make copies of these sheets and use them throughout your development and implementation process.

For additional information on diabetes management programs, consult the other products of the Taking on Diabetes Initiative. They are listed below.

Diabetes at the Worksite: A Directory of Current Employer Programs. An online directory of employer-based diabetes management programs, including which companies have implemented these programs, program goals, program elements, current evaluation data, and lessons learned. Visit www.emhca.org or www.Takingondiabetes.org.

Taking on Diabetes: What Employers Can Do. A comprehensive monograph profiling four companies with diabetes management programs. This monograph can be found at www.Takingondiabetes.org.

The Compendium of Diabetes Best Practices. A list of abstracts describing published clinical effectiveness studies, federally funded diabetes quality improvement projects conducted in work sites or that grew out of community collaborations, and a bibliography of clinical efficacy studies that form the evidence base for excellent diabetes care. This report is also on the Taking on Diabetes Web site (www.Takingondiabetes.org).

Taking on Diabetes: Care in the New Millennium. Proceedings of an August 1999 conference sponsored by the American Diabetes Association, the American Association of Health Plans (AAHP), and the Health Care Financing Administration. This report can be found on the Taking on Diabetes Web site (www.Takingondiabetes.org).

The multi-year *Taking on Diabetes* initiative is made possible by a grant from GlaxoSmithKline. The project is a joint initiative of AAHP and the American Diabetes Association. To produce the worksite products, including the *Taking on Diabetes* monograph, the Directory, and this Workbook, AAHP has collaborated with the Employers' Managed Health Care Association (MHCA). The overall goal of the worksite component is to find innovative ways for health plans and employers to work together to create a more productive, accountable, and cost-effective approach to the treatment and management of diabetes.

Over the past two years, MHCA and AAHP have been conducting research on employer-based diabetes management programs. The research began with a solicitation of companies involved in diabetes management. After four companies had been earmarked, they were interviewed using a data collection tool developed by AAHP.

The next step was to conduct a formal needs assessment to determine which MHCA members had diabetes management programs in place. After sending out the assessment and receiving responses, we followed up with phone calls, trying to reach as many employers as possible. These efforts resulted in a 70 percent response rate and uncovered the following information:

- ◆ 61 percent of the respondents do not have a diabetes program.
- ◆ 39 percent of respondents do have a diabetes program.
- ◆ 35 percent of those with a diabetes program have contracted with their health plan or pharmacy benefits management company.

After analyzing the data from the needs assessment, MHCA then developed an online directory of employers with diabetes management programs. To date, 12 companies have submitted information about their programs, and information continues to be added and updated.

Diabetes at the Workplace: How Employers Can Make a Difference makes use of this research, but additional background work has been done. We have consulted with health plans, pharmacy benefits management companies, and disease management companies to learn about each group's philosophy and approach toward disease management. We also have used information from the National Diabetes Education Program (NDEP), an initiative sponsored by the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC). Other sources that we have found useful include an article on the systems approach to population health management, written by Nicolaas P. Pronk, PhD and Patrick J. O'Connor, MD, MPH, and published in 1997 in the *Journal of Ambulatory Care Management*, and a book written by Raymond J. Fabius, MD, CPE, FACPE, entitled *Total Care Management: A Physician Executive's Guide to Medical Management for the 21st Century*, published in 2001 by the American College of Physician Executives. We also have used information from the American Diabetes Association, including treatment guidelines and other recommendations.

We have tried to bring all this information together in a way that is most useful to employers. Our overall goal has been to develop a tool that makes use of state-of-the-art research and gives employers the information they need in a user-friendly format so that they can make informed decisions about diabetes management programs.

MAKING THE BUSINESS CASE

A crucial first step in deciding whether to implement a program is assessing whether you need such an intervention. Many factors contribute to this decision—the demographics of your workforce, its stability, and the impact of diabetes on your bottom line. Tools 1 through 3, described on the following pages, can help you evaluate the number of employees at risk for diabetes, how much of the cost you are bearing, and whether this strategy will result in significant long-term savings.

TOOL 1: CHECKLIST FOR EMPLOYERS

- Who makes up your workforce? If the majority of your workers are over 45 and are of ethnic heritage—African American, Hispanic, Native American, or Asian—your employees may have an increased risk of developing diabetes.
- Is your workforce stable or transient? Many companies feel that the longer their employees stay with the company, the greater the incentive to make a long-term investment in their health and well-being. Alternatively, if your workforce is more transient, you may want to consider whether there are incentives to create a short-term, focused program.
- Are you bearing much of the cost for your employees' health benefits? If so, it may be in your best interest financially to try to keep your workforce healthy. Keep in mind that the basic elements of a diabetes prevention program (physical activity, nutrition, and smoking cessation) also are the basic elements of other chronic condition programs.
- To the best of your knowledge, does diabetes and its many complications, including cardiovascular disease, have an effect on health care costs and the productivity of your workers?
- Do you know what, if any, diabetes education is covered by your company's health plans?
- Does your company, through its health plans or pharmacy benefits plans, pay for diabetes supplies, such as blood glucose monitoring devices?

If the answer to at least two of these questions was “yes,” you may find it useful to estimate the health risk of your employees for diabetes and the costs associated with this disease. In order to estimate the potential prevalence rates of diabetes in your company and costs associated with them, you will need to know the average prevalence rates of your employee population either as a whole group or by gender, age, or ethnic origin.

TOOL 2: DETERMINING THE PREVALENCE RATE

The Third National Health and Nutrition Examination Survey, 1988-1994 (NHANES III Data), is one of several sources for prevalence of diabetes in the United States. NHANES III is a representative sample of more than 18,000 adults surveyed within the general population to determine the percentage with a known diagnosis of diabetes. Use the prevalence rates listed in the NHANES III Data chart below to calculate the number of employees between 20 and 64 who are at risk for diabetes.

Prevalence of Diabetes by Age and Sex (NHANES III data)

Sex	PERCENTAGE BY AGE				General Population
	20-39 Years Old	40-49 Years Old	50-59 Years Old	60-74 Years Old	
Both Sexes	1.1%	3.9%	8.0%	12.6%	5.9%
Men	1.1%	3.3%	9.6%	11.8%	5.9%
Women	1.1%	4.4%	6.6%	12.8%	5.9%

Special Populations

Some populations have a higher incidence of diabetes. These populations include African American, Mexican American, Asian/Pacific Islander, and Native American. Below are the available prevalence percentages for Non-Hispanic White, Non-Hispanic Black, and Mexican American men and women.

Prevalence of Diabetes by Special Population

Race/Sex	PERCENTAGE BY AGE			
	20-39 Years Old	40-49 Years Old	50-59 Years Old	60-74 Years Old
Non-Hispanic White				
Both Sexes	1.0%	3.3%	7.5%	11.3%
Men	1.2%	3.0%	9.9%	10.9%
Women	0.9%	3.5%	5.3%	11.7%
Non-Hispanic Black				
Both Sexes	1.6%	6.2%	13.8%	20.9%
Men	1.6%	5.5%	13.0%	16.8%
Women	1.6%	6.7%	14.5%	23.9%
Mexican American				
Both Sexes	0.8%	7.3%	16.0%	24.4%
Men	0.5%	5.5%	15.5%	18.8%
Women	1.2%	9.2%	16.5%	29.0%

TOOL 3: ESTIMATED HEALTH CARE COSTS FOR PEOPLE WITH DIABETES

Once you have found the estimated number of employees at risk for diabetes you can then calculate the costs associated with these risks. The per capita costs of health care for people with diabetes amounted to \$10,071, while health care costs for people without diabetes amounted to \$2,699 in 1997.

$$\text{Number of Employees At Risk for Diabetes} \times \$10,071 = \text{(A)}$$

A = Projected Health Costs for Employees At Risk for Diabetes

OR

If you have calculated the number of employees at risk for diabetes by age, gender and/or ethnic backgrounds multiply the total for each category by \$10,071 and add them together:

$$\text{Category 1} \times \$10,071 + \text{Category 2} \times \$10,071 + \text{Category 3} \times \$10,071 = \text{(A)}$$

A = Projected Health Costs for Employees At Risk for Diabetes

Total Number of Employees

Number of Employees At Risk for Diabetes -

$$B = \text{Estimated Number of employees w/out diabetes} = \text{(B)}$$

$$\text{(B)} \times \$2,669.00 = \text{(C)}$$

C = Projected Health Costs for Employees w/out Diabetes

$$\text{(A)} - \text{(C)} = \text{(D)}$$

D = Additional Estimated Annual Health Costs for Employees with Diabetes

By comparing the difference in costs for people with diabetes with those for people without diabetes or other chronic conditions, you can determine how much additional money you are paying for your employees with diabetes. If you are paying a significant amount more, it may be worth investing in a diabetes management program. The cost of implementing such a program is probably similar to what you are paying currently, and there is a strong possibility that costs would decrease over time with better diabetes management. So, over the long term, a diabetes management offers a sound return on the investment.

Below are examples of companies that have instituted diabetes education programs and have demonstrated cost savings:

- ◆ A worksite based diabetes education program at First Chicago decreased the hemoglobin A1C, a measure of long-term glucose control, from 9.5% to 8.3%.⁹
- ◆ Another study showed that for every 1% reduction in A1C, there was a significant cost savings over the next 3 years.¹⁰
- ◆ A recent study from Group Health Cooperative of Puget Sound showed that a reduction in the A1C level among adult patients with diabetes was associated with significant cost savings within 1-2 years of improvement. These cost savings ranged from \$685-\$950 per year per patient and could help pay for the systems needed to improve the control of blood sugars.¹¹

For additional information on assessing your company's potential risks for diabetes and the costs associated with them, go to www.diabetesatwork.org, an online diabetes resource for the business community developed by the National Diabetes Education Program.

Where Do You Go From Here?

After reviewing the numbers, the next step is to decide whether it is in your company's best interest to implement a diabetes management program. Here are some questions you need to consider with your top management team:

- 1. Is enough of your workforce at risk for diabetes to justify a program?**
- 2. Is your company committed to creating a culture of wellness? Are you willing to make a long-term investment in the health of your workforce?**
- 3. Do you estimate that you will save money over the long term?**
- 4. Who would you want the program to reach? Those insured through your self-insured health plan, those insured through your HMOs, or for both groups?**
- 5. Do you have a good relationship with your pharmacy benefits manager or your health plan? Would you want to have the program administered through either of these groups, design your own program, or use the services of a disease management vendor?**
- 6. What are the implications under the Health Insurance Portability and Accountability Act (HIPAA) relating to privacy?**
- 7. Have you thought through issues of confidentiality? For example, how would you identify participants? What data would you use? What would you do to assure employees that this information would be kept confidential and that it would not influence their standing in the company?**



As you think about these questions, refer to the sections on Working with Your Health Plan, Working with Your Pharmacy Benefits Manager, and Working with a Disease Management Company (pages 41–49) for more information about how to select the vendor to help in developing a diabetes management program that works best for your company.

The way you address these questions will determine whether you decide to implement a program and what first steps you need to take. It is essential that top management be committed to the program. Furthermore, management must understand that direct cost savings won't be realized for three to five years. Company buy-in and leadership support are critical to the survival of the program.

Be aware, too, that diabetes management programs are a good way to empower patients to be better consumers and advocates for themselves. By raising the level of knowledge of people with diabetes, employers stand a better chance of avoiding the life-threatening—and expensive—complications of the disease.

DESIGNING AN EFFECTIVE DIABETES MANAGEMENT PROGRAM

Designing and implementing an effective diabetes management program is no small task. There are many steps involved with each stage of the process—from making the decision to implement a program to setting goals to developing specific program elements. To make this job easier, it is a good idea to take a methodical approach and to be aware of best practices established by the ADA and other reputable sources. By working slowly and carefully, employers will find the task less daunting and more productive. The steps listed below provide a good framework for developing your program.

Identification. Prospective candidates for diabetes management programs are usually identified through data from one or more of the following sources: the pharmacy benefits manager, claims data and utilization data sets, and laboratory tests. To identify employees who may be at the highest risk and most appropriate for a targeted care management intervention, it is important to pay particular attention to repeat hospital admissions; specialty referrals, including dialysis; emergency department claims; and insulin use. In using any data, it is imperative that employers be sensitive to employees need for confidentiality. Also, employers should be aware that there could be errors in the data, or that individuals may not yet be ready to deal with their condition. Because of these issues, employers should proceed with caution.

Another strategy employers can use is screening, although its cost effectiveness has not been documented. According to ADA guidelines, community screening may not identify those at risk. For this reason, screening in a health fair setting is not recommended. High-risk individuals should be evaluated by their health care provider every three years beginning at age 45.

To help employers learn more about screening, consider the following:

- ◆ Education and information for employees on what to expect from their health care clinical visits.
- ◆ Query for health plan or vendor about screening guidelines for clinicians to use.

