

# TRENDWATCH

## Healthy People Are the Foundation for a Productive America

Healthy, productive individuals make our nation strong and vibrant. Advances in medicine contribute to national economic growth by helping Americans recover more quickly from injury and illness, avoid lost or ineffective work time due to flare-ups of chronic conditions, and live longer with higher quality of life.

Progress in preventing and treating disease has added approximately 30 years to Americans' life expectancy since the beginning of the 20th century. For example, over the past 50 years, advances in the treatment of cardiovascular disease alone have added more than three years to the life expectancy of men and women.<sup>1</sup> As Americans live longer, healthier lives, they also are working longer, thus continuing their contributions to the economy. A one-year improvement in the life expectancy of the U.S. population translates into an estimated 4 percent increase in gross domestic product (GDP) – an increase currently equal to about \$540 billion.<sup>2</sup>

Yet, even as the U.S. health system's ability to prevent and treat disease improves, the prevalence of chronic health problems among working Americans is rising.<sup>3</sup> Individuals, of

course, prefer to be healthy and productive rather than sick and unable to work. Yet, illness and chronic conditions can keep people out of work for days or even months at a time or force them to leave the workforce altogether.<sup>4</sup> Inability to work diminishes individuals' quality of life and capacity to provide for themselves and their families. Being unable to work can lead not only to a loss of financial security but also to reduced self esteem and symptoms of depression.<sup>5</sup>

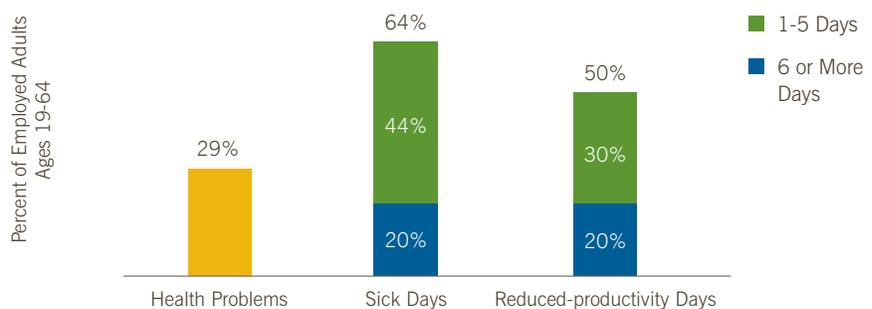
In addition, lost or unproductive work days pose a significant cost to national and local economies. For example, in California, hypertension alone

accounts for an estimated 2.8 million lost work days each year. And asthma accounts for an estimated 8 million lost work days each year in New York.<sup>6</sup>

More and more employers, including hospitals, are recognizing that health status has a direct link to day-to-day productivity. They are taking new steps to promote health and wellness among their employees. Health *care* – that helps employees stay well, recover and return to work after illness, and effectively manage chronic conditions – not only benefits individuals but also has a positive effect for employers and the economy as a whole.

### Three of 10 working individuals report health problems...

Chart 1: Percent of Persons Who Work Reporting Health Problems and Productivity Losses, 2003



Source: Davis, K., et al. (2005). *Health and Productivity Among U.S. Workers*. New York, NY: The Commonwealth Fund.

Note: Excludes self-employed adults and workers with an undesignated wage rate. Health problems are defined as presence of a chronic condition (cancer, diabetes, arthritis, or heart attack/heart disease), presence of disability, or self-reported fair/poor health status; sick days are days missed work because self or family member sick; and reduced-productivity days are days unable to concentrate fully at work because not feeling well or worried about sick family members.

## Work Time Lost to Illness Costs the Nation Billions

The incidence of chronic conditions among the working population is increasing.<sup>7</sup> In 2003, three out of 10 U.S. workers reported having a health problem defined as presence of a chronic condition such as diabetes, arthritis, cancer or heart disease; presence of a disability; or self-reported fair or poor health status.<sup>8</sup> These health conditions lead not only to missed work time

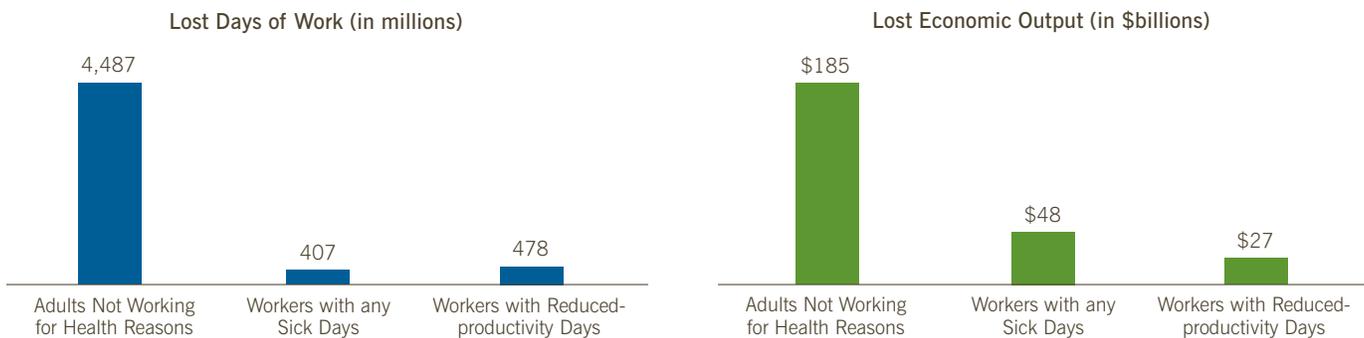
(absenteeism) but also reduced productivity while at work (referred to as “presenteeism”). An estimated 69 million workers took sick days in 2003, amounting to 407 million lost work days. This translates into \$48 billion in wages paid for time not worked because of illness.<sup>9</sup>

A majority of working Americans have at least one absence from work due to illness or go to work sick during

the course of a year. A survey of working Americans ages 19 to 64 found that two-thirds missed one or more days of work due to their own health problems or those of a family member in 2003. Additionally, half reported going to work while sick or while worried about the health problems of a family member, and thus were unable to work at full capacity while there.<sup>10</sup>

### ...leading to lost work time and lower economic output.

Chart 2: Estimated Lost Work Time and Economic Output Due to Health Problems, Adults Ages 19-64

