

The True Cost of Poor Health

In 2005, health care expenditures in the United States reached nearly \$2 trillion,¹ with U.S. employers shouldering the majority of this burden. In 2007, health care costs for U.S. employers increased another 7 percent, despite vigorous attempts to control health care spending.² In dollar terms, that translates into an average hike of \$575 per employee, for an average total cost of \$8,796 per employee.² It's no secret that these mounting costs are eroding profit margins, and in some cases, threatening the survival of U.S. companies.

Over the years, employers have relied on benefit plan design, coverage limitations and cost-shifting to help control health care costs, but these approaches have shown limited results.³ Making matters worse, researchers have identified another, even more significant business cost of unhealthy employees — the cost of lost productivity from absent workers (absenteeism) and present workers who can't perform because of health-related impairments (presenteeism).^{4, 5, 6} In fact, presenteeism now costs employers two to three times more than direct medical care, such as insurance premiums and pharmacy costs.⁴

But there is good news: Researchers have also identified a direct link between all of these health care costs and individual health risk. This gives employers a compelling business imperative to control health care costs through individual risk reduction and behavior change programs. This means helping every person in your population maintain healthy behaviors, modify high-risk behaviors and control chronic conditions. A comprehensive population health management program that addresses these issues is an investment in a present, productive work force, which confers a strategic business advantage.

The business case for population health management

To gauge the business case for population health management, it's critical to fully identify and enumerate all of the health-related costs associated with unhealthy employees. This includes:

- **Direct costs**, such as outpatient care, pharmacy charges, inpatient care and emergency room visits
- **Indirect costs**, including short-term disability, workers' compensation, turnover, absenteeism and presenteeism

For most employers, direct health care costs are well documented and well understood (as described above).^{4, 5} However, many organizations currently don't pay enough attention to the hidden costs of avoidable sick days and presenteeism — the cost of employees who are on the job but not fully functioning because of real illnesses and medical conditions, including asthma, seasonal allergies, arthritis, migraines, depression, back pain, gastrointestinal disorders and diabetes.^{4, 5, 6} For employers, these common conditions represent fewer direct costs than high-expense diseases, such as cancer and heart disease, but they represent higher indirect costs, because they are so prevalent:⁴

- Depression costs U.S. employers more than \$35 billion a year in reduced performance at work.⁴
- On-the-job pain (including back pain, headaches and arthritis) costs employers nearly \$47 billion a year in productivity loss.⁴
- In one study, chronic conditions alone were estimated to cost The Dow Chemical Company more than \$100 million annually in lost productivity for its U.S. work force — the equivalent of 6.8 percent of total lab costs for the company in 2002.⁶
- One research team calculated the total cost of presenteeism in the United States to be greater than \$150 billion per year.⁴

For employers, the hidden costs of presenteeism present a frightening and motivating prospect. These costs also represent a substantial argument for a consumer-driven approach to health care that engages employees in better managing these lifestyle risks and common chronic conditions.

One of the best ways for companies to start addressing these issues is to quantify their actual costs from presenteeism, using a validated presenteeism instrument such as the Work Limitations Questionnaire (WLQ). Mayo Clinic Health Solutions clients do this by incorporating a shortened version of the WLQ into the Mayo Clinic Health Risk Assessment (HRA). This allows companies to collect self-reported data from employees on the amount of work time that a health problem has interfered with four areas of job performance: time management, physical work activities, mental/interpersonal activities and output demands. Employers can then compare their summary scores with a benchmark of healthy workers to understand how presenteeism impairs job performance among their employees. This data also gives employers a clearer picture of the health risks that are most responsible for their companies' productivity loss.^{4, 7, 14}

The link between health risk and health costs

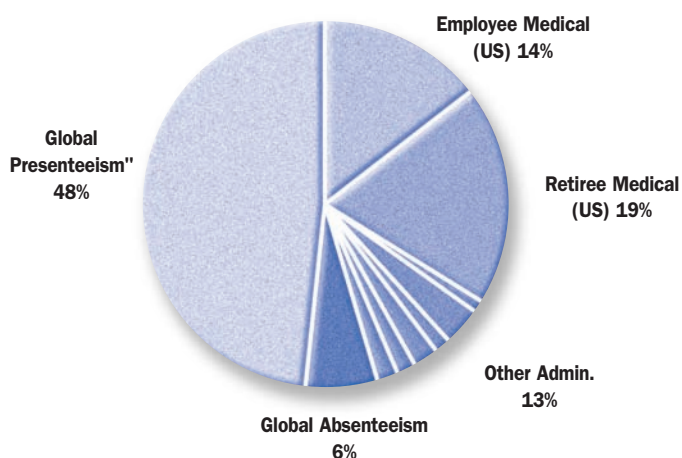
Understanding the direct link between individual health risk and health costs is another key to the economic rationale for a comprehensive population health management program. Modifiable health risks are precursors to a large number of costly diseases and disorders.^{8,9} Plus, a growing body of research shows that common, modifiable health risks (such as tobacco use, obesity, poor nutrition, stress and lack of exercise) significantly impact direct and indirect health costs to employers, including medical claims, pharmaceutical expenditures, time away from work, workers' compensation costs and productivity at work:

- Obesity-related medical claims account for 2.8 percent of all medical costs for adults ages 19 to 64 years old.⁸
- Among overweight and obese adults, each one-unit increase in body mass index (BMI) yields an additional \$119.70 in medical costs and \$82.60 in drug costs.⁹
- Medical care charges for employees with no days of physical activity are approximately 4.7 percent higher than are charges for those who were active one day a week.¹⁰
- Medical charges for smokers are 18.1 percent higher than are charges for nonsmokers.¹⁰ Plus, smokers cost their employers \$4,430/year in lost productivity costs, due to missed days and hours of work, compared with \$2,623/year for nonsmokers.¹¹

Additionally, there is a direct relationship between the number of individual health risks and health costs. More health risks simply mean more health costs:

- High-risk employees (5+ health risks), on average, incur an extra \$3,321 in annual medical costs above baseline.¹² High-risk employees are also 12.2 percent less productive than are low-risk employees (0-2 health risks).⁷
- Each additional risk factor is associated with an average annual increase in pharmacy claims costs of \$76 per employee.¹³

Total Economic Impact of Health: One Company Example



Conclusion: For all chronic conditions studied, the cost associated with performance-based work loss, or “presenteeism,” greatly exceeded the costs of absenteeism and medical treatment combined.²²

Data from a comprehensive database of employees and health plan members who have taken the Mayo Clinic Health Risk Assessment — representing results from more than 500,000 HRA participants from diverse industries, geographic location, age and job functions — show that a significant number of HRA participants (39 percent) fall into the high-risk or very high-risk category, while 54 percent of HRA participants have two to four risk factors.¹⁴ Interestingly, though, 94 percent of participants report their health is “good,” “very good” or “excellent.”¹⁴ This data reveals an opportunity for health risk awareness and education, combined with targeted risk reduction programs.

Mayo Clinic HRA Book of Business Data¹⁴

Risk Stratification	% of Book of Business
Low: 0 to 1 risk	5%
Moderate: 2 to 4 risks	52%
High: 5 + risks	43%

Population health management programs that work

For more than a decade, researchers and health consultants have gathered hard data, practical advice and real-life experience on how to run an effective, efficient work site health program. And there is a clear formula for success.^{3,15} So implementing a work site program doesn't have to be a financial experiment.

What we know is this: Successful population health management programs are comprehensive and ongoing — not just a one-time thing. Plus, effective programs consider the needs of a population and tailor programs accordingly.^{3,14,15} That's why it's key to start with a companywide health risk assessment (HRA), which gives you the data you need to identify and analyze risk trends and respond with meaningful, needs-based health programs.

According to Mayo Clinic HRA data, the most prevalent lifestyle risk factors include poor nutrition, emotional health, safety and weight, so these risk factors are good places for many companies to get started.¹⁴ But your company's specific HRA

What is a risk factor?

A risk factor is anything that increases a person's chance of getting a particular disease, such as diabetes, heart disease or cancer. Having one or more risk factors for a certain condition isn't a guaranteed path to illness. But having a risk factor means that you're more likely to develop that disease at some point in your life. And the more risk factors you have, the greater your risk.

Some risk factors, such as age, sex, genetics and family history, can't be changed. However, there are many known risk factors that can be controlled, including tobacco use, alcohol use, poor diet, obesity, lack of exercise and sun exposure. By addressing these modifiable lifestyle risk factors, serious costly diseases such as cancer and diabetes can be prevented.

results can be combined with other health data (health care claims, workers' compensation) to help establish organizational priorities and trends that need attention. A sophisticated HRA can triage individuals into appropriate follow-up interventions based on risk stratification so that the right resources are offered to healthy, unhealthy and at-risk employees.

The key is to use HRA results to design a comprehensive, sustained engagement strategy that addresses the full spectrum of health needs of your population. For healthy employees, it's critical to prevent movement into higher risk categories, through prevention and wellness education, self-care, and health advocacy. For those at risk, the goal is clearly to reduce risk. To do this, companies need to raise awareness of personal health risk and empower individuals with better information and resources to make treatment decisions and change unhealthy behaviors. Finally, for employees with chronic conditions, it's critical to provide information that leads to better disease management.