A health risk assessment (HRA) will help identify those employees who are at risk. Risk factors include the following:

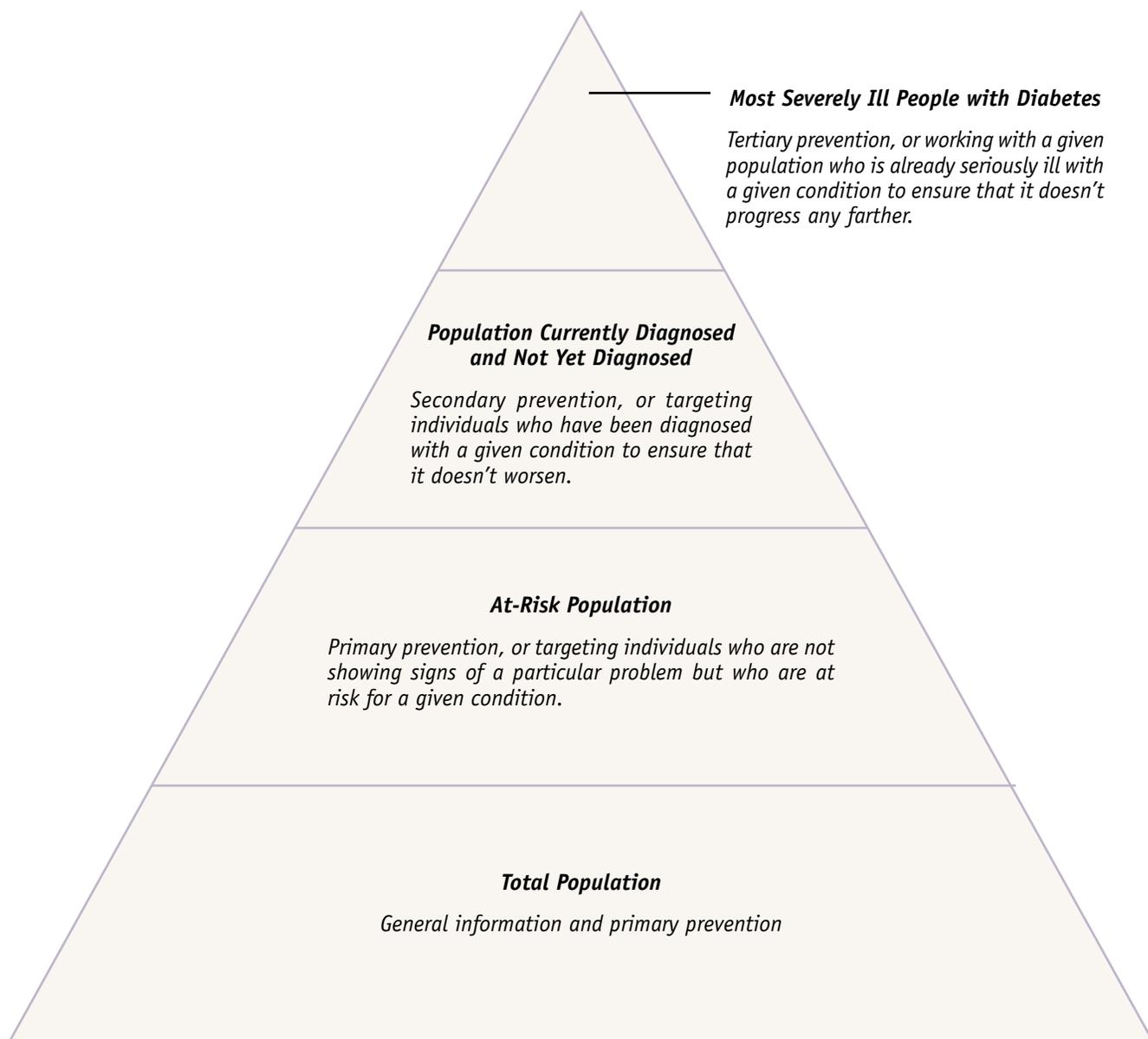
- ◆ Family history of diabetes
- ◆ Obesity
- ◆ Habitual physical inactivity
- ◆ Race and ethnicity for African-Americans, Hispanic-Americans, Native Americans, Asian-Americans, and Pacific Islanders
- ◆ Fasting glucose plasma test results outside normal ranges
- ◆ Hypertension
- ◆ Cholesterol or triglyceride test results
- ◆ Delivery of a baby weighing over 9 pounds
- ◆ Polycystic ovary syndrome

After identifying individuals who are eligible for a diabetes management program, they can be further stratified into the following categories:

- ◆ Employees (in some cases, this category could include dependents and retirees as well as active employees) eligible for employee benefits who have been diagnosed with diabetes and are being treated for the disease.
- ◆ Employees who are at risk based on current health behavior.
- ◆ Employees who may be at risk in the future.

The diagram summarizes how appropriate populations are identified for diabetes management programs.

TOOL 4: POPULATION IDENTIFICATION FOR DIABETES MANAGEMENT PROGRAMS



This diagram helps define the population that is targeted within the diabetes management program and the level of services and information within the stratifications. Each subpopulation has different needs and would benefit from different kinds of services. The key is to decide which population or populations you want to target and to match the services for that group or groups.

Steps to Follow when Establishing a Diabetes Management Program

Once the population has been identified, the next step is to actually develop the program. Nicolaas Pronk, PhD, and Patrick J. O'Connor, MD, MPH, have identified seven steps that should be followed in establishing a diabetes management program. These steps, summarized below, have been explored in greater depth in an article entitled "Systems Approach to Population Health Improvement," published in 1997 in the *Journal of Ambulatory Care Management*. The information described here is being used with permission and has been adapted for employer use.

As Mike Kriner, director of benefits from NCR says, "It's a philosophical issue. You either believe in disease management or you don't. At NCR, we believe that disease management can improve the quality of life, help manage costs, and help employees be more productive. It is part of an overall tool kit that benefits employers."

Set Goals



The first, crucial step is to determine what the goals for the program are. Making decisions about goals also means deciding which population or populations you want to serve and which existing data sets, such as those reported through HEDIS (Health Plan Employer Data and Information Set), you want to use to help identify appropriate areas of diabetes management to focus on, such as self-management education.

Another way to set goals is through assessing the population by using the disease prevalence model described on page 16 of this Workbook. This model suggests a simple way to identify the cost of people with diabetes to and to determine which group to target for change.

Finally, Healthy People 2010 goals for diabetes, which have been established by the U.S. Department of Health and Human Services, is another framework on which to base your program. Healthy People 2010 is a prevention agenda for the United States that includes the most significant and preventable threats to health in this country, as well as national goals designed to reduce these threats. The agenda for diabetes includes 30 objectives aimed at reducing risk factors; improving diabetes control processes; identifying and treating people with diabetes, especially those with co-morbidities; reducing complications associated with diabetes; and increasing patient counseling and education.

Sample goals include the following:

- ◆ Provide information to increase employee awareness of the risks and treatment for diabetes.
- ◆ Raise interest in and awareness of health so that employees become more informed health care consumers.
- ◆ Work with the health plan to improve how people with diabetes are identified, diagnosed, educated, and treated using HEDIS measures at the health plan level.
- ◆ Establish goals with local area business coalitions on health to increase community awareness of diabetes and to address one or more of the Healthy People 2010 goals.

Assess Willingness to Participate

The design of the program will be enhanced and the likelihood of achieving the desired goals increased by assessing the willingness of the population to participate in the program. This step will help identify barriers, best methods for communication, logistical concerns (for example, brown bag lunches versus other mechanisms for educational and support meetings), issues with privacy and confidentiality; and health assessment or screening opportunities. Questions in a human resource or benefit survey, focus group questions, or an ad hoc advisory group are all ways to solicit information about the willingness of a given population to participate in a diabetes initiative. It is essential that employers have a clear sense of participants' interest in the program before embarking on this effort and that employees have a number of options from which to choose.

Using a community workplace activity, such as a general education session open to all employees, helps avoid the problem of self-identification of employees with diabetes. In addition, because many employees will know someone—family, friends, or co-workers—with diabetes, this education has the potential of reaching out beyond the workplace to the community.

Assess Health Risk and Health Status



As part of the identification process described on page 19, the program should stratify the population selected. A health risk appraisal (HRA) is an effective way to target potential employees, especially if both clinical measures and behavioral factors are included. Any HRA should also include a question about permission to follow up so that health status before and after the intervention can be compared. For more information about how to develop a HRA, consult the SPM Handbook of Health Assessments, the authoritative text on the topic. (It can be found online at www.spm.org.) The book includes examples of HRAs, including sample questions and forms. The importance of HRAs is also discussed later in this workbook (see page 30).

Another source of information for employers are blinded claims data used by the health plan or by a third party. Employers can use this information to assess those at risk or those who are diagnosed or being treated for diabetes. After a qualified person from the employer's benefit management office reviews these data, a decision may be made to focus the program on those employees who have the most severe conditions and generate the highest costs. In any case, employers must have the necessary information, preferably from a variety of sources, before they can make sound decisions about their diabetes management program.

Assess Readiness to Change

The program design should include elements that reflect the various stages in the readiness to change model. These stages are pre-contemplation, contemplation, preparation, action, and maintenance. According to this model, health care professionals working with program participants assess whether they have accepted their condition and are ready to work toward improving it or are still in the pre-contemplation stage. After making this determination, the program is then tailored to work with the individual to help him or her reach a higher level of acceptance and compliance with best practices. In order to achieve this goal, the program must be flexible to allow for services and information that correspond to the individual's needs, interests, and willingness to participate. Research has shown that to the extent that this information can be factored into the program, the more effective the program will be. Aggregate data on readiness to change can help in setting realistic improvement goals.

Provide Health Interventions

The interventions designed will depend upon the goals that are established and the findings from the assessment steps outlined above. The interventions can take place in a number of different settings, including at the clinic or health care provider's office, at the workplace, or in the community. Purchasers may also focus their intervention in collaboration with a health plan, or they can consider how company policy can help create a "culture of wellness." Interventions may include education, referrals, case or care management, or support groups.

Evaluate

After the program has been in effect for six months to a year, participants need to evaluate whether they have met their goals and whether new goals should be established. This is also the time to determine the progress that has been made.

Modify Goals

At this point, participants have decided whether they want to modify their goals based on progress made or because of changes in their condition. Evaluation and modification of goals should be an ongoing part of participants' self-management of their condition.

The chart below summarizes the seven steps involved in establishing a diabetes management program.

TOOL 5: SUMMARY OF STEPS NEEDED TO ESTABLISH A DIABETES MANAGEMENT PROGRAM

1.	Set Goals
2.	Assess Willingness to Participate
3.	Assess Health Risk and Health Status
4.	Assess Readiness to Change
5.	Provide Health Interventions
6.	Evaluate
7.	Modify Goals

Specific Components of the Diabetes Management Program

While there is some variation in the specific components of a diabetes management program, most include those listed in the following section. These components conform to guidelines established by the American Diabetes Association (ADA), which are listed below.

TOOL 6: GUIDELINES ESTABLISHED BY THE ADA

Criteria for Diagnosis
Key Tests and Exams
Nutritional Goals
Recommendations for Glycemic Control
Lipid and Blood Pressure Goals
Therapy
Determining Body Mass Index

As you develop your company's program you can use the ADA Standards of Care, summarized in Tool 7, as a guide to what should be included in the clinical management components of the program.

TOOL 7: ADA STANDARDS OF CARE

- ◆ Medication management
- ◆ Individualized nutrition recommendations and instructions, preferably by a registered dietician familiar with the components of diabetes medical nutrition therapy
- ◆ Recommendations for appropriate lifestyle changes (e.g., exercise, smoking cessation)
- ◆ Patient and family education for self-management
- ◆ Monitoring instructions for testing and recording
- ◆ Annual comprehensive dilated eye and visual examinations by an experienced eye care professional for all patients age 10 years and older who have had diabetes 3-5 years, all patients diagnosed after age 30 years, and any patient with visual symptoms and/or abnormalities
- ◆ Consultation of podiatry services as indicated (foot checks and sensory foot exams)
- ◆ Agreement on continuing support, follow-up, and return appointments
- ◆ Instructions on when and how to contact the physician or other members of the health care team when the patient has not been able to solve problems and when management of acute problems is required
- ◆ For women of childbearing age, discussion of contraception and emphasis on the necessity of optimal blood glucose control before conception and during pregnancy
- ◆ Dental care and hygiene

Components of the a Diabetes Management Program

The following issues must be addressed throughout the planning and implementation of a diabetes management program.



1. **Participant recruitment.** The communications methods and techniques used for recruitment and enrollment in the program are an essential part of the process. After potential participants are identified in accordance with the goals of the program (see the section entitled *Set Goals*, page 21), with attention paid to confidentiality and protection of privacy, individuals should be contacted via phone, letter, e-mail, or meetings. The introductory materials distributed to participants should highlight the prevalence of and risks associated with diabetes, the benefits of early detection and management of this chronic condition, and resources available. See the section entitled *Strategies to Prompt Employee Awareness and Participation* (pages 35–36) for more information about effective ways to target and communicate with participants.
2. **Clinical assessment and patient care team.** The diabetes program may be focused on patient education and self-management separate from the patient-clinician relationship, but the most effective programs will integrate these elements, or at least help the participant become empowered to take charge of his or her treatment and participate in their care more actively.
3. **Use of medications.** If applicable, the utilization of diabetes medications for therapeutic effectiveness needs to be included in the overall program. Information offered could include reminder systems, coordination with other medications and other providers, tips for discussion with the prescribing physician, and questions to ask.
4. **Monitoring glucose.** Self-monitoring techniques and tools and how to schedule the administration of insulin need to be included in the education program. It is essential to emphasize the importance of this part of the treatment plan and to educate participants on the benefits of compliance.
5. **Prevention.** Preventing, detecting, and treating chronic complications should be included in the program. Risk reduction strategies, such as getting an annual fall season flu shot and pneumococcal vaccination if appropriate, eating a healthy diet, exercising regularly, not smoking, and drinking in moderation should all be part of the care management plan developed for each participant. Working to take the necessary steps to avoid emergency room or urgent care visits should also be included in the prevention part of the treatment plan.
6. **Psychosocial adjustment.** The ability of the patient to integrate self-care and management into daily living activities should be part of the assessment and care management plan development process. These skills may change over time, so periodic review of this aspect of the program should be conducted. Coordinating the program with the company's Employee Assistance Program or with another behavior health program is recommended.
7. **Special needs and considerations.** Planning for pregnancy and prenatal care needs to be part of the care management and information plan as appropriate, along with management during pregnancy as well as gestational diabetes management. Similarly, complications from other problems, such as cardiovascular disease, need to be included in the individual assessment and subsequent plan.
8. **Evaluate.** Develop and then measure short-term, interim, or longer-term results of the interventions. The measures may include process changes, attitude or satisfaction improvements, clinical indicators, levels of participation, or HEDIS measures. For more information about the evaluation process, see the section entitled *Evaluating Your Diabetes Management Program*, on page 29–32 of this Workbook.
9. **Impact.** As described in the intervention planning steps, the impact can be measured based on the clinical quality of care, quality of service, quality of life, and return on investment. The clinical and cost outcomes, as well as ways to measure participation and satisfaction are listed in Tool 8.