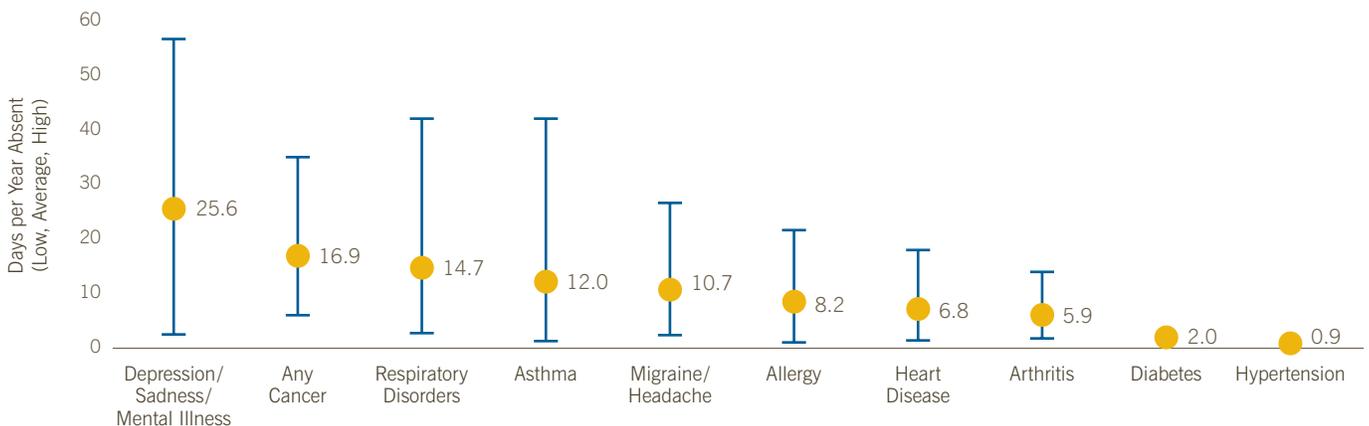


Source: Davis, K., et al. (2005). *Health and Productivity Among U.S. Workers*. New York, NY: The Commonwealth Fund.

Note: Non-working adults report not working due to disability, handicap, chronic disease, or other health reasons.

### Common chronic conditions, on average, account for more than 10 days of work lost per year...

Chart 3: Number of Days Absent per Affected Individual per Year Due to 10 Conditions, 1997-1999



Source: Goetzel, R.Z., et al. (2004). Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting U.S. Employers. *Journal of Occupational and Environmental Medicine*, 46(4), 398-412.

...resulting in significant costs for employers, states and the national economy.

Chart 4: Estimated Workplace Absenteeism Due to Chronic Conditions by State

STATE	Number of Employed Persons Ages 18-64	ASTHMA		DIABETES		HYPERTENSION		Days per Year Absent per 1,000 Employed Persons Due to Asthma, Diabetes, & Hypertension Combined
		Days Absent per Year (in thousands)	Annual Dollar Impact (in millions)	Days Absent per Year (in thousands)	Annual Dollar Impact (in millions)	Days Absent per Year (in thousands)	Annual Dollar Impact (in millions)	
Alabama	1,953,438	1,738	\$322	262	\$48	462	\$87	1,260
Alaska	296,570	313	\$58	22	\$4	52	\$10	1,306
Arizona	2,666,059	2,595	\$480	259	\$47	387	\$73	1,216
Arkansas	1,239,424	1,180	\$218	147	\$27	264	\$50	1,284
California	15,946,268	15,840	\$2,932	1,711	\$312	2,761	\$522	1,274
Colorado	2,351,585	2,331	\$432	162	\$30	329	\$62	1,200
Connecticut	1,677,941	1,782	\$330	153	\$28	282	\$53	1,321
Delaware	402,308	381	\$71	46	\$8	78	\$15	1,256
District of Columbia	258,672	246	\$45	28	\$5	45	\$9	1,235
Florida	8,217,907	6,050	\$1,120	1,036	\$189	1,549	\$293	1,051
Georgia	4,315,642	3,644	\$674	525	\$96	865	\$163	1,167
Hawaii	588,012	419	\$78	66	\$12	96	\$18	987
Idaho	686,195	655	\$121	67	\$12	115	\$22	1,220
Illinois	5,716,782	4,999	\$925	634	\$116	1,012	\$191	1,162
Indiana	2,899,065	2,872	\$532	355	\$65	552	\$104	1,304
Iowa	1,476,099	1,156	\$214	135	\$25	248	\$47	1,043
Kansas	1,262,079	1,180	\$218	119	\$22	210	\$40	1,195
Kentucky	1,771,698	2,033	\$376	228	\$42	368	\$70	1,484
Louisiana	1,613,756	1,176	\$218	210	\$38	349	\$66	1,075
Maine	643,080	781	\$145	71	\$13	112	\$21	1,499
Maryland	2,729,270	2,610	\$483	281	\$51	500	\$95	1,243
Massachusetts	2,888,275	3,586	\$664	263	\$48	470	\$89	1,496
Michigan	4,407,542	4,951	\$916	550	\$100	869	\$164	1,445
Minnesota	2,622,827	2,204	\$408	197	\$36	393	\$74	1,065
Mississippi	1,144,329	957	\$177	186	\$34	292	\$55	1,254
Missouri	2,775,923	2,846	\$527	305	\$56	541	\$102	1,330
Montana	435,272	405	\$75	36	\$7	67	\$13	1,167
Nebraska	889,979	758	\$140	82	\$15	143	\$27	1,105
Nevada	1,101,523	892	\$165	102	\$19	175	\$33	1,061
New Hampshire	671,009	711	\$132	58	\$11	105	\$20	1,303
New Jersey	4,134,921	3,631	\$672	436	\$80	722	\$136	1,158
New Mexico	858,378	702	\$130	83	\$15	131	\$25	1,066
New York	8,450,135	8,145	\$1,507	985	\$180	1,474	\$278	1,255
North Carolina	3,856,439	3,074	\$569	474	\$87	799	\$151	1,127
North Dakota	330,523	265	\$49	26	\$5	51	\$10	1,035
Ohio	5,348,143	4,663	\$863	626	\$114	978	\$185	1,172
Oklahoma	1,557,694	1,489	\$276	197	\$36	329	\$62	1,293
Oregon	1,669,500	1,881	\$348	161	\$29	269	\$51	1,384
Pennsylvania	5,600,774	5,625	\$1,041	636	\$116	1,017	\$192	1,300
Rhode Island	499,376	621	\$115	46	\$8	95	\$18	1,526
South Carolina	1,886,736	1,312	\$243	274	\$50	406	\$77	1,055
South Dakota	385,085	319	\$59	34	\$6	63	\$12	1,081
Tennessee	2,601,972	2,523	\$467	372	\$68	591	\$112	1,340
Texas	10,023,381	8,190	\$1,516	1,271	\$232	1,775	\$335	1,121
Utah	1,236,517	1,093	\$202	95	\$17	163	\$31	1,093
Vermont	320,326	341	\$63	28	\$5	52	\$10	1,311
Virginia	3,646,381	3,187	\$590	391	\$71	679	\$128	1,168
Washington	3,048,958	3,347	\$619	301	\$55	517	\$98	1,366
West Virginia	752,398	740	\$137	115	\$21	172	\$32	1,364
Wisconsin	2,706,293	2,376	\$440	225	\$41	441	\$83	1,124
Wyoming	256,614	212	\$39	23	\$4	42	\$8	1,082
<b>National</b>	<b>134,819,073</b>	<b>125,029</b>	<b>\$23,141</b>	<b>15,094</b>	<b>\$2,755</b>	<b>24,460</b>	<b>\$4,620</b>	<b>1,221</b>

Source: Avalere Health analysis. Estimates are attributable only to absenteeism and do not include lost work time due to presenteeism or disability.

