

# An Aging Workforce: Health-Related Productivity and the Economic Value of Health Promotion CME/CE

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## Introduction

The challenge of caring for the aging baby boom generation has been looming for many years. During the early 1990s, when national health expenditures first hit the 14% gross domestic product mark, managed care and the promise of prevention seemed like the cure for rising costs. The optimism faded, however, in the wake of consumer backlash against managed care structures and the growing perception that high employee turnover precluded the benefits of prevention from being captured by health plans and employers.

However, time has brought greater sophistication and a deepening evidence base supporting the economic value of health promotion, and the field of health-related productivity has been growing in leaps and bounds. The time is at hand for health and productivity management to "cross the chasm" from early adoption to a wider acceptance among the majority of corporate leaders and national policymakers. The American Occupational Health Conference (AOHC), held in Los Angeles, California, May 5-10, 2006, addressed a broad swath of issues associated with health-related productivity and the economic value of health promotion among employers.

## Cost Storm Rising

Employer health benefit costs are on the rise. According to Ronald Loeppke, MD, MPH, FACOEM, Chief Strategic Officer and Executive Vice President, Matria Healthcare, Inc., Marietta, Georgia, medical benefit costs — including medical, pharmacy, and long- and short-term disability claims — have increased 53% from 1996 to 2000, while after-tax profits have only increased 9% in the same time frame.<sup>[1]</sup> Key points presented during his lecture and the module that followed included:<sup>[2]</sup>

- Large employers spent over \$8000 per employee on health in 2004.
- Health insurance premiums have been increasing faster than overall inflation and workers earnings since 1999.
- The aging workforce creates even greater cost pressures on employers and on the US economy.
- 22% of adults reported a health-related work impairment due to chronic illness within the 30 days prior to the survey; on average, each impairment led to 6 lost days. This equates to 2.5 billion impaired days per year; the top 5 reasons alone account for \$180 billion in lost time.
- National health expenditures hit \$1.9 trillion, or 16.0% of GDP, in 2004, and the cost crisis (thought to stabilize somewhat during the mid-1990s) looms once again.

More than 36 million Americans are older than 65 years; this number is expected to increase to more than 70 million over the next 25 years.<sup>[3]</sup> Approximately 80% of older adults have at least 1 chronic condition, and more than 50% have at least 2 chronic conditions. Pamela Allweiss, MD, MSPH, Director, Outpatient Clinic, Department of Preventive Medicine, University of Kentucky Chandler Medical Center, Lexington, Kentucky, used the "epidemic" of diabetes as an example of an aging population.<sup>[4]</sup> Diabetes already affects 21 million people in the United States and costs over \$132 billion per year in healthcare expenditures. It is the leading cause of heart disease, stroke, blindness in adults, and end-stage renal disease requiring dialysis. Poorly controlled diabetes and other chronic conditions in the workplace have significant economic impacts that require effective interventions for control.

Don Wright, MD, Director of the Office of Occupational Medicine, Occupational Safety and Health Administration (OSHA), Washington, DC, also spoke about the opportunities and challenges of the aging workforce, detailing the vast experiences and talent provided to the labor market by older workers as well as the proactive health and safety measures required to protect these valued workers.<sup>[5]</sup> Chronic illnesses account for nearly 75% of total healthcare expenditures, and the measurement of the economic impact of disease management and health promotion has become more important.<sup>[6]</sup>

The total costs of poor healthcare may be much more extensive than first realized. Paid benefits include employee health insurance, worker's compensation, short-term and long-term disability, and the costs of incidental absence and family medical leave. The full costs of health and productivity also include the expense of on-the-job productivity losses (presenteeism), which accounts for poor quality of work and reduced work capacity or output. Research by Ron Z. Goetzel, PhD, Vice President of Consulting and Applied Research, Medstat, Washington, DC, and colleagues on the total burden of illness for the top 10 health conditions suggests that presenteeism may account for 18% to 60% of employee costs.<sup>[7]</sup> Data obtained using the World Health Organization Health and Work Performance Questionnaire 2005 showed that presenteeism costs may account for 74% of total costs.<sup>[8]</sup>