TOOL 8: OUTCOMES TO MEASURE

Clinical Outcomes

- ◆ Rate of hemoglobin A1C evaluation
- ◆ Percent with A1C level within normal control
- ◆ Rate of retinal examination
- ◆ Rate of cholesterol screening
- ◆ Rate of foot exams
- ◆ Identification of co-morbidities
- ◆ Increased number of diagnosed diabetics
- ◆ Monitoring blood pressure

Cost Outcomes

- ◆ Pharmacy costs
- ◆ Cost avoidance from reductions in the number of emergency room visits or repeat hospitalizations due to directly related diabetic problems and cost savings from a reduction of specialty physician visits. There may, however, be an increase in visits to the primary care physician; this is appropriate because it indicates that the patient is monitoring his or her condition more closely. While there may be a slight increase in costs from more regular visits to the physician, better health practices will lead to cost savings in the long run.
- ◆ Reductions in worker absence rates or other measures of productivity improvements.¹²

Participation and Satisfaction

- ◆ Number of program participants
- ◆ Level of satisfaction for employees and/or providers for the program
- ◆ Increased understanding of diabetes and self-management
- ◆ Movement within the stages of change spectrum



Impact measures need to be determined at an appropriate aggregate level for meaningful numbers and for confidentiality at the individual level. Some clinical measures may be most appropriate at the health plan level rather than at the employer level. Functional status and satisfaction measures may also be appropriate and can be built into the program. In addition, satisfaction ratings from physicians may be appropriate for large enough populations. For more information on how to assess the impact of the program, see the section entitled *Evaluating Your Diabetes Management Program*, on page 29–32.

TOOL 9: SUMMARY CHECKLIST

The checklist below is a summary of the different factors that need to be considered in developing and implementing a diabetes management program.

Diabetes Management Program Checklist

Participant Recruitment

- Identification of participants to match program goals
- Review method to develop target population
- Stratification of participants
- Information available for identification of participants
- Rational approach to recruitment
- Demonstrates respect for individual confidentiality
- Link to provider in participant recruitment
- Integration information with other programs

Clinical Assessment and Patient Care Team

- Use of clinical guidelines, such as those from the American Diabetes Association
- Evidence-based information for clinical care
- Ability to customize management and support plan needs
- Assessment of risk factors
- Inclusion of experienced health professionals, including nutritionists and health educators, appropriate specialists, etc.
- Identification of co-morbidities
- Screening for depression
- Assessment of readiness to change
- Coordination with other services and information
- Monitoring by an appropriately trained health care provider

Program Suitability with Overall Health Program Goals for Employer

- Worksite health promotion objectives
- Employee education about prevalent health conditions
- Self-help tools for consumers
- Integration with health risk appraisal or other programs (wellness, fitness, EAP)
- Partnership with health plan

Self-Management Education and Plan

- Identification of needs and readiness to change
- Identification of resources
- Nutritional education and plan
- Physical activity
- Medication management and monitoring
- Monitoring glucose levels
- Prevention
- Goal setting
- Psychosocial adjustment
- Special needs and complications
- Includes patient and family in development of management plan

Evaluation

- Basis for evaluation and application for program modification
- Decision-making and future directions

EVALUATING YOUR DIABETES MANAGEMENT PROGRAM

Evaluation is a critical component of your diabetes management program. In setting up this part of the program, what you are really doing is developing a mechanism to measure whether you have been able to reach the goals established at the onset of the program. Typically, employers strive to achieve positive changes in the following three areas:

- a. **Changes in process outcomes.** This refers to an improvement in the efficiency of the administration of services. For example, if employers decide to send out notices reminding people with diabetes to have a yearly eye exam, is there an increase in the number of people doing so? If so, then there has been an improvement in process outcomes.
- b. **Changes in health outcomes.** This refers to an improvement in the health of individuals involved in a program. In this case, a person with diabetes participating in a diabetes management program is expected to have improved his or her blood sugar as a result of the diabetes management program.
- c. **Changes in financial outcomes.** This refers to a savings in either direct or indirect costs, as well as improvement in absenteeism (number of days missed), presenteeism (better quality of work while present and on the job), and overall productivity. These changes can be measured by looking at absenteeism records over the course of a year, analyzing their relationship to the program, and determining whether they have improved.¹³

After deciding which of these or other outcomes you want to measure, the next step is to figure out how you are going to measure them. Ideally, the way to proceed next would be to set up a controlled study with two well-matched, randomized groups. Employers might find it useful to have the control group located at a plant in one city, while the experimental group is located at a site in another city. In the case of a diabetes program, the control, located in County A, for example, would be comprised of people with diabetes. They would not be invited to participate in the program or would only be given the basic health care information packet. The second group, the experimental or intervention group, perhaps located in County B, would also be comprised of people with diabetes. This group, however, would receive the full benefits of the diabetes management program. For this study, you could compare improvements in blood sugar (a health outcome), improvements in absenteeism (a financial outcome), and improvements in hospital stays (a financial outcome). At the end of six months or a year, you can compare the two groups to see whether there is an improvement in both the designated health outcome and the designated financial outcomes. Using other forms of analyses, you can determine if these improvements are a result of or related to your program intervention.

This kind of study, though ideal, is usually very difficult to implement in the workplace setting. As a result, what employers usually do is develop “before and after studies.” For these studies, employers begin with baseline data of what they want to measure. Having these data is essential because without this information, you have nothing against which to compare the progress of your program. From a practical standpoint, without hard numbers it will be very hard to prove the effectiveness of the program for at least one to two years.¹⁴

Employers have found that many different tools can be used to collect the baseline data. Below is a list of the most common tools that employers use as a way to gather the baseline data they need at the onset of the program.

1. **Using a health risk assessment (HRA) questionnaire.** One way to begin your program is by having employees and dependents complete a health risk assessment questionnaire. The HRA serves three important functions. First, it identifies those individuals who are eligible for the program. 3M and Caterpillar both used an HRA to identify individuals eligible for the program, but participation is, as always, voluntary. Second, by seeing where they need improvement, individuals can set their own health goals that they would like to accomplish while participating in the program. Parker Hannifin administers an HRA twice a year for the purpose of determining whether goals set at the time of the last HRA were in fact met. Third, the HRA results, when sorted and reported as an aggregate set, gives a company a good indication of its level of wellness. At the end of the program time frame, usually one year, the employer can assess whether participants have been able to meet their goals. This information can then be used as a way to promote the program to both upper management and other potential participants. Overall, the HRA is a valuable tool for measuring specific health outcomes.
2. **Establishing performance guarantees.** In working with health plans or other outside vendors, employers have the option of asking the vendor to incorporate performance guarantees into the original design of the program. Performance guarantees can be used to measure both financial and health outcomes. For example, Anheuser-Busch Co., Inc. whose health plan administers its diabetes management program, worked out an agreement to establish a performance guarantee in five networks in which the company has the greatest concentration of employees. The performance guarantee, which measured a financial outcome, is that the claims savings of the diabetes management program would have to be equal to or greater than the program's costs. By comparing claims data from the previous year with that of the year the program was in place, it was then possible to calculate savings. Other performance guarantees that employers can consider requesting of their vendor include those related to clinical outcomes, such as reduced emergency room visits and hospitalizations.
3. **Using goal-setting strategies.** In programs where participants work individually with a health care professional, setting individual goals is a good way to assess progress in improving health incomes and financial outcomes. AT&T's program, administered by a PBM, has a goal-setting component. For example, if an individual has determined that his or her goal is to keep blood glucose levels under control or to keep short-term, acute complications to a minimum, these can be measured in terms of per capita costs for diabetes patients. If participants have met these goals, then their costs that year have probably decreased as well, because they did not have to go the emergency room or spend time in the hospital. Perhaps, too, their overall health has improved because they have gone to see their physician on a more regular basis. In this way, all three outcomes can be measured. You can see an improvement in a process outcome by the increased number of doctor visits, an improvement in a health outcome by lower blood glucose levels, and an improvement in a financial outcome by a decrease in per capita costs for diabetes patients, based on a decrease in emergency room and/or hospital stays. Although there may be increased costs associated with higher frequency of physician visits, these are outpatient rather than inpatient costs. Those costs are not as expensive as those incurred through hospital stays.
4. **Measuring participant satisfaction and increased understanding of the condition.** Surveys measuring improved self-advocacy are also frequently used to evaluate the program. Self-advocacy results in a stronger relationship with the individual's physician, decreased risk of complications related to the condition, and increased knowledge about the condition. These factors can be assessed before the program is initiated and at a designated interval into the program (i.e. 6 months) to measure the following health outcomes: improved ability to manage the condition; increased knowledge, resulting in more effective self-advocacy and empowerment; and an improved relationship with the physician.

"After implementing our diabetes management program, we were able to demonstrate a \$44.09 PMPM savings after the first year."

**Ann Gebhard
Anheuser-Busch Co.**

5. **Using data from the pharmacy benefits manager (PBM).** If you are working with your PBM to develop and implement your diabetes management program, the PBM will probably have access to data on use of medications by program participants. If baseline data are available on medications taken and level of compliance before program implementation (a process outcome), then your PBM can give you information comparing results at designated intervals such as 6 months or after the first year of the program. For example, if participants in the program are filling their prescriptions on a more regular basis, there is a good chance that greater compliance will result in fewer complications, ultimately leading to greater savings over the long term. In the short term, however, there may be an increase in pharmacy costs. Savings from a decrease in more costly emergency room visits and hospital stays generally offset this increased cost. Throughout the duration of the program the PBM submits quarterly reports to the employer. The reports have such information as the number of HRAs returned, the number of participants, the participants broken down by age and gender, and the number of calls the toll-free number received from both participants and their physicians.
6. **Using medical claims data.** If you are working with a disease management company or a health plan, both of which have access to medical claims data, then it is possible to compare hospitalization rates both before and after program implementation (both a process and financial outcome). Ideally, having access to both pharmaceutical data and claims data could yield the most convincing information about the success of the program. In some cases, a PBM is willing to give information about pharmacy use to the health plan, as was Anheuser-Busch's experience.
7. **Designing your own study.** Some employers design their own controlled study to measure the impact of the worksite diabetes program. As mentioned earlier, this is the ideal way to get accurate information about the effectiveness of a program, but it can also be the most difficult tool to implement. However, Southern Company, in Atlanta, Georgia, did design a study with intervention and control groups. At the beginning of the six-month study, each group was given education information, a blood pressure check, a weight check, a urine test, a fasting blood sugar, an A1C test, a lipid profile, kidney function tests, and one-on-one counseling. The intervention group was given nutritional information at special lunch programs and additional one-on-one counseling sessions. At the end of the six-month period, both groups were given all the tests again. Study results showed that while both groups improved, the participants who received interventions showed greater improvement, thus demonstrating (for this company) that more involvement with participants yielded a greater return on investment.

While all these tools are helpful, each has its strengths and weaknesses. Even the most conscientious attempts may or may not yield results. This is simply because measuring outcomes, or isolating the cause and effect factors, is extremely difficult to do. The easiest kind of outcome to measure is a process outcome, such as tracking and comparing the number of hospital visits before and after program implementation. But the information that you would really like to have—improved health and financial outcomes—is much harder to assess. The reason for this is that changes take a long time to show up, can be caused by a number of factors, and can be subtle and hard to detect.

A new tool being developed by the Biomathematics Unit, Care Management Institute at Kaiser Permanente shows promise as a way to provide employers with information about the effectiveness of a proposed program. Called Archimedes, the program is a mathematical model that uses existing information to predict the value of a program. The database has a tremendous capacity and can factor in a wide range of information to determine results. For example, if you input information about the people participating in a program and any data available about costs, as well as knowledge about clinical trials, disease management programs, population epidemiology, and desired outcomes, the model can give you information about the pros and cons of a particular program. While the model cannot give you hard and fast answers about what to do for people with diabetes in your particular setting, it can give you more data to use in making critical decisions.



In developing the evaluation component of the program, be sure to plan for it at the onset and to develop it in conjunction with other program elements. For a description of program design and how evaluation fits in with the overall structure of the program, see the section entitled *Designing an Effective Diabetes Management Program* (pages 19–27).

TOOL 10: SUMMARY OF EVALUATION APPROACHES

Consider using one of the following approaches to the Evaluation component of your program.

1.	Using a HRA questionnaire
2.	Establishing performance guarantees
3.	Using goal-setting strategies
4.	Measuring participant satisfaction
5.	Using data from the pharmacy benefits manager (PBM)
6.	Using medical claims data
7.	Designing your own study

Performance Measurement for the Management of Diabetes

To measure the performance of diabetes management, the American Medical Association (AMA), the National Committee for Quality Assurance (NCQA), and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) have worked together to develop a Consensus Statement that focuses on physician-level and plan-level performance measurement for outpatient care. This collaborative effort is a model that identifies measures at the health plan, provider organization, and physician levels.