Number of employed persons ages 18-64 from US Census Bureau. Current Population Survey's Annual Social and Economic Supplement. Data are employed persons in 2006 excluding children, members of the Armed Forces, those not in the labor force, and the unemployed.

Days absent per year (annual dollar impact) is the product of the number of employed persons per state with each chronic condition and the average days absent per year (average annual dollar impact) attributable to that condition.

Employed persons per state with each chronic condition was obtained by applying age-cohort-specific prevalence estimates for each condition to the number of employed persons in each corresponding age cohort by state; state total is shown. Prevalence estimates for diabetes and hypertension from Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System, self report among adults, 2003-2005. Prevalence estimates for asthma from Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System, 2003. As cited by Kaiser State Health Facts. <http://www.statehealthfacts.org>.

Average days absent per year and average annual dollar impact by condition from Goetzel, R.Z., et al. (2004). Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting U.S. Employers. *Journal of Occupational and Environmental Medicine*, 46(4), 398-412.

**Absenteeism**

Health conditions such as heart disease, hypertension, diabetes, cancer and asthma are among some of the costliest conditions to employers in terms of both health care expenses and lost work days. In a study of the effect of physical and mental health conditions on productivity at six large U.S. employers, researchers determined that employers paid a total of \$3,703 per employee for medical care, absenteeism and short-term disability costs associated with physical and mental health conditions. (This figure is averaged across all employees, not just those with health conditions. The cost per affected worker is much higher.)<sup>11</sup> Each year, 10 common chronic conditions account for an average of more than 10 days of work loss, though some conditions, such as depression, cancer and respiratory disorders, may account for many more.<sup>12</sup>

Avalere Health has estimated the state-by-state impact of three common chronic conditions – asthma, diabetes and hypertension. All told, just these three common conditions together account for significant losses in work days for individual states and the nation’s economy – on average, an estimated

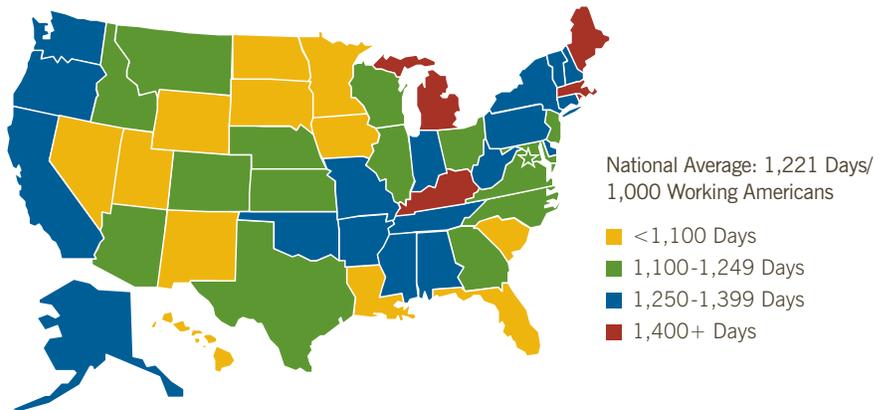
**69**  
million

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Number of working Americans  
who took sick days in 2003

**State-by-state rates of lost work time vary markedly for three common chronic conditions.**

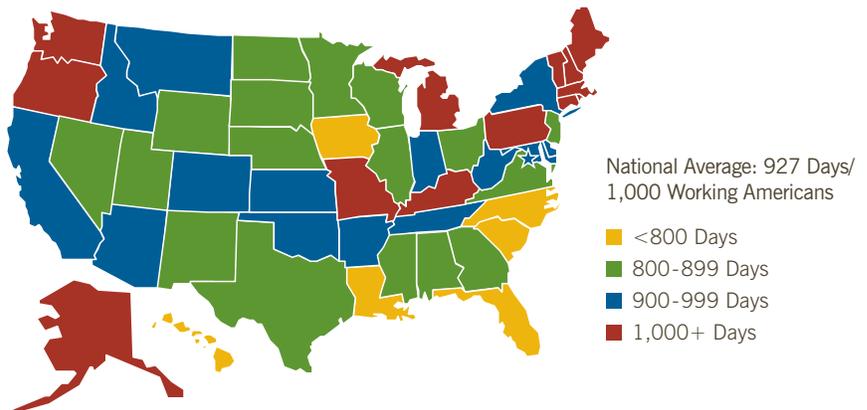
Chart 5: Estimated Annual Number of Days of Work Absence per 1,000 Employed Persons Due to Asthma, Diabetes and Hypertension



Source: Avalere Health analysis using Goetzel, R.Z., et al. (2004). *JOEM*, 46(4), 398-412 estimates of average days per year absent due to common chronic conditions, CDC Behavioral Risk Factor Surveillance System estimates of disease prevalence by state, and Current Population Survey estimates of employed persons by state.

**On average, asthma accounts for 927 days of lost time per 1,000 working Americans each year.**

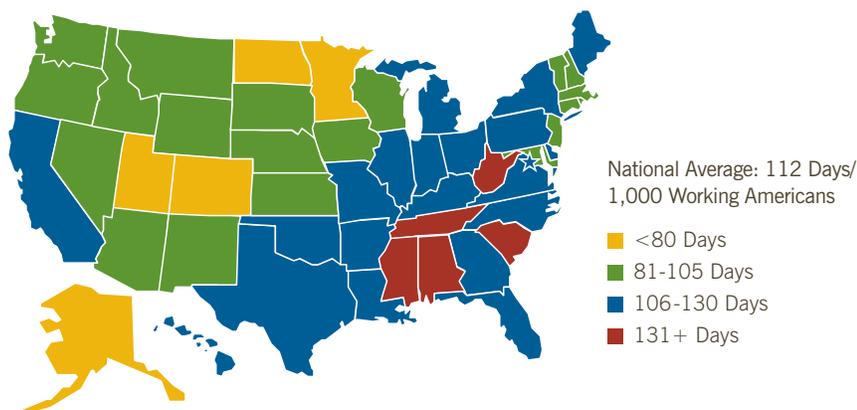
Chart 6: Estimated Annual Number of Days of Work Absence per 1,000 Employed Persons Due to Asthma



Source: Avalere Health analysis using Goetzel, R.Z., et al. (2004). *JOEM*, 46(4), 398-412 estimates of average days per year absent due to common chronic conditions, CDC Behavioral Risk Factor Surveillance System estimates of disease prevalence by state, and Current Population Survey estimates of employed persons by state.