## **Emerging Health and Productivity Research**

There have been many recent studies designed to estimate the true costs of both absenteeism and presenteeism.<sup>[8]</sup> John E. Riedel, MBA, MPH, President, Riedel & Associates Consultants, Inc., Conifer, Colorado, reviewed some important recent findings:

- Data collected via the Stanford Presenteeism Scale from almost 8000 Dow Chemical employees demonstrated that absenteeism associated with chronic conditions resulted in 1.35 to 8.85 days lost per year and that presenteeism associated with chronic conditions resulted in 44.5 to 91 days lost per year.<sup>[9]</sup>
- Goetzel and colleagues used a combination of 5 surveys to estimate that absenteeism associated with chronic conditions resulted in greater than 10 days lost per year and that presenteeism resulted in 30 days lost per year.<sup>[7]</sup>
- Stewart and associates estimated 4 to 8.4 days lost per year and 17.9 to 34 days lost per year, for absenteeism and presenteeism, respectively, using the American Productivity Audit in almost 30,000 people.<sup>[10]</sup>
- Boles and colleagues found 4.2 days lost per year for absenteeism and 15.5 days lost per year for presenteeism, using the Work Productivity and Activity Impairment Questionnaire.<sup>[11]</sup>

- Burton and associates estimated 1.8 to 3.1 days lost per year for absenteeism and 16 to 31.1 days lost per year for presenteeism, using the Work Limitation Questionnaire as part of a Health Risk Appraisal.<sup>[12]</sup>
- Tsai and colleagues found 4.1 to 12.6 days lost per year due to absenteeism from personnel and payroll systems<sup>[13]</sup>; the number of days lost per year depended directly on the number of specific health risk factors, which included smoking, body mass index, cholesterol level, triglycerides, hypertension, and fasting blood sugar. Those with no health risk factor were on the lowest end of days lost, while those with 4 or more were on the highest end of this range.

There has been new human resource management research as well. Absence multipliers are a tool for benefits managers to evaluate the costs of absenteeism. The costs of absenteeism need to be adjusted because traditional cost estimates may significantly understate the "true costs" of worker absence. The costs of an absent worker's daily wages must be adjusted by an absence multiplier for the following reasons<sup>[14]</sup>:

- Inability to find a perfect replacement worker;
- Production often occurs in a team setting; and
- Price or revenue may fall if output is lost or postponed.

According to William Molmen, JD, General Counsel, Integrated Benefits Institute, San Francisco, California, the average multiplier is 1.28.<sup>[14]</sup> Although different occupations have wide variations in multipliers, Sean Nicholson, PhD, Associate Professor, Department of Policy Analysis and Management, Cornell University, Ithaca, New York, and colleagues evaluated a wide range of industries and estimated the mean absence multiplier as 1.61 (median absence multiplier as 1.28).<sup>[15]</sup>

One approach for estimating potential cost savings involves using prevalence estimates for specific diseases multiplied by medical/insurance costs, with the addition of worker's wages multiplied by estimated days lost from absenteeism (adjusted by an absence multiplier) and worker's wages multiplied by estimated days lost from presenteeism.<sup>[16]</sup> Although there are a multitude of validated survey instruments for assessing presenteeism losses and administrative claims data for medical costs and absenteeism estimates, the collection of more methodologically rigorous data may be challenging or cost-prohibitive. Building on the work of Edington and colleagues,<sup>[17]</sup> Burton and associates estimated that each additional health risk factor equated to a 2.4% loss in on-the-job productivity.<sup>[12]</sup> Based on these findings, they contend that health programs designed to decrease the prevalence of health risk factors will translate into measurable cost savings.