“A recent employee satisfaction survey, with a 30 to 40 percent return, revealed that the overwhelming majority of participants are satisfied with the program and would like it to continue.”

**Joyce Munsell
Parker Hannifin**

Based on the current knowledge for clinical recommendations and treatment goals for adult diabetes management, the guidelines from organizations such as the American Association of Clinical Endocrinologists (AACE) and the American Diabetes Association (ADA) were used to develop the measures. In addition, the work conducted under the Diabetes Quality Improvement Project, which is sponsored by the ADA, the Foundation for Accountability (FACCT), the Center for Medicare and Medicaid Services (CMS, formerly HCFA), NCQA, the American Academy of Family Physicians (AAFP), the American College of Physicians-American College of Internal Medicine (ACP-ASIM), and the Veterans Administration was also referenced to finalize the Consensus Statement.

Described below are the aspects of care from the Consensus Statement compared with the Health Plan Employer Data and Information Set (HEDIS) created by NCQA that are submitted by many health plans:

TOOL 11: COMPARING THE CONSENSUS STATEMENT WITH HEDIS

Aspect of Care	Consensus Measures	HEDIS Measure*
A1C Management	A1C tested at least annually	Comprehensive Diabetes Care: One A1C test during measurement year.
	A1C poorly controlled (>9.5%)	Comprehensive Diabetes Care: A1C poorly controlled (>9.5%) measured by evaluating the most recent level taken during measurement year. If no test is documented, the level is considered to be >9.5%.
Lipid Management	Lipid testing at least annually	Comprehensive Diabetes Care: LDL-C Screening: Test performed in measurement year or the year before.
	Lipid levels <130 mg/dL controlled**	Comprehensive Diabetes Care: LDL-C controlled: Most recent LDL-C level taken in the measurement year or the year before is <130 mg/dL.
Urine Protein Testing	Testing for microalbuminuria at least annually (every two years for low-risk patients)	Comprehensive Diabetes Care: Monitoring for nephropathy: Test for microalbuminuria in the measurement year. This test can be performed in the prior year for low-risk patients (e.g., those not prescribed insulin in the measurement year; A1C test is <8.0, or negative test result was found in the prior year).
Eye Examination	Screening examinations for diabetic retinopathy at least annually (every two years for low-risk patients)	Comprehensive Diabetes Care: Eye exam performed in the measurement year. This test can be performed in the year prior for low-risk patients (e.g., those not prescribed insulin in the measurement year; A1C test is <8.0, or eye care exam in measurement year showed no evidence of retinopathy).
Influenza Immunization	Influenza immunization status, eligible patients	Flu Shots for Older Adults: Vaccination during the measurement year for Medicare members who reported having the immunization through a patient survey.
Foot Examination	Foot exam at least annually	NA
Blood Pressure Management	Blood pressure read at office visit	NA
	Control of blood pressure level (< 140/90mm/Hg)	Controlling High Blood Pressure: Blood pressure controlled (<=140/90 mm Hg) as noted from most recent visit during the measurement year. If no blood pressure is recorded during the year, the BP is out of control.
Office visits	Two or more office visits per year	NA
		Pneumonia vaccination (in development)
		Activities of daily living (NA)
		Patient satisfaction (access)
		Advising Smokers to Quit: Current smokers or recent quitters who have been advised to quit smoking by the practitioner during the measurement year.

* References for HEDIS are taken from the HEDIS 2000 Technical Specifications. The age ranges for measures are as follows: For comprehensive diabetes care, the eligible population is those persons aged 18-75 and diagnosed with Type 1 or Type 2 diabetes; for flu shots for older adults, the population measured is 65 years and older; for controlled high blood pressure, the age group is those individuals between the ages of 46 and 85 with a confirmed diagnosis of hypertension; for smokers or recent quitters aged 18 years and older as of December 31 of the measurement year.

** ADA recently adopted cholesterol guidelines released by the National Cholesterol Education Program (NCEP) and recommends the following: The primary goal of therapy for adult patients with diabetes is to lower LDL cholesterol to < 100 mg/dL. Revision to Consensus Measure is under consideration.

Actions for the Purchaser

Using these measures, the purchaser may review the results for the following reasons:

To evaluate performance of internal or external diabetes management programs. If the employer has an in-house diabetes management program or contracts with an external vendor, these measures will be helpful to use as a way to develop the program and measure its success.

To present information to employees. This data set forms a useful compilation of measures to help educate employees about managing chronic conditions and selecting a health plan. In addition, the measures become useful tools for employees with diabetes to use as they monitor their own care. These indicators also help individuals understand what they should expect as part of their clinical care.

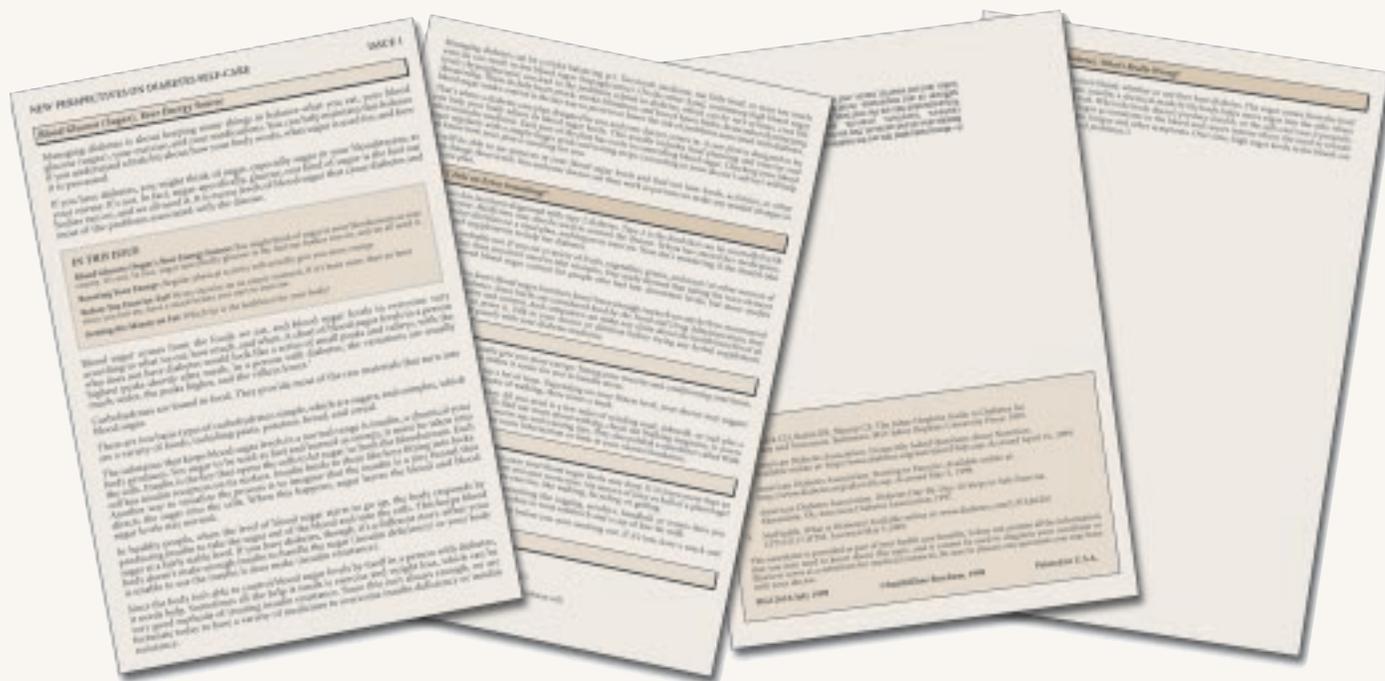
To compare health plan performance. To the extent that better control of diabetes improves employee productivity, the impact of a better performing plan may be important for maintaining the health status of employees, as well as decreasing the costs.

To use in the health plan review. Whether the health plan reports HEDIS measures differs by market and health plan. To the extent that HEDIS measures are not available, the Consensus Statement measures will provide a framework for discussions with providers or health plans.

STRATEGIES TO PROMPT EMPLOYEE AWARENESS AND PARTICIPATION

As employers embark on the task of establishing a diabetes management program, they should be aware that employees may be resistant to becoming involved in a program because of privacy concerns. Some employees may think that they don't need any help in managing their diabetes, or they may be upset about being diagnosed with this condition. Other people may seem uninterested because they don't want to admit—even to themselves—that they have a problem. Whatever the reason for employees' apathy, it is imperative to get their buy-in. Otherwise, they won't participate, and without their participation, the program will falter.

Furthermore, employers have to do more than just convince employees to sign up. They also have to monitor participation to make sure that employees continue to be involved in the program. So employers really have two major tasks—to raise awareness about the diabetes management program and to ensure continued participation.



The sections below describe strategies employers can use for each phase of the process. These tasks are simple, yet they can go a long way to engaging employees in a program that could help prolong—and even save—their lives.

Strategies to Promote Awareness

1. **Invite a diabetes educator to come to your workplace.** A brown bag lunch at the workplace focusing on diabetes is an appropriate, low-key way to begin your awareness campaign. The educator can discuss such topics as nutrition and the importance of exercise. What has been popular at such sessions is a discussion of recipes for people with diabetes. Some companies have even offered cooking classes, which have been very well received.
2. **Meet with local businesses and physicians to get their buy-in.** It is a good idea to involve the community in a new diabetes management program. If physicians are made aware of the program before it begins, they will be more likely to see it as an additional way to reinforce compliance, not as a threat to his or her own relationship with a patient. Other businesses may be willing to contribute to the program by helping to organize health fairs or other events associated with the program.
3. **Advertise the program in internal publications.** Let employees know about the program in employee newsletters and other internal publications and in e-mails to all employees. Consider including a regular column about the program as a reminder about it and to keep employees informed of any modifications to the program.
4. **Send out targeted mailings to alert people about the program.** Work with your vendor (health plan, pharmacy benefits manager, or disease management company) to send out friendly, low-key mailings informing prospective participants about the program. Make sure the information supporting the program conforms to the culture of your company. For example, if your workforce is made up of engineers, make sure the mailings are suitable for that audience.

Strategies to Promote Participation

1. **Stress that you value confidentiality.** Make sure the workforce understands that any information exchanged between the employee and those managing the program is 100 percent confidential. Remind employees that their involvement in the program is completely voluntary and will in no way affect their opportunities with the company or their health care benefits.
2. **Send out appropriate mailings to the targeted audience.** Work with your vendor to develop separate, appropriate information for subgroups within your targeted population. For example, active employees may receive a slightly different mailing from retirees, and those who are newly diagnosed may receive a different mailing from those who have been managing diabetes for a while. The more focused the mailing, the better participation rate you will have.
3. **Provide financial incentives for participating in the program.** Some companies find it useful to cover testing supplies and equipment as an incentive for enrolling in a diabetes management program. Other companies, such as Kellogg's Company, offer a dollar amount that covers supplies and educational materials.
4. **Encourage group activity and support.** For example, sponsor lectures, brown bag lunches, or social events for people participating in the program. For many employees, feeling as though they are members of a group from which they can get support can make a major difference in their feelings about both the program and their condition.
5. **Take advantage of national campaigns as a way to encourage participation.** For example, November is Diabetes Awareness month, so that may be a good time to run an article about diabetes in your in-house newsletter or sponsor a brown bag lunch on diabetes. Also, other organizations, such as the National Diabetes Education Program (NDEP) and the ADA, run campaigns on diabetes. Look for information on NDEP's Web site (www.diabetesatwork.org) and use it as appropriate.

Communication Tools for Employees

Consumer communication and empowerment are the latest buzzwords in the health care industry. In the current environment, physicians and other health care professionals have a limited amount of time to devote to each patient. Therefore, it will be up to each patient to be as knowledgeable as possible and to be his or her own advocate.

To help guide diabetes patients through this complex health care system, this section provides important information on questions to ask when selecting a physician and how to communicate with the selected physician.

TOOL 12: QUESTIONS TO ASK WHEN SELECTING AND WORKING WITH HEALTH CARE PROVIDERS

Questions to Ask when Selecting a Physician

Below are some questions the patient should consider asking prospective physicians or health plans as he or she interviews prospective candidates.

- ◆ Who will provide care as it relates to diabetes? A primary care physician? A specialist? A special team program?
- ◆ Which of the primary care physicians in your health plan are most experienced and knowledgeable about diabetes?
- ◆ For patients with special needs (pregnancy or for children), which doctors are most experienced?
- ◆ If patients see a specialist, what role will the primary care physician continue to play in overall care?
- ◆ What roles do other clinicians (nurses, nurse practitioners, physicians' assistants, and nutritionists) play? Who is available to see you when your primary doctor isn't available?
- ◆ What hospitals are used for the treatment of diabetes? If patients have a preference, they may want to choose a doctor who utilizes a specific hospital.
- ◆ How will the physician be involved in the design of the care treatment plan? Do they use ADA Standards of Care? What systems are in place to ensure this?
- ◆ How will care be coordinated?
- ◆ What procedures are in place to ensure the confidentiality of medical records?
- ◆ What is the physician's philosophy of care? Does he or she immediately prescribe medication? Does the physician recommend exercise and diet as a way to control the diabetes?

Issues to Discuss with the Health Care Provider

Employees should discuss the following points with their physicians to ensure their understanding of how the provider will help support the management of their diabetes.