**Diabetes accounts for 112 days of lost time per 1,000 working Americans each year.**

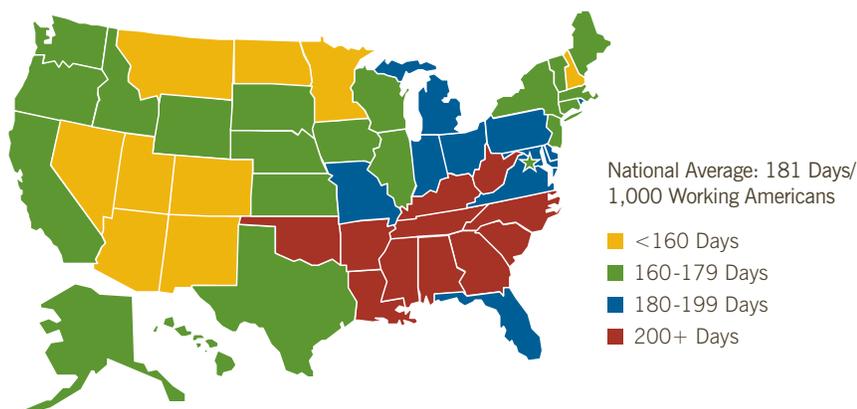
Chart 7: Estimated Annual Number of Days of Work Absence per 1,000 Employed Persons Due to Diabetes



Source: Avalere Health analysis using Goetzel, R.Z., et al. (2004). *JOEM*, 46(4), 398-412 estimates of average days per year absent due to common chronic conditions, CDC Behavioral Risk Factor Surveillance System estimates of disease prevalence by state, and Current Population Survey estimates of employed persons by state.

**Hypertension accounts for 181 days of lost time per 1,000 working Americans each year.**

Chart 8: Estimated Annual Number of Days of Work Absence per 1,000 Employed Persons Due to Hypertension



Source: Avalere Health analysis using Goetzel, R.Z., et al. (2004). *JOEM*, 46(4), 398-412 estimates of average days per year absent due to common chronic conditions, CDC Behavioral Risk Factor Surveillance System estimates of disease prevalence by state, and Current Population Survey estimates of employed persons by state.

1,221 days of work absence per 1,000 employed Americans each year.<sup>13</sup>

However, the individual impact of each of these diseases varies. For example, nationwide asthma accounts for an estimated 927 days absent per 1,000 employed individuals each year, but state-by-state estimates of days of lost work range from 696 (SC) to 1,244 (RI) per 1,000 working persons. And each year, hypertension accounts for an estimated 200 days or more of work absence per 1,000 employed residents of states in the Southeastern U.S., but fewer than 160 days per 1,000 working individuals in states in the North and Southwest.<sup>14</sup> This analysis illustrates the high costs of common conditions and reveals an opportunity to improve health-related productivity.

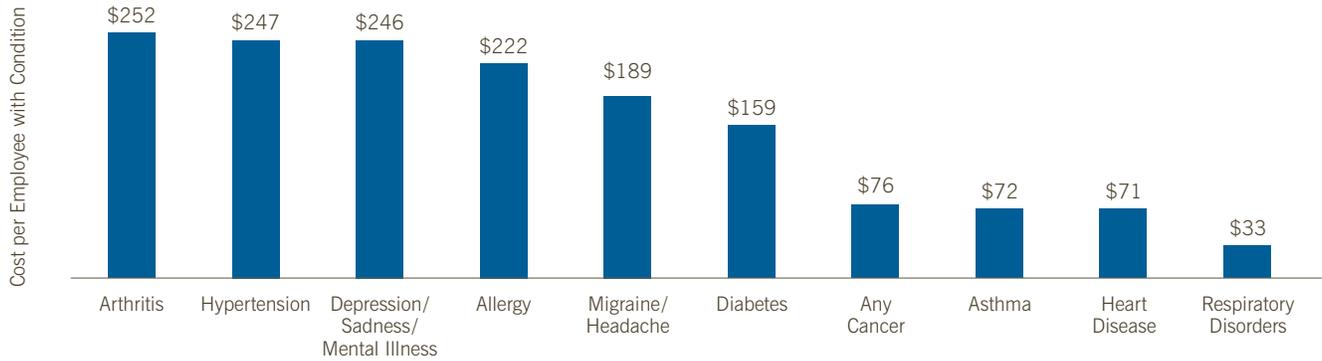
**Presenteeism:**  
Individuals are at work but are not fully functioning because of illness or other medical conditions, resulting in decreased productivity.

**Presenteeism**

Newly emerging research on health and productivity shows that presenteeism – when people are at work but not fully functioning because of illness or other medical conditions – can cut individual productivity by one-third or more.<sup>15</sup> Bank One, in a large internal study of its health care-related costs, found that the company spent \$116 million on direct medical costs in 2000. However, further analysis revealed that direct

**Common chronic conditions contribute to sizeable presenteeism costs...**

Chart 9: Estimated Average Annual Cost of Presenteeism\* per Employee with Condition



Source: Goetzel, R.Z., et al. (2004). Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting U.S. Employers. *Journal of Occupational and Environmental Medicine*, 46(4), 398-412.

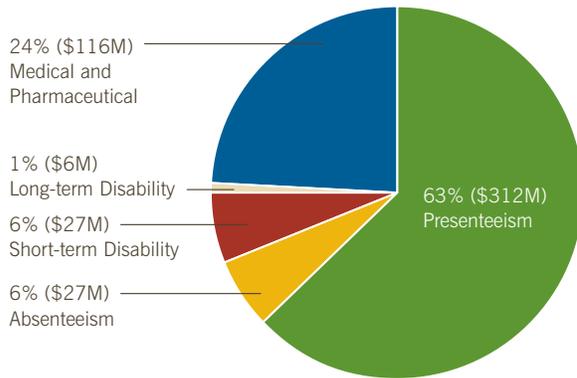
\*Presenteeism: Individuals are at work but are not fully functioning because of illness or other medical conditions, resulting in decreased productivity.

medical costs comprised merely 24 percent of the total health care costs borne by the company. The remaining 76 percent was attributable to indirect health-related costs: \$312 million to presenteeism, \$27 million to absenteeism, \$27 million to short-term disability and \$6 million spent for long-term disability.<sup>16</sup>

Indeed, a large proportion of employers' health-related costs may be due to employees who are sick on the job and, thus, are not working at the same capacity as they would be if healthy. Presenteeism is difficult for employers to measure, as the employees in question are physically present at work, even if compromised, yet the financial impact of presenteeism is serious.

**...which can account for the majority of employers' total health-related costs.**

Chart 10: Bank One's Total Health-related Costs by Expense Category, 2000



Source: Hemp, P. (2004). Presenteeism: At Work—But Out of It. *Harvard Business Review*, 82(10), 49-58.