Bruce Sherman, Principal, Sherman Consulting Services, Burlington, Massachusetts, reviewed the need for an integrated data analysis system to better measure the impact of health and productivity programs using a broad spectrum of potential data sources, including<sup>[18]</sup>:

- **Medical costs** from health plans, health service utilization rates, and health risk appraisals;
- **Lost time data** from short- and long-term disability, family and medical leave, and sick leave;
- **Human resource and payroll data** from time reporting, employee surveys, performance appraisals, and turnover data;

- **Worker's compensation and safety data** from OSHA reporting, drug testing, and claims data;
- **Productivity metrics** from staffing, self-reported presenteeism metrics, and per-employee financial measures; and
- **Business data** from customer satisfaction, production data, quality metrics, and revenue/cost information.

Integrated data analyses are an area of growth and evolution in health and productivity management.

## C-Suite Receptivity

The growth of an evidence base on health and productivity (more specifically, estimates of the costs of absenteeism and presenteeism) creates an intuitive rationale for supporting health promotion and disease management programs. The question remains, however, of whether corporate executives and benefit managers will be willing to support health and safety programs as a profit center. Fortunately, initial indications from "corporate suites" have been positive.

According to a survey in 2004 of 174 corporate healthcare decision-makers, 86% of corporate leaders consider worker health a key component of company performance, and 93% consider keeping employees healthy an essential corporate goal.<sup>[19]</sup> Misperceptions about the total costs of healthcare remain, however, and commitments to health promotion continue to be superficial in most companies. Out of 32 value-focused health activities, 75% of companies do less than 8 value-focused activities, with a mean of 5.2 per company. The most common activities are access to<sup>[8]</sup>:

- Influenza vaccinations;
- Centers of Excellence; and
- Wellness programs.

An encouraging observation pointing to the inevitability of growth in the health and productivity field is that both access to detailed outcomes data and accountability by decision-makers for outcomes were associated with doing more value-focused activities.

One realization is that nonmedical decision-makers often have more authority over health benefits and policies than healthcare professionals ("decision-making silos"). The challenge for corporate medical directors and healthcare professionals using the emerging evidence base on health productivity is translating the results into the language of corporate executive and financial officers, as well as benefit managers.<sup>[18]</sup> Corporate senior leaders understand the cost control argument appealing to improvements in return on investment, cash flow impacts, and revenue growth. An increasing number of enlightened corporate leaders also appear to understand the benefits of long-term investments to increase workforce productivity and performance, which include:

- Absence management;
- Human capital management (including employee satisfaction, recruitment and retention, and program costs); and

- Quality improvements in product or service.

According to Raymond J. Fabius, MD, President and Chief Medical Officer, CHD Meridian Healthcare, San Mateo, California, safety and disability have already approached 6 sigma standards — meaning that error rates occur at a rate above 6 standard deviations or sigmas. Corporate leaders are now starting to understand that workplace occupational medicine programs need to approach the same level of efficiency.<sup>[20]</sup>

## **Aligning Incentives in Program Implementation**

Wendy Lynch, PhD, Executive Director, Health as Human Capital Foundation, Cheyenne, Wyoming, provided an interesting perspective on moving beyond productivity management to human capital performance.<sup>[21]</sup> She emphasized the importance of understanding that health programs not only save on costs but also enhance performance. Achieving better health and lowering health benefits consumption relies on strategic benefits design and rational structuring of financial incentives. For example, coinsurance has a powerful effect on healthcare utilization, and subsidies for program fees and prevention allowances promote participation in health promotion and disease prevention activities. An aligned incentive hierarchy establishes:

- Mechanisms for prudent care-seeking;
- Responsible management of illness;
- Healthy habits;
- Decreased absence;
- Promotion of on-the-job productivity; and
- Improved level of performance.