- ◆ Physician's approach to the management of diabetes
- ◆ Services available for diabetes care through the clinician or health plan
- ◆ Relationship with patient, primary care provider, and any specialist, diabetes educator, or care coordinator
- ◆ Involvement and options in design of care management plan
- ◆ Standards adopted for diabetes care by clinician or health plan
- ◆ Educational materials or meetings that are available to help manage diabetes, including availability of nutrition or exercise classes
- ◆ Reminder system for regular vision, dental, foot, or other exams that are important for people with diabetes
- ◆ Procedures for emergencies, especially at night or on weekends
- ◆ Any clinical trials or research projects that the clinician may have access to
- ◆ Support groups available for the patient or family

Help for the Employee: What to Expect at the Physician Visit*

The following section outlines what the employee should expect at the physician visit about medical history, physical exam and laboratory tests, education and management program development, and follow-up visits and communications.

Medical History

A comprehensive medical history is an important element that can help uncover symptoms that may establish a diagnosis of diabetes or confirm the diagnosis if it has already been made. Previous treatment, evaluation of blood sugar control, complications that may be present, patient involvement in the development of a care management plan, and defining ongoing care should all be part of the discussion. The following parts of the medical history are especially relevant for patients with diabetes:

- ◆ Symptoms of diabetes
- ◆ Results of laboratory tests
- ◆ Special examinations related to diabetes
- ◆ Prior A1C records
- ◆ Dietary habits and patterns, nutritional status, and weight history
- ◆ Details of any previous treatment, including self-management
- ◆ Current treatment, including medications, nutrition and meal habits, results of glucose monitoring, and patients' use of the resulting data
- ◆ Information about exercise programs or activity level
- ◆ History of any prior or current complications or infections, particularly skin, foot, dental, and genitourinary infections
- ◆ Other medications
- ◆ Smoking and tobacco use, alcohol use, hypertension, obesity, dislipidemia, and any treatment for risk factors
- ◆ Family history and gestational history
- ◆ Lifestyle, psychosocial, cultural, educational, support, and economic factors that impact the management of diabetes

Physical Examination

The physical examination should include a number of areas, as stated below, to help address the higher risk that people with diabetes have for problems with the eyes, kidneys, feet, cardiovascular system, and nerves.

- ◆ Height and weight measurement
- ◆ Blood pressure
- ◆ Eye examination
- ◆ Mouth check
- ◆ Thyroid palpitation
- ◆ Cardiac evaluation
- ◆ Abdominal examination
- ◆ Foot examination
- ◆ Skin check
- ◆ Hand/finger exams

Laboratory Evaluation

The laboratory tests should include complete blood count (CBC), blood glucose, urine ketone, lipid profile, and any other tests appropriate for evaluation of the general medical condition. These tests should establish or validate the diagnosis of diabetes, determine the degree of glycemic control, and help define any associated risk factors or complications.

“Even though our program is still in its infancy, we can already see that more patients have met the standards for getting exams and tests, are working on exercise and weight loss, and have a better understanding of their disease and how to manage it.”

**Beverlee Gilmore
Caterpillar**

* Adapted from the American Diabetes Association with detail available at <http://journal.diabetes.org/FullText/Supplements/DiabetesCare>

TOOL 13: MANAGEMENT PLAN

The management plan should be developed as an individual approach of clinical and behavioral steps that include patient and family/support, with emphasis on patient self-management. Consideration should be given to the severity of the diabetes, the patient's schedule for work (especially if travel is involved) or school, demographics and social situation, cultural factors, food and exercise needs and ability, and any other health conditions. Elements of the program should include the following:

- ◆ Statement of goals for the short and longer term
- ◆ Information on medication
- ◆ Nutrition recommendations and planning with a dietitian experienced with diabetes management
- ◆ Lifestyle change recommendations, including exercise, smoking cessation, and education on how to achieve these changes
- ◆ Information on a clinical schedule for follow-up medical appointments, eye and foot exams, how to contact the physician and patient care team when necessary, and dental care
- ◆ Instructions on how to manage any other medical problems that coexist with the diabetes
- ◆ Monitoring instructions
- ◆ Education on the need for influenza and pneumococcal vaccination
- ◆ Information on dealing with the needs of people with diabetes in the workplace, while traveling, and in other situations
- ◆ Support groups
- ◆ Information for the family members
- ◆ Follow-up program steps

For more information about managing diabetes at the worksite, see www.diabetesatwork.org for some unique ideas.

Ongoing Care

The continuation of care is critical for every patient with diabetes. The patient's thoughts about the management plan and his or her progress should be reviewed with the patient care team, and any problems or issues should be discussed. Revisions to the management plan should be made based on the evaluation. The frequency of visits or follow up will depend on the specific patient's condition. The method of follow up—e-mail, phone, or actual office visits—should be determined as part of the ongoing care plan. Access to education classes, support groups for the patient or family, and other resources should also be included in the ongoing care plan.

WORKING WITH YOUR HEALTH PLAN

As employers consider how they are going to implement a diabetes management program, one of the first steps should be talking with your health plan (or plans) to determine what programs and services are available. Understanding what the health plan can provide under the current contract is the first step in your development process. As you begin discussing these issues with your health plan or plans, the following questions offer a good starting point:



- ◆ What programs are available through the health plan? For primary prevention? Secondary prevention? Tertiary prevention? Care management, including end of life care? (These terms are defined in the Glossary, found on page 59 of this Workbook.)
- ◆ What have the results of these programs been, both in terms of improved health and financial outcomes?
- ◆ What has been the employer role in the implementation of the programs for the highest degree of success?
- ◆ What experience does the health plan have with workers compensation and disability management?
- ◆ What is the range of programs that the health plan is willing to support?
- ◆ What resources might be available under the current contract?
- ◆ What tools can the health plan provide for the program?
- ◆ What can the health plan recommend for community resources?
- ◆ How can the health plan measure the results of the program?
- ◆ Are there additional costs to provide diabetes management services?

The health plan also can be a resource for supplying data that can be used in developing the business case to present to the management team. They also may have valuable resources for the program. The health plan may already have a number of activities in place to support improved detection and treatment of diabetes that could be highlighted to health plan members as part of the employer's consumer education program.

Health plan professionals engaged in the prevention and treatment of diabetes can add their knowledge and experience to the development of the employer program. The employer may also use measures reported by the health plan, such as HEDIS (Health Plan Employer and Data Information Set). The chart on the next page outlines the steps involved in working effectively with the health plan.

TOOL 14: STEPS TO CONSIDER WHEN WORKING WITH YOUR HEALTH PLAN*

Objectives	Actions	Anticipated Results
<p>Determine business need and resources and opportunities with health plan</p>	<p>Communicate overall health program goals with health plan(s)</p> <p>Identify internal resources, including occupational health, wellness programs, worksite education, etc.</p> <p>List barriers and constraints</p> <p>Work with health plan(s) to identify burden of disease based on available data</p> <p>Review current contractual provisions</p> <p>Examine health program participant communication options and sources for information</p>	<p>Alignment of corporate health goals with health plan services</p> <p>Frame the business case for the development of a program and outline the rationale</p> <p>Understand resources internally and externally for development of options for programs</p> <p>Understand current covered benefits and services as applicable to diabetes treatment and prevention, including health education</p> <p>Proceed with program development and implementation</p>
<p>Develop business case for diabetes management program</p>	<p>Achieve corporate approvals for the development of a program for diabetes</p>	<p>Collaboration with health plan defined to achieve program goals and objectives</p>
<p>Outline program with health plan</p>	<p>Identify key health plan staff who will work with the corporation</p> <p>Define the program goals and objectives</p> <p>Identify the population for potential participation</p> <p>Develop the roles and responsibilities for the program implementation</p> <p>Determine the measures for the program and how results will be shared</p> <p>Agree on an approach to cost-sharing, risk-sharing, and benefit sharing for the program stakeholders</p>	<p>Clarification of roles and responsibilities to make the best use of resources to achieve results</p> <p>Clearly define desired outcomes to develop a program that can achieve results and interim as well as longer term measures</p>

* Adapted from Building Partnerships between Mature Worksite Health Promotion Programs and Managed Care, by Nico Pronk, PhD, HealthPartners

Working with Health Plans: Additional Resources

Request for Information Sample

The National Business Coalition on Health (NBCH) has available on its Web site, at www.nbch.org, a Request for Information (RFI) that was developed by several of its members to help lessen the energy and expense for purchasers, plans, and providers in the development, response verification, and analysis of plan-specific information collected in Request for Information (RFIs) and Request for Proposals (RFPs) for health services. Section N of the RFI is devoted to Disease Management. You may want to reference this tool as you consider the development and evaluation of your diabetes program.

Diabetes Services Contract Language Sample

George Washington University Center for Health Services Research and Policy, under a cooperative agreement with the Centers for Disease Control and Prevention, has prepared a sample service agreement or contract language that you may want to reference as a tool to assist in the development of the diabetes program. Service areas included are preventive services for assessment and diagnosis, medical management services, laboratory services, pharmaceuticals, devices, and supplies. This contract language may be found at www.gwu.edu/~chsrp. Look Under "Sample Purchasing Specifications."

Coverage for Diabetes

The following list indicates a typical scope of coverage by a health plan for a range of needs for medical management services for persons with diabetes:

- ◆ Preventive health exams
- ◆ Laboratory tests, including A1C, lipid profile, urinalysis, and others as necessary
- ◆ Pharmaceuticals, including insulin (or prescribed oral agents instead of insulin), blood glucose monitor and test strips, ketone strips, and lancets and lancet devices
- ◆ Self-management training and education
- ◆ Assessments for nutritional status, medical nutritional therapy, and education
- ◆ Eye exams
- ◆ Foot exams
- ◆ Office visits for monitoring health status
- ◆ Referrals and consultations with specialists and subspecialists
- ◆ Case management services

Additional coverage may be available for the following, depending on the health plan design or the disease management program:

- ◆ Vaccine for influenza and pneumococcus vaccine
- ◆ Devices for self-administration of insulin
- ◆ Urine reading glucose strips
- ◆ Other pharmaceutical self-testing items
- ◆ Obesity treatment
- ◆ Smoking cessation services
- ◆ Exercise training if necessary
- ◆ Therapeutic footwear if prescribed

WORKING WITH YOUR PHARMACY BENEFITS MANAGER

*W*orking with your PBM on your diabetes management program provides access to one specific piece of information—an ongoing record of those individuals who are taking medication for diabetes on a regular basis. The PBM has pharmaceutical data for every employee, dependent, and retiree who receive the pharmacy health benefit. Having this information means that newly diagnosed individuals who have been given a medication can be identified immediately and enrolled in the diabetes management program. This individual can then be monitored for compliance and adherence to successfully proven drug therapy regimens.

In addition to monitoring for compliance, the PBM offers its services to all participants. These services usually included targeted educational materials with information about diet, exercise, and complications that can result from diabetes. Also, participants usually have access to a toll-free, 24-hour information line run by qualified health care professionals.

Many employers turn to their PBMs for the experience and expertise they offer. “When we put out our RFI [request for information], says Leanne Fosbre, benefits manager with AT&T, “I expected that we would go with one of our medical vendors. But as it turned out, our PBM manager offered us the greatest population reach, program consistency, and program maturity.”

PBMs are used to working with a wide range of people from all sectors and know how to communicate effectively with these diverse groups. Furthermore, the PBM knows how to develop the program and track its progress. Many employers have found their PBM to be sensitive to issues important to employees, such as the need for confidentiality and the importance of communicating respectfully and effectively with program participants. Employers also say that the materials produced by the PBM are professionally done and easily understood by the diverse populations found in many workforces.

Some PBMs offer a portfolio of programs on many disease states, including diabetes, asthma, cardiovascular disease, and depression. Many employers pilot several chronic disease management programs simultaneously because their population can benefit from an array of programs. In those cases, the employer also recognizes the importance of consumer education and empowerment and sees the synergistic effect of combining chronic disease management programs.

WORKING WITH A DISEASE MANAGEMENT COMPANY

Most disease management companies had their origins as either case management organizations or organizations started for utilization review. Case managers, as defined 20 years ago, had the job of working with someone who, in many cases had suffered a catastrophic injury at the workplace. Case managers, who were often nurses, had the task of assuring compliance to treatment plans including medication and physical therapy, and whatever else was necessary to allow the employee to get better and resume their normal life.

Utilization review companies were designed for a different purpose. Their job was to manage authorization and precertification for hospitalization. These companies were in the unique position of having access to claims data, which provided key information about the patients whose cases they reviewed.

 From origins such as these, disease management companies have emerged as key players in the development and management of diabetes management programs. Most disease management companies have some features in common. For example, most rely on a health care professional, often a nurse, to work one-on-one with participants. Also, most companies supply educational information on diet, exercise, and in the case of diabetes

programs monitoring blood glucose levels. But beyond that, disease management companies vary widely. Unlike PBMs, all of which have as their primary function to manage the pharmacy benefits, disease management companies are operating from different philosophical starting points. When evaluating these companies, be prepared to review information about each one carefully and thoughtfully using the criteria in the section of the Workbook entitled *Evaluating Your Diabetes Management Program*, found on pages 30–31. The key is to find a philosophy and approach that matches your own and effectively complements your current health care investments.

Obviously, it would be impossible to profile each kind of disease management company in this Workbook. But to give you a sense of the choices available, on the next page are profiles of two different kinds of disease management companies. One has a focus on lifestyle management, while the other emphasizes integrated patient care. These profiles give you a taste of the variety currently available in the marketplace.

“The most valuable lesson we’ve learned to date is the use of one-on-one counseling, mostly face-to-face with some phone, is the critical element needed to encourage people to participate and the most effective way to convey information.”