Note: Figures are based on Bank One annual data for 2000. Workers' compensation accounted for less than 1% of indirect medical costs.

**Better Health – and Health Care – Can Lead to Improved Productivity**

Acute and chronic health problems are burdensome for individuals and society. Illness interferes with individuals' ability to conduct everyday tasks and may

impede their ability to go to work and contribute fully to society. Employers also have recognized that direct health care costs and the associated costs of

lost productivity can be a large component of overall company expenses.

Prevention of chronic illness and its complications, aided by advances in

diagnostic tools and pharmacological therapies, can reduce the burden of these conditions on individuals and the nation's economy. Type 2 diabetes, a major cause of morbidity and mortality in the U.S.,<sup>17</sup> currently affects 20.8 million Americans.<sup>18</sup> As the number of young Americans diagnosed with diabetes continues to grow,<sup>19</sup> the condition is likely to become even more common in the working-age population. Complications associated with diabetes can cause individuals to exit the workforce and may lead to increased absenteeism or impaired productivity among those who remain working.<sup>20</sup> Already, productivity losses due to diabetes are estimated to be about one-third of the yearly total economic costs associated with the illness – \$40 billion of \$132 billion.<sup>21</sup>

Over the past few decades, Type 2 diabetes has become more manageable as a result of technological improvements in devices that enable self-monitoring of blood glucose, better accuracy of HbA1c tests and new insulin and oral drug therapies.<sup>22</sup> Notably, workers who are able to achieve glycemic control of their diabetes with medications are more likely to keep their jobs, are more productive at work, and miss fewer days of work.<sup>23</sup> Glipizide, for example, has been shown to reduce absenteeism significantly and to raise employment retention.<sup>24</sup>

Cancer, a leading cause of morbidity and mortality, as well as productivity loss, costs the U.S. \$190 billion each year.<sup>25</sup> Breast cancer accounts for nearly one in three diagnosed cancers in women.<sup>26</sup> According to the National Institutes of Health, nearly 180,000 women will be newly diagnosed with breast cancer in 2007, and more than 40,000 women are expected to die of the disease.<sup>27</sup>

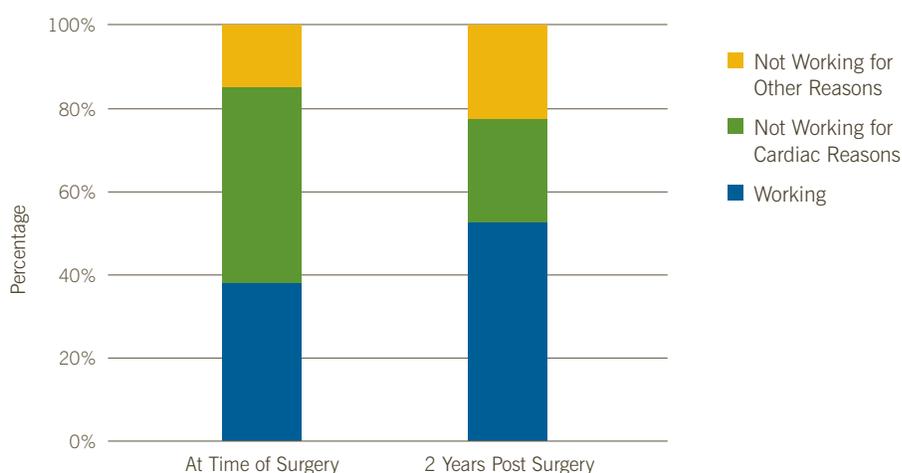
Routine mammography screening may reduce breast cancer mortality by as much as 30 percent. Mammograms offered by employers at the worksite can benefit both the individual and the employer. Employer-sponsored, on-site mammograms help overcome barriers to screening, such as cost and inconvenience, by allowing women to be screened without taking time off from work.<sup>28</sup> Such screening can lead to earlier cancer detection and improved survival. Sixteen of the 18 employees diagnosed with cancer following worksite mammography at Eli Lilly and Company had stage 0 or stage I cancer.<sup>29</sup> But earlier detection via mammography (employer-sponsored, on-site) can also lead to fewer lost workdays – 33.9 days for those screened compared to 74.5 for others in one study – and save money in treatment costs – \$18,526 for

those detected via screening compared to \$35,031 for others.<sup>30</sup>

New surgical techniques and treatments also can facilitate, and even hasten, employees' return to work. For example, recent treatments for heart disease such as angioplasty (PTCA) and coronary artery bypass (CABG) have allowed patients to return to work following surgery, including those who were unemployed due to cardiac ailments prior to surgery. In one study, 77 percent of those employed prior to PTCA or CABG were working again at two years post surgery. Only 11 percent were unable to return to work for cardiac reasons. Further, 45 percent of patients not working due to cardiac causes prior to surgery had returned to work two years following surgery.<sup>31</sup> A separate study of PTCA and CABG found similar results. All patients working before

### Recent treatments for heart disease increase employees' ability to return to work.

Chart 11: Percent of Adults by Employment Status, Before and After Cardiac Surgery



Source: Pocock, S.J., et al. (1996). Quality of Life, Employment Status, and Anginal Symptoms After Coronary Angioplasty or Bypass Surgery. *Circulation*, 94(2), 135-142.

surgery and more than half of patients not working for health reasons were able to return to work after surgery.<sup>32</sup>

Additionally, many health conditions with far less impact on mortality, but very common to individuals of working age, can now be treated and managed effectively. For example, migraines are estimated to cost employers nearly \$13 billion per year in missed work days and lost productivity, with \$8 billion directly attributable to absenteeism alone.<sup>33</sup> Severe headaches may cause employees to leave work early, rest in their offices or call in sick.<sup>34</sup> In the

early 1990s, the FDA approved the first of a new class of medications called triptans, which more effectively stopped a migraine attack and its associated symptoms than did traditional pain medications. One case study found that triptans saved over one hour of productivity per migraine attack – 0.64 absenteeism hours and 0.60 presenteeism hours.<sup>35</sup>

Similarly, seasonal allergies affect millions of Americans, with prevalence highest among working-age adults.<sup>36</sup> A survey by the Employer Health Coalition, Inc. found that workers in Florida suffer-

ing from seasonal allergies lost more than three days of work in a four-week period due to impairment on the job as a result of seasonal allergy symptoms or sedation associated with their allergy medications.<sup>37</sup> However, allergy medications, such as non-sedating antihistamines, can ameliorate allergy symptoms and restore employee productivity. So, while workers with untreated seasonal allergies may have a 10 percent drop-off in productivity during allergy season, workers who use non-sedating antihistamines show no significant declines in productivity.<sup>38</sup>