According to the *Health and Productivity Toolkit*, published by the American College of Occupational and Environmental Medicine (ACOEM), it is essential to keep the following 6 factors in mind when designing health programs and benefits<sup>[22]</sup>:

- One's own time and money matter more to the individual than someone else's.
- Nothing is free.
- What gets paid gets done.
- Incentives and disincentives always exist, influencing the general direction of behavior.
- There is a reason the term "rational" has the word "ration" in it.
- Employment is a human capital marketplace.

The implications are that incentives drive behaviors and "aligned incentives lead to shared goals for success." Understanding and designing incentives in a meaningful way need to guide policy and financing decisions.

## **Resources for Finding Benchmark Studies and Guides**

Corporate leaders need a multitude of inputs to aid their decision-making. Establishing the potential for cost savings is not enough to help determine which programs to establish and sustain over the long haul. Leveraging opportunities to expand corporate health promotion and disease management programs will involve<sup>[23]</sup>:

- Building relationships;
- Identifying ideal clinical opportunities; and
- Establishing oneself as an organizational problem solver.

It will also involve understanding the existing evidence base and translating it so that decision-makers can make the connection and "become a believer." Fortunately, there are many resources available. The following are among those organizations that have become increasingly active in this growing field and have a wealth of information available on their Web sites:

- ACOEM<sup>[24]</sup>
- Institute of Health Productivity and Management (IHPM)<sup>[25]</sup>
- Integrated Benefits Institute<sup>[26]</sup>
- The Health as Human Capital Foundation<sup>[27]</sup>

Additionally, research from Thomson MedStat,<sup>[28]</sup> University of Michigan Health Management Research Center,<sup>[29]</sup> and both employers and health plans continues to add to the body of literature. Many organizations are publishing health and productivity toolkits to help decision-makers and program advocates to justify, establish, and sustain health promotion and other value-based activities to help the aging workforce.

There is also a growing body of literature on the return on investment of disease management. The Disease Management Association of America has established a program evaluation guide<sup>[30]</sup> and a dictionary of common terminology<sup>[31]</sup>; they are also planning to unveil recommendations for a new industry evaluation methodology in the coming year. Healthways and Johns Hopkins collaborated on a methodology for disease management evaluation.<sup>[32]</sup> The Medicare Health Support (formerly Chronic Care Improvement Program) will be conducting a randomized controlled evaluation of their 3-year disease management demonstration project.<sup>[33]</sup> The Agency for Healthcare Research and Quality has continued to develop an economic evaluation guide for Medicaid programs.<sup>[34]</sup> IHPM continues to conduct research on corporate wellness programs,<sup>[35]</sup> and the Health Industry Forum and the Population Health Institute are working on economic evaluation methodologies for health plans and employers.

## Conclusion

According to the White House,<sup>[36]</sup> "active prevention is critical to achieving a better and longer life and should play a central role in controlling the costs of healthcare." Senator Edward Kennedy<sup>[37]</sup> stated that, "to cut costs and promote quality, we can do much more to stop illness before it starts. Health promotion and disease prevention must be as central to our health system as hospital and physician care." Gregg O. Lehman, PhD, President and CEO, Inspiris, Brentwood, Tennessee,<sup>[38]</sup> reflected the movement of these premises into the workplace with his contention that, "employers are learning that the more they help employees determine their health risk and the more opportunities they provide employees to make better choices, the greater the rewards — a healthier, more productive workplace."

In the face of the growing crisis in rising national and corporate health expenditures fueled by the aging workforce and the increasing prevalence of chronic medical conditions, health and productivity management promises to be an expanding, valuable field. Research and benchmark data on absenteeism and presenteeism costs, coupled with increased receptivity by senior corporate leaders, allows for building a stronger business case for health promotion and disease prevention.

Program design and implementation will need to structure and align individual incentives in rational and strategic ways to capitalize on the potential cost savings that this field has promised. It appears that many organizations from many interrelated fields are beginning to collaborate more effectively to respond to the growing cost challenges of our healthcare system.

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