**Gloria Hardegree
Southern Company**

PROFILE 1: LIFESTYLE MANAGEMENT

Such companies believe that the key to controlling a chronic condition such as diabetes is making lifestyle healthy choices. This often involves making significant changes in daily activities, such as exercising, eating healthful foods, drinking in moderation, and not smoking. As we all know, this is usually easier said than done. To help people overcome the barriers that prevent them from changing, a disease management company with this philosophy may begin as follows:

1. Use current tools available to assess readiness to change.
2. Use standardized tests to measure each individual's learning style. For example, some people learn by reading materials, while others learn by engaging in discussions on a particular subject.
3. Through interviews and surveys, determine the level of support an individual has at home and at work.

The company utilizes information to develop an individualized treatment plan for each participant in the program. Typically, each person works closely with one health care professional, and the two usually meet between six and ten times a year, depending on the design of the program. At the onset, the participant and his or her health care professional, often called a health advisor, develop a goal-oriented behavior change plan. The goals are realistic, attainable, and can be reached in a pre-determined time frame. As each goal is reached, a new goal is added. In this way, each participant can work toward lifestyle changes in a way that is comfortable and manageable, with some success virtually guaranteed.

PROFILE 2: INTEGRATED PATIENT CARE

Companies emphasizing integrated patient care see patients from a holistic point of view. They try to learn about all the patient's medical problems and work to manage all of them simultaneously. For example, an individual with diabetes may also have high blood pressure and high cholesterol, increasing that individual's risk for heart disease as well as for complications related to diabetes. For such individuals, a health care professional would work to develop a treatment plan that addresses all of their physical needs. In addition to the lifestyle changes addressed in the previous model, an individualized plan would be developed to address each of these concerns. For example, dietary intervention for an individual with diabetes and elevated cholesterol would include instructions on low-fat foods in addition to the diabetic dietary instructions. The treatment plan will likely include as many one-on-one sessions as are necessary, access to educational materials on all appropriate conditions, and the necessary time spent ensuring that the patient understands his or her condition (or conditions) and the steps needed to be taken to control the problems.



Disease management companies such as this one often work with people with acute and chronic medical problems. They are committed to doing whatever needs to be done to ensure that their clients get the attention and care that they need before an adverse event occurs.

These companies typically provide a full continuum of services, from wellness and health promotion to chronic condition management. If your business has significant numbers of people with diabetes and related conditions, you might want to look for a disease management company like the one described here. For additional information on other vendors who administer diabetes management programs, see the sections entitled *Working with Your Pharmacy Benefits Manager* (page 45) and *Working with Your Health Plan* (pages 41–43).

The chart below compares the three types of programs available in terms of identification of participants, design and implementation of the program, and its overall impact.

TOOL 15: WORKING WITH HEALTH PLANS, PHARMACY BENEFIT MANAGEMENT PROGRAMS, AND DISEASE MANAGEMENT VENDORS: COMPARING THE OPTIONS

ISSUE	HEALTH PLAN	PBM	DM
Identification of population for program participation	Access to encounter, laboratory, diagnostic, and pharmacy data (if included in coverage) for covered population.	Access to pharmacy data.	Access to data provided by employer through health plan or HRA information, or self-identification by employee.
	Have access to a broad set of data, which could facilitate identification of people eligible for the program.	Use primarily pharmacy data to identify those eligible for the program.	Use HRA data and other information the employer has access to for employee identification.
Intervention Design and Implementation	If using more than one health plan, the programs may vary.	Uniformity of program for all employees.	Uniformity of program for all employees.
	Connected with network of providers that employees use.	No direct connection with provider network.	No direct connection with provider network.
	May already provide case management services.	PBMs offer case management services.	DMs offer case management services.
	Can integrate the needs of persons with other co-morbidities with other health coverage and disease management programs.	Can integrate the needs of persons with other co-morbidities who are taking medication with other health coverage and disease management programs.	As data are available, can integrate the needs of persons with other co-morbidities with other health coverage and disease management programs.
Impact	MCO may already be reporting HEDIS measures and can capture disease-related global expense changes.	Can report on pharmacy-related activities such as compliance.	Can report on number of employees involved, satisfaction with program, and self-reported work days gained.
	Short- term measures, such as changes in ER use and hospital admissions.	Changes in medication regimens, including increased compliance or changes in therapy.	Changes in self-reported health status, improved attendance, and improved knowledge about condition.

ACCREDITATION

This section describes the progress to date on accreditation of organizations performing disease management functions by two leading groups: URAC and NCQA. Accreditation validates that organizations meet national standards and have the processes and structures necessary to provide quality health care services. Employers look for accreditation as evidence that companies have undergone review in key operational areas by an independent oversight entity.

The Work of URAC

URAC is now developing disease management (DM) standards as one of its modular accreditation programs. The disease management standards will incorporate URAC's Core Standards, the building block of all URAC accreditation programs. The Core Standards establish benchmarks for staffing, operations, quality management, and patient protection, elements common to all types of health care organizations. The Core Standards will be supplemented by very specific standards indicative of an effective and efficient DM program.

URAC's DM standards are being developed by a national advisory committee comprised of employer representatives, health care organizations, DM programs and others. The DM module will address issues such as population management, participant rights and responsibilities, and program design. URAC's DM standards will apply to:

- ◆ Stand-alone disease management vendors
- ◆ Integrated UM, CM and DM organizations
- ◆ DM programs within organized health systems.

The standards are not disease specific, but will require organizations to base program objectives on nationally recognized standards of care, such as those of the American Diabetes Association.

The URAC DM standards are expected to be released in the spring of 2002; a draft for public comment will be circulated in fall, 2001. The standards are built on the following key concepts:

- ◆ Evidence-based practice: disease management organizations will be expected to adopt nationally recognized practice guidelines and to employ an

evidence based approach to all elements of the DM program, including patient education.

- ◆ Population based approach: URAC's standards specify how DM programs should identify participants in the eligible population, conduct risk assessments, stratify the population for targeted interventions, and report on program effectiveness. Programs that enroll participants based on referral will manage the population of referred patients using the same criteria.
- ◆ Performance measurement and improvement: URAC's standards emphasize measurement and reporting of program outcomes at periodic intervals. The standards will specify valid statistical approaches to measurement. URAC will not mandate standard performance measures until we have achieved a better understanding of how to compare outcomes across a wide variety of organizations with variable enrollment criteria.
- ◆ Patient empowerment and shared decisionmaking: The URAC standards are based on a model that promotes patient education, improved self-management, and shared decision-making using educational tools. DM programs will be able to meet URAC's standards by using a variety of techniques to engage patients, including telephonic contact, web-based education, in-person education, or other methods that have been demonstrated to be effective in the targeted population.
- ◆ Collaborative relationships with providers: URAC's DM standards require that providers be involved in program development and implementation, and that DM programs demonstrate collaborative practices in communicating with and co-managing patients with treating providers. The standards also require DM programs to track, manage, and report provider complaints and grievances.

Other concepts addressed in the standards include access to services, HIPAA compliance, and management of co-morbidities. Additional information on the URAC DM standards will be available in late fall, 2001, when the first draft of the standards has been completed. Information about all of URAC's programs is available on the company web site at www.urac.org.

The Work of NCQA

- ◆ Beginning in January 2002, NCQA will offer DM Accreditation for its final complete set of Disease Management requirements and DM Certification for subsets of the requirements.

In this program, NCQA will address the growing number of organizations and programs within organizations designed to improve the care of people with ongoing health care needs and to improve outcomes for those people.

Organizations Eligible for Accreditation

DM Accreditation and Certification evaluate the functions associated with DM rather than any particular type of organization. This differs from other NCQA Accreditation programs. Varied types of organizations perform the functions covered in the requirements in this document, and all are eligible for NCQA DM Accreditation or Certification.

The types of eligible entities include but are not limited to:

- ◆ DM organizations
- ◆ Population management or case management organizations
- ◆ Health plans (including health maintenance organizations, preferred provider organizations, managed behavioral health care organizations, and others)
- ◆ Hospitals
- ◆ Physician organizations and physician groups
- ◆ Pharmacy benefit management companies
- ◆ Pharmaceutical companies.

Components of Disease Management Accreditation Program

Following are the categories of requirements which are due to be finalized by December 15, 2001:

Program Content Requirements

- ◆ Using evidence-based guidelines or standards of care in the development of program content for patients and practitioners
- ◆ Ensuring that all content is consistent with adopted guidelines
- ◆ Informing practitioners about current guidelines and how program recommendations relate to guidelines and cited evidence
- ◆ Testing content with consumers for usefulness.

Patient Service Requirements

- ◆ Providing information, reminders, coaching as appropriate, and other interventions as indicated by data about the patient
- ◆ Measuring the rates of patient participation
- ◆ Giving patients feedback on progress as appropriate
- ◆ Stating a commitment to patients' rights, including the right to opt out of the program and expectations of patients' responsibilities.

Practitioner Service Requirements

- ◆ Supporting practitioners' decisions with evidence-based recommendations on care of chronic conditions and reminders about individual patients where appropriate
- ◆ Providing feedback on the practitioner's treatment compared to benchmarks
- ◆ Encouraging practitioners to work with the program to coordinate patients' care.

Clinical Systems Requirements

- ◆ Using available data to identify potential program participants and to stratify them for assignment to different levels of intensity in patient services
- ◆ Coordinating information for all parts of the system to promote better self-management—from patients, sponsoring organization, the DM organization itself, and practitioners
- ◆ Ensuring privacy and confidentiality

Measurement and Quality Improvement Requirements

Measurement includes initial requirements for measuring and taking action on processes of care, patient experience, and other aspects of disease management. Because of the differences in operation and data availability among organizations that perform DM, NCQA's DM Accreditation does not require the use of performance measures that are comparable from organization to organization. Instead, the measurement requirements are for internal tracking and quality improvement, and include the principles of population-based measurement. Comparable and reportable measures will be added in later versions of the program, when comparable data are available.

Applying at least two measurements of quality (chosen by the organization) to each condition managed

- ◆ Including all patients for whom the organization has disease management responsibility in the denominators for measures
- ◆ Processing feedback from patients and practitioners to assess their experience of DM programs for quality improvement
- ◆ Analyzing all measurements and data and using findings for improvement

Structural Components and Organizational Coordination Requirements

- ◆ Ensuring convenient access to the organization for patients and practitioners
- ◆ Employing and training personnel with the qualifications for their duties
- ◆ Disclosing any business relationships and marketing activities
- ◆ Using a systems approach to ensure patient safety
- ◆ Handling complaints from patients or practitioners
- ◆ Integrating services with the sponsoring organization
- ◆ Ensuring that delegated functions meet the same standards

Relationship between NCQA MCO Accreditation and DM Accreditation

MCO Accreditation and DM Accreditation and Certification are related in three important ways, which are listed below.

- ◆ MCOs that contract with an NCQA-Accredited or NCQA-Certified entity for DM will receive automatic credit for relevant parts of the MCO standards.
- ◆ MCOs that wish to receive DM Accreditation in addition to their existing MCO Accreditation will receive credit for DM standards that are covered in MCO Accreditation.
- ◆ NCQA will, for the 2003 standards year, modify its existing MCO QI standards to align them with DM standards, but will not require the same level of intensity of DM activity that is required in DM Accreditation.

Developing a diabetes management program for employees represents a major commitment on the part of employers and employees. At every stage of the process—from gathering data to making the business case to determining program goals to designing and evaluating the program—much work needs to be done. Once the program is up and running, employers must continue to work to ensure employee participation and involvement. Yet the investment is well worth the time and energy. The end result will be a significant return on your investment—long-term savings on your health benefits as well as a more productive workforce.

This Workbook has presented you with a blueprint for implementing a diabetes management program for your employees. The steps needed to follow this blueprint have been presented in a clear, methodical way. By becoming familiar with these steps, employers are in a better position to assess whether a diabetes management program is a tool that would help improve both the health and productivity of their employees.

As rising costs of health care continue to be a major concern for both employers and employees, it is even more important to consider any tools that may help ease the burden on all parties. Diabetes management may be such a tool for your company. We hope that the information provided in this Workbook has enabled you to better make this determination.

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6. The Diabetes Control and Complications Trial Research Group. The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *N Engl J Med* 329:977-986, 1993.
7. Excerpts from the Finnish study can be found at <http://www.ced.gov/diabetes/news/finnish.htm>
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13. The discussion of how to measure outcomes is based on a talk given at the MHCA 2001 Spring Conference by David Eddy, MD, PhD, Senior Advisor for Health Policy and Management at Kaiser Permanente Southern California.
14. Testa proved that quality of life could be improved in a shorter time frame than 2 years.

APPENDIX A: GLOSSARY OF TERMS

The following terms have been used throughout the Workbook. Here are brief definitions of these key terms.