Other distinguishing characteristics of an effective population health management program include:^{3,15,16}

- Involving key stakeholders in determining program goals
- Aligning your health and wellness goals with your corporate objectives
- Setting specific goals, such as increasing HRA participation by 20 percent in 2007
- Being realistic about outcome expectations (e.g., participation, engagement, clinical and satisfaction)
- Using incentives strategically to achieve participation and engagement goals
- Encouraging visible participation from senior management
- Determining a process for data collection, analysis and evaluation, and deciding what metrics you will measure to define success
- Communicating progress and success to employees and key stakeholders

By implementing proven strategies such as these, employers can significantly lower health care cost trends. One large survey by the National Business Group on Health/ Watson Wyatt found that the best-performing employers in this arena held their average annual health cost increase to 5 percent, compared with a 15 percent increase for the lowest performers.¹⁷ According to this research, best-performing companies are significantly more likely than poor-performing companies to have adopted lifestyle behavior change programs. They're also more likely to provide employees with information and resources on specific health issues.¹⁷

Measuring ROI

Clearly, improved employee health can save money. But can health promotion programs actually pay for themselves? Several studies have crunched the numbers with positive results:

- A 1999 study of a comprehensive health management program at Citibank estimated the return on investment (ROI) to be between \$4.56 and \$4.73 per dollar spent on the program.¹⁸

- A cost-benefit analysis performed for The Dow Chemical Company showed that a very small amount of health risk reduction (0.17 percentage points per year) over 10 years would allow the company's health promotion program to break even, while larger reductions in health risk (1 percentage point per year) over 10 years would yield an ROI of \$3.21 for every \$1 invested.¹⁹
- A meta-analysis of work-site health promotion programs found an average reduction in medical costs of slightly more than 25 percent.²⁰
- Workplace smoking cessation programs that include smoking cessation medications can result in decreased absenteeism, increased productivity and net cost savings within four years; the internal rate of return on these programs ranged from 39 percent to 60 percent at 10 years.²¹
- Based on these studies, employers should stop thinking of health promotion programs as another outlay and start thinking of them as an investment — one that can produce a positive return.

Measuring Productivity Loss

Analyzing Emotional Health¹⁴

HRA/WLQ Measures	Results
Prevalence (% of employees who completed the HRA)	On average, 61% of employees were at risk of Emotional Health.
% Productivity Loss	Of those at risk of Emotional Health, they experienced an average annual productivity loss of 2.3%.
Average Productivity Loss in \$/emp.	This productivity loss equated to an average annual productivity cost of \$1,391 per employee.
Comparison With Those Not at Risk of Poor Emotional Health	On average, those at risk of poor emotional health had almost three times the productivity loss per employee compared with those not at risk.

Analyzing Weight¹⁴

HRA/WLQ Measures	Results
Prevalence (% of employees who completed the HRA)	On average, 60% of employees were at risk of Weight.
% Productivity Loss	Of those at risk of Weight, they experienced an average annual productivity loss of 1.8%.
Average Productivity Loss in \$/emp.	This productivity loss equated to an average annual productivity cost of \$1,079 per employee.
Comparison With Those Not at Risk of Weight	On average, the annual productivity cost for those at risk for Weight was 11% higher than that of those not at risk.

A healthy bottom line depends on healthy people

Most employers view their employees as one of their greatest business assets. Realizing this, health promotion programs must be viewed as an economic business investment, no different from

Why the workplace?

Improved health can happen at home or the local gym. But the workplace is an ideal place for health promotion programs for a variety of reasons:

- **Employees spend more than half of their waking hours at work.** This makes employees a captive audience for health promotion messages. Plus, employees may be more likely to attend a health screening or educational Lunch and Learn session if they don't have to spend more time away from home to do it.
- **Incentives to encourage program participation work extremely well in the workplace.** Mayo Clinic Health Solutions' experience shows that a relatively small incentive, such as a \$100 gift card or \$240 health premium reduction, can drive high participation in health promotion programs (75 percent and 87 percent respectively), such as a health risk assessment.¹⁴
- **Existing company systems can help facilitate health programs.** Information, communication and program analysis can usually be accomplished within the existing systems and organizational structure of the work site.
- **Company culture and camaraderie can help drive program success.** Group initiatives, such as a populationwide walking campaign or a health risk assessment drive, can be very effective in the workplace, because friendly competition between departments or cooperation among colleagues can help drive engagement and participation.
- **Health promotion programs support a consumer-driven approach to health care.** Health promotion programs reinforce a consumerism health care strategy, by encouraging (and sometimes rewarding) employees for taking charge of their health. They are a natural fit with health savings accounts and other consumer-driven health plans.

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