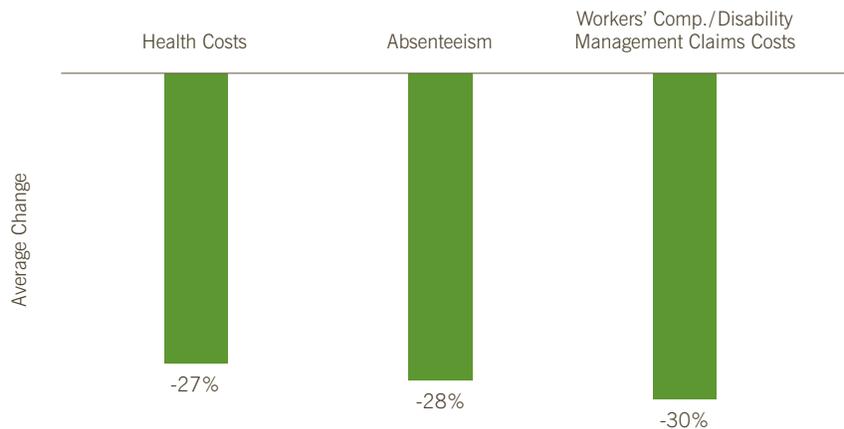
## Employers Recognize Their Role in Promoting Health and Well-being

Employers are now well aware that workers' health and vitality affect their productivity, which in turn impacts the company's performance and competitiveness. Increasingly, employers recognize that they have an important role to play in promoting health and productivity.<sup>39</sup>

Today, employers have an assortment of tools at their disposal that have been shown to promote better health and productivity for employees, including on-site clinics, health promotion and wellness programs, health insurance and sick leave benefits. More than 100 of the nation's 1,000 largest employers now offer on-site care, including clinics with occupational health care, primary care and pharmacy services. That number is forecasted to surpass 250 by the end of 2007.<sup>40</sup> Mortgage insurer

### Workplace health programs reduce costs to employers...

Chart 12: Average Percent Change in Employers' Costs Resulting from Workplace Health Promotion and Wellness Programs



Source: Chapman, L. (2003). Meta-evaluation of Worksite Health Promotion Economic Return Studies. *Art of Health Promotion Newsletter*, 6(6).

“ ”  
from the field

“We believe that if we care for our employees, we will increase our productivity.”

Brent Pawlecki, MD, Associate Medical Director, Pitney Bowes<sup>41</sup>

Freddie Mac operates an on-site health clinic for more than 4,300 employees at its company headquarters; it costs \$586,000 each year, but the annual return on that investment – from savings on direct medical costs and an estimated 12,318 hours saved in time away from work – is \$900,000.<sup>42</sup> Such clinics offer convenience and lower costs for employees as well.

Employers also may offer a range of on-site preventive services including disease management, fitness centers, healthy cafeteria programs, health risk assessments, smoking cessation programs and employee assistance programs.<sup>43</sup>

These programs help employees engage in healthy lifestyles and preventive behaviors. Ninety-six percent of the employee members of Pioneer Hi-Bred International’s corporate fitness center report that the on-site center helps them exercise regularly.<sup>44</sup> Approximately 90 percent of all employers in the U.S. with 50 or more employees say they have some form of health promotion program.<sup>45</sup>

One such example is the Cleveland Clinic Employee Wellness Program. It strives to integrate wellness into the culture of the Cleveland Clinic to enhance employees’ health and quality of life. It provides such things as a health-risk assessment, disease management programs, fitness centers and other wellness-oriented programs. The Clinic is measuring the effects that the wellness program has on employee health and overall satisfaction in addition to a number of other factors.<sup>46</sup>

...and yield a positive return on their investment.

Chart 13: Return on Investment of Workplace Health and Wellness Promotion Programs

<b>Xerox Corporation</b>	For over 3,000 enrolled employees, Xerox’s health promotion program showed savings – \$3 for every \$1 invested – from lower medical costs, reduced absenteeism and presenteeism, reduced workers’ compensation and short-term disability claims, and increased productivity.
<b>Washoe County School District (Reno, NV)</b>	Employees participating in the wellness program missed an average of three fewer work days per year than those who chose not to participate, which translated into a cost savings of \$16 for every \$1 spent on the program.
<b>Navistar International Corp.</b>	Navistar estimates annual savings among employees participating in its health promotion program to be more than \$4.7 million; if program participation reaches 100% of employees, the projected annual savings is estimated to be greater than \$19 million.

Sources: [http://www.hap.org/healthy\\_living/worksitehealth/worksite\\_health.php#1](http://www.hap.org/healthy_living/worksitehealth/worksite_health.php#1). Aldana, S.G., et al. (2004). Financial Impact of a Comprehensive Multisite Workplace Health Promotion Program. *Preventive Medicine*, 40(2), 131-137. <http://www.washoe.k12.nv.us/wellness>.

Another example is the Hospital for Joint Diseases Orthopaedic Institute Return to Work Program, which is designed to prevent lower back pain work-related disability and promote a healthy and expedited return to work. For employees participating in this initiative, 75 percent were able to remain working.<sup>48</sup>

On-site health care and wellness programs show measurable results in improving the health and well-being of participating employees. For example, at-risk employees participating in Highsmith, Inc.’s wellness initiatives realized sizeable declines in high blood pressure and high cholesterol.<sup>49</sup> Employees of SwedishAmerican Health System in Rockford, IL, who attended a 40-hour course addressing nutrition, physical activity and risk factors

for chronic disease not only gained increased awareness of healthy habits, they also had significantly lower cholesterol, blood pressure and body fat six months after completing the program.<sup>50</sup>

Workplace disease management and health promotion programs not only help employees get and stay healthy, they also pay dividends. A review of 42 published studies of workplace health promotion and wellness programs found an average savings of \$5.93 for every \$1 spent. This study also found workplace wellness programs yielded an average reduction in sick leave absenteeism of 28 percent; in health costs of 26 percent; and in workers’ compensation and disability management claims costs of 30 percent.<sup>51</sup> In general, savings are due to lower medical costs, reduced



“...there is compelling evidence to support that healthy employees have lower medical costs and higher productivity...”