- 1. Blood sugar, or blood glucose.** The amount of sugar found in the blood.
- 2. Diabetes.** A condition characterized by the pancreas' inability to produce enough insulin to control the amount of sugar, or glucose, in the blood. There are three main types of diabetes. Type 1 is usually diagnosed before the age of 30; people with this condition do not produce any insulin and are dependent on taking insulin medication to control their blood sugar. Type 2 is usually diagnosed after the age of 40; people with this condition are producing insufficient amounts of insulin to control their blood sugar. Usually, they can control their diabetes through diet and oral diabetes medications. Gestational diabetes occurs during pregnancy because of insufficient production of insulin or inability to use the insulin produced properly. Women with gestational diabetes are at an increased risk for developing type 2 diabetes later in life.
- 3. A1C.** A simple blood test used to assess average amount of sugar (glucose) in the blood over the past two to three months.
- 4. HEDIS.** Stands for Health Plan Employer Data and Information Set. It is a quality and utilization performance data set developed by NCQA and is an integral part of the continuous process of identifying problems in health care delivery, testing solutions, and monitoring those solutions to determine if they are effective. HEDIS 2000 includes a set of six diabetes process measures upon which participating health plans will be evaluated.
- 5. Performance measurement.** Changes in outcomes (process, health, or financial) linked to specified standards of care developed from an organization or from HEDIS.
- 6. Presenteeism.** The overall productivity of employees while at the workplace.
- 7. Prevalence.** The estimated number of people in a given population with a condition, such as diabetes.
- 8. Prevention.** Ways to stop a condition from starting and progressing. Primary prevention refers to targeting the general population who is not showing signs of a particular problem as well as people who are at risk for a given condition. Secondary prevention refers to targeting individuals who are currently diagnosed with a given condition to take measures to slow down the progression of the disease to prevent the condition from worsening. Tertiary prevention refers to working with a given population who is already seriously ill with a given condition to help slow the progression of the disease and prevent complications.
- 9. Return on investment (ROI).** Additional profits contributed either directly or indirectly by an investment project.
- 10. Trend information.** Group or aggregate data that measures change in a number of health indicators over a period of time.

APPENDIX B: ADDITIONAL RESOURCES

This list includes studies, publications, and organizations that may be helpful to you as you work to develop your diabetes management program.

Studies and Publications

American Diabetes Association. Diabetes facts and figures, 1997. Virginia: American Diabetes Association, 1998. <http://www.diabetes.org/ada/c20f.asp>

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Pronk, Nicolaas, PhD, and O'Connor, Patrick, MD, MPH, "Systems Approach to Population Health Improvement." *Journal of Ambulatory Care Management* 20(4): 24-31, 1997.

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The Third National Health and Examination Survey, 1988-1994 (NHANES III Data).

Tuomilehto, J., Lindstrom, J., Eriksson, J.G. et al. Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance. *N Engl J Med* 344 (18): 1343-50, 2001.

Organizations

1. American Diabetes Association, 1660 Duke Street, Alexandria, VA 22314; (800) 232-3472; <http://www.diabetes.org>
2. Centers for Disease Control and Prevention, [Address TK]; (877) CDC-DIAB; <http://www.cdc.gov/diabetes/>
3. National Diabetes Education Program (NDEP), Joanne Gallivan, director, NDEP (NIH), National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health; (301) 496-3583; www.diabetesatwork.org, Faye L. Wong, direction, NDEP (CDC), Division of Diabetes Translation, Centers for Disease Control and Prevention; (770) 488-5037; <http://www.cdc.gov/diabetes/>
4. The Juvenile Diabetes Research Foundation; www.jdg.org.

Taking on Diabetes program office, 1129 20th Street, NW, Suite 600, Washington, D.C. 20036; (202) 778-3222; <http://TakingonDiabetes.com>

APPENDIX C: TOOLS FOR DEVELOPING AND IMPLEMENTING A DIABETES MANAGEMENT PROGRAM

The tools in this section have either been found in the Workbook or referenced. These sheets can be copied and used throughout the implementation process.

TOOL 1: CHECKLIST FOR EMPLOYERS

- Who makes up your workforce? If the majority of your workers are over 45 and are of ethnic heritage—African American, Hispanic, Native American, or Asian—your employees may have an increased risk of developing diabetes.
- Is your workforce stable or transient? Many companies feel that the longer their employees stay with the company, the greater the incentive to make a long-term investment in their health and well-being. Alternatively, if your workforce is more transient, you may want to consider whether there are incentives to create a short-term, focused program.
- Are you bearing much of the cost for your employees' health benefits? If so, it may be in your best interest financially to try to keep your workforce healthy. Keep in mind that the basic elements of a diabetes prevention program (physical activity, nutrition, and smoking cessation) also are the basic elements of other chronic condition programs.
- To the best of your knowledge, does diabetes and its many complications, including cardiovascular disease, have an effect on health care costs and the productivity of your workers?
- Do you know what, if any, diabetes education is covered by your company's self-insured health plans?
- Does your company, through its self-insured health plans or pharmacy benefits plans, pay for diabetes supplies, such as blood glucose monitoring devices?

If the answer to at least two of these questions was “yes,” you may find it useful to estimate the health risk of your employees for diabetes and the costs associated with this disease. In order to estimate the potential prevalence rates of diabetes in your company and costs associated with them, you will need to know the average prevalence rates of your employee population either as a whole group or by gender, age, or ethnic origin.

TOOL 2: DETERMINING THE PREVALENCE RATE

The Third National Health and Nutrition Examination Survey, 1988-1994 (NHANES III Data), is one of several sources for prevalence of diabetes in the United States. NHANES III is a representative sample of more than 18,000 adults surveyed within the general population to determine the percentage with a known diagnosis of diabetes. Use the prevalence rates listed in the NHANES III Data chart below to calculate the number of employees between 20 and 64 who are at risk for diabetes.

Prevalence of Diabetes by Age and Sex (NHANES III data)

Sex	PERCENTAGE BY AGE				General Population
	20-39 Years Old	40-49 Years Old	50-59 Years Old	60-74 Years Old	
Both Sexes	1.1%	3.9%	8.0%	12.6%	5.9%
Men	1.1%	3.3%	9.6%	11.8%	5.9%
Women	1.1%	4.4%	6.6%	12.8%	5.9%

Special Populations

Some populations have a higher incidence of diabetes. These populations include African American, Mexican American, Asian/Pacific Islander, and Native American. Below are the available prevalence percentages for Non-Hispanic White, Non-Hispanic Black, and Mexican American men and women.

Prevalence of Diabetes by Special Population

Race/Sex	PERCENTAGE BY AGE			
	20-39 Years Old	40-49 Years Old	50-59 Years Old	60-74 Years Old
Non-Hispanic White				
Both Sexes	1.0%	3.3%	7.5%	11.3%
Men	1.2%	3.0%	9.9%	10.9%
Women	0.9%	3.5%	5.3%	11.7%
Non-Hispanic Black				
Both Sexes	1.6%	6.2%	13.8%	20.9%
Men	1.6%	5.5%	13.0%	16.8%
Women	1.6%	6.7%	14.5%	23.9%
Mexican American				
Both Sexes	0.8%	7.3%	16.0%	24.4%
Men	0.5%	5.5%	15.5%	18.8%
Women	1.2%	9.2%	16.5%	29.0%

TOOL 3: ESTIMATED HEALTH CARE COSTS FOR PEOPLE WITH DIABETES

Once you have found the estimated number of employees at risk for diabetes you can then calculate the costs associated with these risks. According to the ADA, estimated medical costs (including diabetes related and non-diabetes-related costs) for a person with diabetes is \$10,071 each year, while the medical costs for a person without diabetes or other chronic condition is \$2,669.

$$\text{Number of Employees At Risk for Diabetes} \times \$10,071 = \text{(A)}$$

A = Projected Health Costs for Employees At Risk for Diabetes

OR

If you have calculated the number of employees at risk for diabetes by age, gender and/or ethnic backgrounds multiply the total for each category by \$10,071 and add them together:

$$\text{Category 1} \times \$10,071 + \text{Category 2} \times \$10,071 + \text{Category 3} \times \$10,071 = \text{(A)}$$

A = Projected Health Costs for Employees At Risk for Diabetes

Total Number of Employees

$$\text{Number of Employees At Risk for Diabetes} -$$

$$B = \text{Estimated Number of employees w/out diabetes} = \text{(B)}$$

$$\text{(B)} \times \$2,669.00 = \text{(C)}$$

C = Projected Health Costs for Employees w/out Diabetes

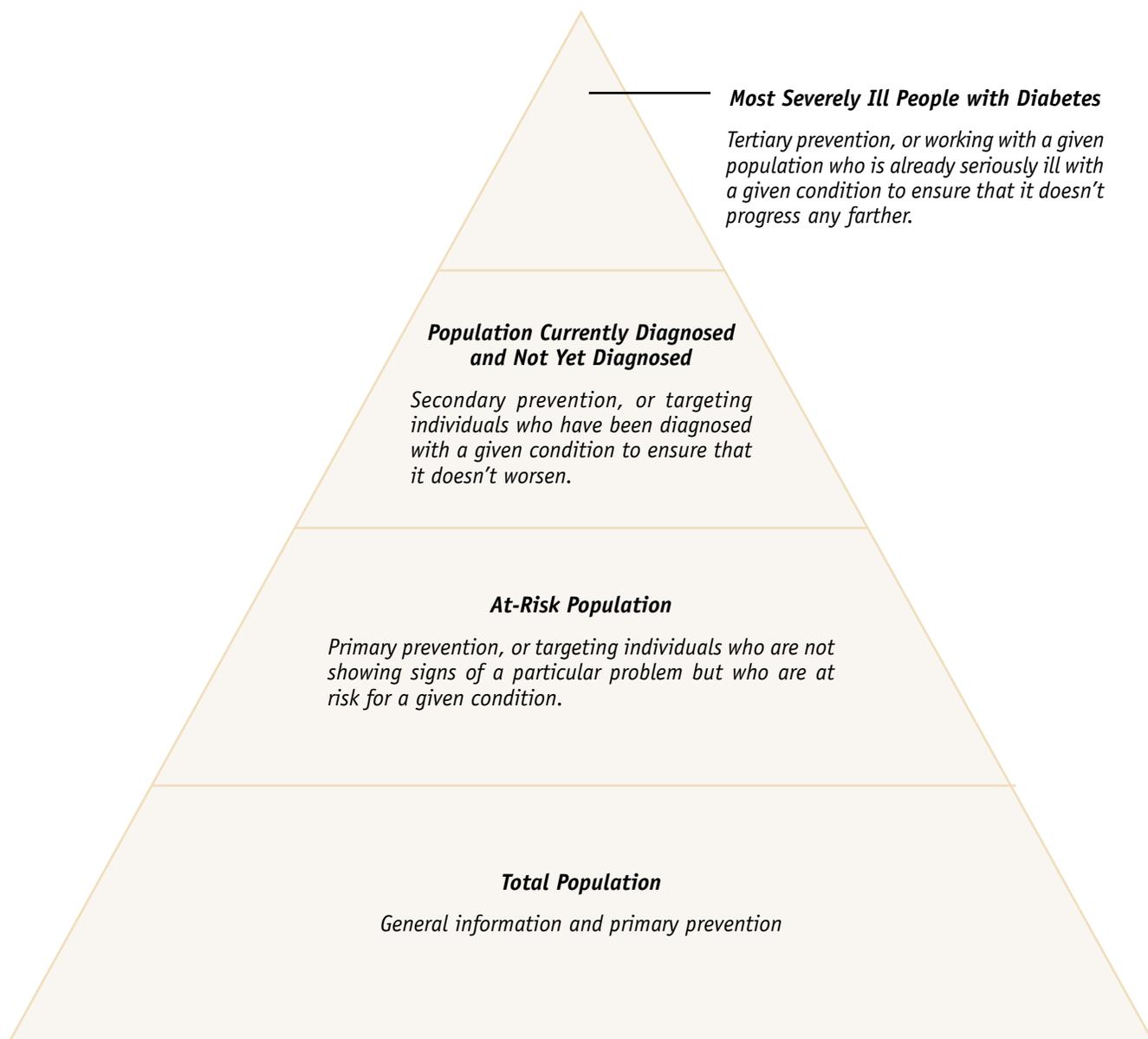
$$\text{(A)} - \text{(C)} = \text{(D)}$$

D = Additional Estimated Annual Health Costs for Employees with Diabetes

By comparing the difference in costs for people with diabetes with those for people without diabetes or other chronic conditions, you can determine how much additional money you are paying for your employees with diabetes. If you are paying a significant amount more, it may be worth investing in a diabetes management program. The cost of implementing such a program is probably similar to what you are paying currently, and there is a strong possibility that costs would decrease over time with better diabetes management. So, over the long term, a diabetes management offers a sound return on the investment.

The diagram summarizes how appropriate populations are identified for diabetes management programs.

TOOL 4: POPULATION IDENTIFICATION FOR DIABETES MANAGEMENT PROGRAMS



This diagram helps define the population that is targeted within the diabetes management program and the level of services and information within the stratifications. Each subpopulation has different needs and would benefit from different kinds of services. The key is to decide which population or populations you want to target and to match the services for that group or groups.

The chart below summarizes the seven steps involved in establishing a diabetes management program.

TOOL 5: SUMMARY OF STEPS NEEDED TO ESTABLISH A DIABETES MANAGEMENT PROGRAM

1.	Set Goals
2.	Assess Willingness to Participate
3.	Assess Health Risk and Health Status
4.	Assess Readiness to Change
5.	Provide Health Interventions
6.	Evaluate
7.	Modify Goals

Specific Components of the Diabetes Management Program

While there is some variation in the specific components of a diabetes management program, most include those listed in the following section. These components conform to guidelines established by the American Diabetes Association (ADA), which are listed below.