Delos M. (Toby) Cosgrove, MD, President and CEO, Cleveland Clinic Health System, about the Cleveland Clinic Employee Wellness Program<sup>47</sup>

absenteeism and presenteeism, fewer workers' compensation and short-term disability claims, and increased productivity. For example, Johnson & Johnson's health and wellness program saved an estimated average of \$225 per employee per year for the first four years after the

program's introduction. These reported savings are from reduced medical expenditures alone and do not count productivity gains, which are expected to further boost Johnson & Johnson's rewards.<sup>52</sup>

Employees, of course, want to stay healthy, and they appreciate the avail-

ability of workplace wellness benefits. More than half of 1,200 employees at small to mid-sized firms recently surveyed agreed that having a wellness program encouraged them to remain with their current employer, work harder and perform better.<sup>53</sup>

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## Health Insurance and Other Benefits Make a Difference

In addition to offering on-site primary care clinics or sponsoring health promotion programs, employers believe that offering health insurance can contribute to company performance. In one survey, two-thirds of small employers said they believe that health benefits contribute to better employee health, and more than one-half agreed that insurance coverage helps to reduce absenteeism.<sup>54</sup> In another survey,

40 percent of employers agreed health benefits were "extremely or very important" for improving worker productivity.<sup>55</sup>

Health insurance coverage also is important to the economy at large. The Institute of Medicine estimates the value lost to the economy due to poorer health, disability and early death among uninsured Americans is between \$65 billion and \$130 billion each year.<sup>56</sup>

Furthermore, other common employer-sponsored benefits, including paid sick leave, also may boost productivity. For example, workers who are able to take paid time off to see a doctor are actually likely to take fewer sick days than workers who cannot take paid leave. Moreover, workers with paid sick leave are less likely to come to work sick, and thus are more likely to be productive while at work.<sup>57</sup>

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## Improvements in Health Benefit Both Individuals and Society

Acute and chronic illness not only affects individuals, it also represents a significant loss to our nation's economy in the form of sick days and days of reduced capacity at work. These costs may only grow as more workers are afflicted with chronic conditions such as diabetes. However, advances in health care offer more effective, more tolerable and less invasive treatment options to help people lessen or eliminate symptoms of acute and chronic illness, recover from illness more quickly and regain or maintain employment.

### QUESTIONS FOR CONSIDERATION

- How can employers and health care providers, along with others in their communities, partner to improve the health and productivity of workers?
- What can employers do to encourage healthy behaviors and timely care-seeking behaviors among their employees, for both preventive and acute needs?
- How might employers better support employees' efforts to return to work following illness?
- In what ways might health care policy reform efforts recognize and support employers that offer health insurance and health promotion programs for workers and their families?

## ENDNOTES

- 1 Murphy, K., and Topel, R. (2006). The Value of Health and Longevity. *Journal of Political Economy*, 114(5), 871-904.
- 2 Bloom, D.E., Canning, D., and Sevilla, J. (November 2001). *The Effect of Health on Economic Growth: Theory and Evidence*. National Bureau of Economic Research, Working Paper No. 8587.
- 3 Kessler, R.C., et al. (2001). The Effects of Chronic Medical Conditions on Work Loss and Work Cutback. *Journal of Occupational and Environmental Medicine*, 43(3), 218-225.
- 4 Davis, K., et al. (2005). *Health and Productivity Among U.S. Workers*. New York, NY: The Commonwealth Fund.
- 5 Dooley, D., Fielding, J., and Levi, L. (1996). Health and Unemployment. *Annual Review of Public Health*, 17, 449-465.
- 6 Avalere Health analysis using estimates of average days per year absent due to common chronic conditions from Goetzel, R.Z., et al. (2004). Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting U.S. Employers. *Journal of Occupational and Environmental Medicine*, 46(4), 398-412., CDC Behavioral Risk Factor Surveillance System estimates of disease prevalence by state, and Current Population Survey estimates of employed persons by state.
- 7 Kessler, R.C., et al. (2001). The Effects of Chronic Medical Conditions on Work Loss and Work Cutback. *Journal of Occupational and Environmental Medicine*, 43(3), 218-225.
- 8 Davis, K., et al. (2005). *Health and Productivity Among U.S. Workers*. New York, NY: The Commonwealth Fund.
- 9 Davis, K., et al. (2005). *Health and Productivity Among U.S. Workers*. New York, NY: The Commonwealth Fund.
- 10 Davis, K., et al. (2005). *Health and Productivity Among U.S. Workers*. New York, NY: The Commonwealth Fund.
- 11 Goetzel, R.Z., et al. (2003). The Health and Productivity Cost Burden of the "Top 10" Physical and Mental Health Conditions Affecting Six Large U.S. Employers in 1999. *Journal of Occupational and Environmental Medicine*, 45(1), 5-14.
- 12 Goetzel, R.Z., et al. (2004). Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting U.S. Employers. *Journal of Occupational and Environmental Medicine*, 46(4), 398-412. The ten conditions include allergies, arthritis, asthma, any cancer, depression/sadness/mental illness, diabetes, heart disease, hypertension, migraine/headaches, and respiratory disorders.
- 13 Avalere Health analysis using estimates of average days per year absent due to common chronic conditions from Goetzel, R.Z., et al. (2004). Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting U.S. Employers. *Journal of Occupational and Environmental Medicine*, 46(4), 398-412., CDC Behavioral Risk Factor Surveillance System estimates of disease prevalence by state, and Current Population Survey estimates of employed persons by state.
- 14 Avalere Health analysis using estimates of average days per year absent due to common chronic conditions from Goetzel, R.Z., et al. (2004). Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting U.S. Employers. *Journal of Occupational and Environmental Medicine*, 46(4), 398-412., CDC Behavioral Risk Factor Surveillance System estimates of disease prevalence by state, and Current Population Survey estimates of employed persons by state.
- 15 Hemp, P. (2004). Presenteeism: At Work—But Out of It. *Harvard Business Review*, 82(10), 49-58.
- 16 Hemp, P. (2004). Presenteeism: At Work—But Out of It. *Harvard Business Review*, 82(10), 49-58.
- 17 Harris, M.I. (1998). Diabetes in America: Epidemiology and Scope of the Problem. *Diabetes Care*, 21(S3), C11-C14.
- 18 American Diabetes Association. All About Diabetes [online]. Available at: <http://www.diabetes.org/about-diabetes.jsp>.
- 19 Mokdad, A.H., et al. (2001). The Continuing Increase of Diabetes in the U.S. *Diabetes Care*, 24(2), 412.
- 20 Tunceli, K., et al. (2005). The Impact of Diabetes on Employment and Work Productivity. *Diabetes Care*, 28(11), 2662-2667.
- 21 American Diabetes Association. (2003). Economic Costs of Diabetes in the U.S. in 2002. *Diabetes Care*, 26(3), 917-932.
- 22 Medtap International. (2004). The Value of Investment in Health Care. Washington, DC.
- 23 Testa, M.A., and Simonson, D.C. (1998). Health Economic Benefits and Quality of Life During Improved Glycemic Control in Patients with Type 2 Diabetes Mellitus: A Randomized, Controlled, Double-blind Trial. *JAMA*, 280, 1490-1496. As cited in Goldfarb, N., et al. (2004). Impact of Appropriate Pharmaceutical Therapy for Chronic Conditions on Direct Medical Costs and Workplace Productivity: A Review of the Literature. *Disease Management*, 7(1), 61-75.
- 24 Lichtenberg, F.R. (2005). Availability of New Drugs and Americans' Ability to Work. *Journal of Occupational and Environmental Medicine*, 47(4), 373-380.
- 25 National Heart, Lung, and Blood Institute. *Fact Book Fiscal Year 2002* [online]. Available from URL: <http://www.nhlbi.nih.gov/about/O2factbk.pdf>.
- 26 American Cancer Society. (2005). *Breast Cancer Facts & Figures 2005-2006*. Atlanta, GA. Available at: <http://www.cancer.org/downloads/STT/CAFF2005BrFacts.pdf>.
- 27 National Cancer Institute. Breast Cancer Home Page [online]. Available at: <http://www.cancer.gov/cancertopics/types/breast>. Last accessed on March 19, 2007.
- 28 Dershaw, D.D., Liberman, L., and Smolek Lippin, B. (1992). Mobile Mammographic Screening of Self-referred Women: Results of 22,540 Screenings. *Radiology*, 184(2), 415-419.
- 29 Reynolds, H.E., et al. (1997). Fixed-facility Workplace Screening Mammography. *American Journal of Roentgenology*, 168(2), 507-510.
- 30 Burton, W., and Hoy, D. (1996). The Economic Benefit of a Corporate-sponsored Mammography Program. *AHP's Worksite Health*, 3(2):27-33. As cited in: Musich, S.A., et al. (2004). Overview of Disease Management Approaches: Implications for Corporate-sponsored Programs. *Disease Management and Health Outcomes*, 12(5), 299-326.
- 31 Pocock, S.J., (1996). Quality of Life, Employment Status, and Anginal Symptoms After Coronary Angioplasty or Bypass Surgery. *Circulation*, 94, 135-142.
- 32 McGee, H.M., et al. (1993). Return to Work Following Coronary Artery Bypass Surgery or Percutaneous Transluminal Coronary Angioplasty. *European Heart Journal*, 14, 623-628.
- 33 Hu, X.H., et al. (1999). Burden of Migraine in the United States, Disability, and Economic Costs. *Archives of Internal Medicine*, 159, 813-818.
- 34 Healthcare Intelligence Network. (2007, January 17). Migraines Underdiagnosed, Costing Employers. *Healthcare Daily Data Bite*, 3(12). Available at: [www.hin.com](http://www.hin.com).
- 35 Lichtenberg, F.R. (2005). Availability of New Drugs and Americans' Ability to Work. *Journal of Occupational and Environmental Medicine*, 47(4), 373-380.
- 36 Nathan, R.A., et al. (1997). Prevalence of Allergic Rhinitis in the United States. *Journal of Allergy and Clinical Immunology*, 99(2), S808-S814.
- 37 Reese, S. (2000). The Hidden Cost of Allergies. *Business & Health* [online]. Available at <http://www.businessandhealth.com/hostedfiles/features/allergiesatwork/physician/article03.htm>.
- 38 Burton, W.M., et al. (2001). The Impact of Allergies and Allergy Treatment on Worker Productivity. *Journal of Occupational and Environmental Medicine*, 43(1), 64-71.
- 39 Goetzel, R.Z., et al. (2002). The Business Case for Quality Mental Health Services: Why Employers Should Care About the Mental Health and Well-being of their Employees. *Journal of Occupational and Environmental Medicine*, 44, 320-330.
- 40 Freudenheim, M. (2007, January 14). Company Clinics Cut Health Costs. *The New York Times*.
- 41 PricewaterhouseCoopers Health Research Institute. (2005). *Take Care of Yourself: Employers Embrace Consumerism to Control Healthcare Costs*. Available at: <http://pwchc.com/cgi-local/hregister.cgi?link=reg/consumerism.pdf>.
- 42 American College of Physicians. (2007). Big Employers Bring Health Care In-house. *ACP Observer*. Available at <http://www.acponline.org/journals/news/jan-feb07/clinics.htm>.
- 43 National Business Group on Health. (2006). *Preventing Chronic Disease in the U.S. and Abroad*. Washington, DC: NBGH.
- 44 Partnership for Prevention. (2006). Pioneer Hi-Bred International, Inc. *Leading by Example: CEOs on the Business Case for Worksite Health*. Available at: [www.prevent.org](http://www.prevent.org)
- 45 Association for Worksite Health Promotion. US Department of Health and Human Services. (2000). *1999 National Worksite Health Promotion Survey*. Northbrook (IL): Association for Worksite Health Promotion and William M. Mercer, Inc. As cited in Aldana, S.G., et al. (2004). Financial Impact of a Comprehensive Multi-site Workplace Health Promotion Program. *Preventive Medicine*, 40(2), 131-137.
- 46 Partnership for Prevention. (2006). Cleveland Clinic Health System. *Leading by Example: CEOs on the Business Case for Worksite Health*. Available at: [www.prevent.org](http://www.prevent.org).
- 47 Partnership for Prevention. (2006). Cleveland Clinic Health System. *Leading by Example: CEOs on the Business Case for Worksite Health*. Available at: [www.prevent.org](http://www.prevent.org).
- 48 Healthcare Association of New York State. (2004-2005 edition). *Community Health Initiatives Across New York State*.
- 49 Partnership for Prevention. (2006). Highsmith, Inc. *Leading by Example: CEOs on the Business Case for Worksite Health*. Available at [www.prevent.org](http://www.prevent.org).
- 50 Aldana, S.G., et al. (2005). The Effects of a Worksite Chronic Disease Prevention Program. *Journal of Occupational and Environmental Medicine*, 47(6), 558-564.
- 51 Chapman, L.S. (2003). Meta-evaluation of Worksite Health Promotion Economic Return Studies. *The Art of Health Promotion*, 6(6), 1-16.
- 52 Ozminkowski, R.J., et al. (2002). Long-term Impact of Johnson & Johnson's Health & Wellness Program on Health Care Utilization and Expenditures. *Journal of Occupational and Environmental Medicine*, 44(1), 21-29.
- 53 Principal Financial Group. (2006). *The Principal Financial Well Being Index<sup>SM</sup> Executive Summary of Wellness Results*. [http://www.principal.com/wellbeing/2006/wbwellness\\_4q2006\\_execsumm.htm](http://www.principal.com/wellbeing/2006/wbwellness_4q2006_execsumm.htm).
- 54 Fronstin, P., and Helman, R. (2000). *Small Employers and Health Benefits: Findings from the 2000 Small Employer Health Benefits Survey*. EBRI Issue Brief No. 226. Washington, DC: Employee Benefit Research Institute. As cited in Institute of Medicine. (2003). *Hidden Costs, Value Lost: Uninsurance in America*. Washington, DC: National Academies Press.
- 55 Christensen, R., et al. (2002). *Employee Attitudes and Practices Affecting Health Benefits and the Uninsured*. Washington, DC: Employee Benefit Research Institute.
- 56 Institute of Medicine. (2004). *Insuring America's Health, Principles and Recommendations*. Washington, DC: National Academies Press.
- 57 Davis, K., et al. (2005). *Health and Productivity Among U.S. Workers*. New York, NY: The Commonwealth Fund.



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