TOOL 6: GUIDELINES ESTABLISHED BY THE ADA

Criteria for Diagnosis
Key Tests and Exams
Nutritional Goals
Recommendations for Glycemic Control
Lipid and Blood Pressure Goals
Therapy
Determining Body Mass Index

TOOL 7: ADA STANDARDS OF CARE

- ◆ Medication management
- ◆ Individualized nutrition recommendations and instructions, preferably by a registered dietician familiar with the components of diabetes medical nutrition therapy
- ◆ Recommendations for appropriate lifestyle changes (e.g., exercise, smoking cessation)
- ◆ Patient and family education for self-management
- ◆ Monitoring instructions for testing and recording
- ◆ Annual comprehensive dilated eye and visual examinations by an experienced eye care professional for all patients age 10 years and older who have had diabetes 3-5 years, all patients diagnosed after age 30 years, and any patient with visual symptoms and/or abnormalities
- ◆ Consultation of podiatry services as indicated (foot checks and sensory foot exams)
- ◆ Agreement on continuing support, follow-up, and return appointments
- ◆ Instructions on when and how to contact the physician or other members of the health care team when the patient has not been able to solve problems and when management of acute problems is required
- ◆ For women of childbearing age, discussion of contraception and emphasis on the necessity of optimal blood glucose control before conception and during pregnancy
- ◆ Dental care and hygiene

TOOL 8: OUTCOMES TO MEASURE

Clinical Outcomes

- ◆ Rate of hemoglobin A1C evaluation
- ◆ Percent with A1C level within normal control
- ◆ Rate of retinal examination
- ◆ Rate of cholesterol screening
- ◆ Rate of foot exams
- ◆ Identification of co-morbidities
- ◆ Increased number of diagnosed diabetics
- ◆ Monitoring blood pressure

Cost Outcomes

- ◆ Pharmacy costs
- ◆ Cost avoidance from reductions in the number of emergency room visits or hospitalizations due to directly related diabetic problems and cost savings from a reduction of specialty physician visits. There may, however, be an increase in visits to the primary care physician; this is a good sign because it indicates that the patient is monitoring his or her condition more closely. While there may be a slight increase in costs from more regular visits to the physician, better health practices will lead to cost savings in the long run.
- ◆ Reductions in worker absence rates or other measures of productivity improvements.¹²

Participation and Satisfaction

- ◆ Number of program participants
- ◆ Level of satisfaction for employees and/or providers for the program
- ◆ Increased understanding of diabetes and self-management
- ◆ Movement within the stages of change spectrum

TOOL 9: SUMMARY CHECKLIST

The checklist below is a summary of the different factors that need to be considered in developing and implementing a diabetes management program.

Diabetes Management Program Checklist

Participant Recruitment

- Identification of participants to match program goals
- Review method to develop target population
- Stratification of participants
- Information available for identification of participants
- Rational approach to recruitment
- Demonstrates respect for individual confidentiality
- Link to provider in participant recruitment
- Integration information with other programs

Clinical Assessment and Patient Care Team

- Use of clinical guidelines, such as those from the American Diabetes Association
- Evidence-based information for clinical care
- Ability to customize management and support plan needs
- Assessment of risk factors
- Inclusion of experienced health professionals including nutritionists and health educators, appropriate specialists, etc.
- Identification of co-morbidities
- Screening for depression
- Assessment of readiness to change
- Coordination with other services and information
- Monitoring by an appropriately trained health care provider

Program Suitability with Overall Health Program Goals for Employer

- Worksite health promotion objectives
- Employee education about prevalent health conditions
- Self-help tools for consumers
- Integration with health risk appraisal or other programs (wellness, fitness, EAP)
- Partnership with health plan

Self-Management Education and Plan

- Identification of needs and readiness to change
- Identification of resources
- Nutritional education and plan
- Physical activity
- Medication management and monitoring
- Monitoring glucose levels
- Prevention
- Goal setting
- Psychosocial adjustment
- Special needs and complications
- Includes patient and family in development of management plan

Evaluation

- Basis for evaluation and application for program modification
- Decision-making and future directions

TOOL 10: SUMMARY OF EVALUATION APPROACHES

Consider using one of the following approaches to the Evaluation component of your program.

1.	Using a HRA questionnaire
2.	Establishing performance guarantees
3.	Using goal-setting strategies
4.	Measuring participant satisfaction
5.	Using data from the pharmacy benefits manager (PBM)
6.	Using medical claims data
7.	Designing your own study

Described below are the aspects of care from the Consensus Statement compared with Health Plan Employer Data and Information Set (HEDIS) created by NCQA that are submitted by many health plans:

TOOL 11: COMPARING THE CONSENSUS STATEMENT WITH HEDIS

Aspect of Care	Consensus Measures	HEDIS Measure*
A1C Management	A1C tested at least annually	Comprehensive Diabetes Care: One A1C test during measurement year.
	A1C poorly controlled (>9.5%)	Comprehensive Diabetes Care: A1C poorly controlled (>9.5%) measured by evaluating the most recent level taken during measurement year. If no test is documented, the level is considered to be >9.5%.
Lipid Management	Lipid testing at least annually	Comprehensive Diabetes Care: LDL-C Screening: Test performed in measurement year or the year before.
	Lipid levels <130 mg/dL controlled**	Comprehensive Diabetes Care: LDL-C controlled: Most recent LDL-C level taken in the measurement year or the year before is <130 mg/dL.
Urine Protein Testing	Testing for microalbuminuria at least annually (every two years for low-risk patients)	Comprehensive Diabetes Care: Monitoring for nephropathy: Test for microalbuminuria in the measurement year. This test can be performed in the prior year for low-risk patients (e.g., those not prescribed insulin in the measurement year; A1C test is <8.0, or negative test result was found in the prior year).
Eye Examination	Screening examinations for diabetic retinopathy at least annually (every two years for low-risk patients)	Comprehensive Diabetes Care. Eye exam performed in the measurement year. This test can be performed in the year prior for low-risk patients (e.g., those not prescribed insulin in the measurement year; A1C test is <8.0, or eye care exam in measurement year showed no evidence of retinopathy).
Influenza Immunization	Influenza immunization status, eligible patients	Flu Shots for Older Adults: Vaccination during the measurement year for Medicare members who reported having the immunization through a patient survey.
Foot Examination	Foot exam at least annually	NA
Blood Pressure Management	Blood pressure read at office visit	NA
	Control of blood pressure level (< 140/90mm/Hg)	Controlling High Blood Pressure: Blood pressure controlled (<=140/90 mm Hg) as noted from most recent visit during the measurement year. If no blood pressure is recorded during the year, the BP is out of control.
Office visits	Two or more office visits per year	NA
		Pneumonia vaccination (in development)
		Activities of daily living (NA)
		Patient satisfaction (access)
		Advising Smokers to Quit: Current smokers or recent quitters who have been advised to quit smoking by the practitioner during the measurement year.

* References for HEDIS are taken from the HEDIS 2000 Technical Specifications. The age ranges for measures are as follows: For comprehensive diabetes care, the eligible population is those persons aged 18-75 and diagnosed with Type 1 or Type 2 diabetes; for flu shots for older adults, the population measured is 65 years and older; for controlled high blood pressure, the age group is those individuals between the ages of 46 and 85 with a confirmed diagnosis of hypertension; for smokers or recent quitters aged 18 years and older as of December 31 of the measurement year.

** ADA recently adopted cholesterol guidelines released by the National Cholesterol Education Program (NCEP) and recommends the following: The primary goal of therapy for adult patients with diabetes is to lower LDL cholesterol to < 100 mg/dL. Revision to Consensus Measure is under consideration.

TOOL 12: QUESTIONS TO ASK WHEN SELECTING AND WORKING WITH HEALTH CARE PROVIDERS

Questions to Ask when Selecting a Physician

Below are some questions the patient should consider asking prospective physicians or health plans as he or she interviews prospective candidates.

- ◆ Who will provide care as it relates to diabetes? A primary care physician? A specialist? A special team program?
- ◆ Which of the primary care physicians in your health plan are most experienced and knowledgeable about diabetes?
- ◆ For patients with special needs (pregnancy or for children), which doctors are most experienced?
- ◆ If patients see a specialist, what role will the primary care physician continue to play in overall care?
- ◆ What roles do other clinicians (nurses, nurse practitioners, physicians' assistants, and nutritionists) play? Who is available to see you when your primary doctor isn't available?
- ◆ What hospitals are used for the treatment of diabetes? If patients have a preference, they may want to choose a doctor who utilizes a specific hospital.
- ◆ How will the physician be involved in the design of the care treatment plan? Do they use ADA Standards of Care? What systems are in place to ensure this?
- ◆ How will care be coordinated?
- ◆ What procedures are in place to ensure the confidentiality of medical records?
- ◆ What is the physician's philosophy of care? Does he or she immediately prescribe medication? Does the physician recommend exercise and diet as a way to control the diabetes?

Issues to Discuss with the Health Care Provider

Employees should discuss the following points with their physicians to ensure their understanding of how the provider will help support the management of their diabetes.

- ◆ Physician's approach to the management of diabetes
- ◆ Services available for diabetes care through the clinician or health plan
- ◆ Relationship with patient, primary care provider, and any specialist, diabetes educator, or care coordinator
- ◆ Involvement and options in design of care management plan
- ◆ Standards adopted for diabetes care by clinician or health plan
- ◆ Educational materials or meetings that are available to help manage diabetes, including availability of nutrition or exercise classes
- ◆ Reminder system for regular vision, dental, foot, or other exams that are important for people with diabetes
- ◆ Procedures for emergencies, especially at night or on weekends
- ◆ Any clinical trials or research projects that the clinician may have access to
- ◆ Support groups available for the patient or family

TOOL 13: MANAGEMENT PLAN

The management plan should be developed as an individual approach of clinical and behavioral steps that include patient and family/support, with emphasis on patient self-management. Consideration should be given to the severity of the diabetes, the patient's schedule for work (especially if travel is involved) or school, demographics and social situation, cultural factors, food and exercise needs and ability, and any other health conditions. Elements of the program should include the following:

- ◆ Statement of goals for the short and longer term
- ◆ Information on medication
- ◆ Nutrition recommendations and planning with a dietitian experienced with diabetes management
- ◆ Lifestyle change recommendations, including exercise, smoking cessation, and education on how to achieve these changes
- ◆ Information on a clinical schedule for follow-up medical appointments, eye and foot exams, how to contact the physician and patient care team when necessary, and dental care
- ◆ Instructions on how to manage any other medical problems that coexist with the diabetes
- ◆ Monitoring instructions
- ◆ Education on the need for influenza and pneumococcal vaccination
- ◆ Information on dealing with the needs of people with diabetes in the workplace, while traveling, and in other situations
- ◆ Support groups
- ◆ Information for the family members
- ◆ Follow-up program steps

For more information about managing diabetes at the worksite, see www.diabetesatwork.org for some unique ideas.

TOOL 14: STEPS TO CONSIDER WHEN WORKING WITH YOUR HEALTH PLAN*

Objectives	Actions	Anticipated Results
Determine business need and resources and opportunities with health plan	<p>Communicate overall health program goals with health plan(s)</p> <p>Identify internal resources, including occupational health, wellness programs, worksite education, etc.</p> <p>List barriers and constraints</p> <p>Work with health plan(s) to identify burden of disease based on available data</p> <p>Review current contractual provisions</p> <p>Examine health program participant communication options and sources for information</p>	<p>Alignment of corporate health goals with health plan services</p> <p>Frame the business case for the development of a program and outline the rationale</p> <p>Understand resources internally and externally for development of options for programs</p> <p>Understand current covered benefits and services as applicable to diabetes treatment and prevention, including health education</p> <p>Proceed with program development and implementation</p>
Develop business case for diabetes management program	Achieve corporate approvals for the development of a program for diabetes	Collaboration with health plan defined to achieve program goals and objectives
Outline program with health plan	<p>Identify key health plan staff who will work with the corporation</p> <p>Define the program goals and objectives</p> <p>Identify the population for potential participation</p> <p>Develop the roles and responsibilities for the program implementation</p> <p>Determine the measures for the program and how results will be shared</p> <p>Agree on an approach to cost-sharing, risk-sharing, and benefit sharing for the program stakeholders</p>	<p>Clarification of roles and responsibilities to make the best use of resources to achieve results</p> <p>Clearly define desired outcomes to develop a program that can achieve results and interim as well as longer term measures</p>

* Adapted from Building Partnerships between Mature Worksite Health Promotion Programs and Managed Care, by Nico Pronk, PhD, HealthPartners

The chart below compares the three kinds of vendors who offer diabetes management programs in terms of identification of participants, design and implementation of the program, and its overall impact.

TOOL 15: WORKING WITH HEALTH PLANS, PHARMACY BENEFIT MANAGEMENT PROGRAMS, AND DISEASE MANAGEMENT VENDORS: COMPARING THE OPTIONS

ISSUE	HEALTH PLAN	PBM	DM
Identification of population for program participation	Access to encounter, laboratory, diagnostic, and pharmacy data (if included in coverage) for covered population.	Access to pharmacy data.	Access to data provided by employer through health plan or HRA information, or self-identification by employee.
	Have access to a broad set of data, which could facilitate identification of people eligible for the program.	Use primarily pharmacy data to identify those eligible for the program.	Use HRA data and other information the employer has access to for employee identification.
Intervention Design and Implementation	If using more than one health plan, the programs may vary.	Uniformity of program for all employees.	Uniformity of program for all employees.
	Connected with network of providers that Employees use.	No direct connection with provider network.	No direct connection with provider network.
	May already provide case management services.	PBMs offer case management services.	DMs offer case management services.
	Can integrate the needs of persons with other co-morbidities with other health coverage and disease management programs.	Can integrate the needs of persons with other co-morbidities who are taking medication with other health coverage and disease management programs.	As data are available, can integrate the needs of persons with other co-morbidities with other health coverage and disease management programs.
Impact	MCO may already be reporting HEDIS measures and can capture disease-related global expense changes.	Can report on pharmacy-related activities such as compliance.	Can report on number of employees touched, satisfaction with program, and self-reported work days gained.
	Short- term measures, such as changes in ER use and hospital admissions.	Changes in medication regimens, including increased compliance or changes in therapy.	Changes in self-reported health status, improved attendance, and improved knowledge about condition.