

Healthy employees, healthy profits:
A stronger business case for employee
health management programs



Introduction

It is a simple but potentially paradigm-shifting reality for senior business leaders: healthy employees lead to healthy business metrics. For decades, though, the health management industry has focused primarily on building a value story around medical cost savings. The reality is that for many business line management leaders — such as chief operating officers, VPs of sales or business unit general managers — medical cost savings may not be a priority. Consequently, championing health management programs internally may not align with their business objectives, either. Instead, the health management industry needs to focus on demonstrating the impact of their programs and services on key business performance metrics.

These should include industry-specific operational business metrics (retail, call-centers, financial, etc.), and other metrics, such as total revenue per employee, shareholder value and earnings multiples (see Figure 1 below for industry-specific examples). By focusing on the impact of health management programs on business performance metrics, senior Human Resource leaders are more likely to get the attention and support of line management within organizations.

[Figure 1] Sample business performance metrics by industry

Business performance metrics	
 All industries	Total revenue per employee Shareholder value Earnings multiples Net income Gross margin Gross profit Customer satisfaction
 Insurance	Average insurance policy size Average handling time of claims Net written premium Number of new insurance policies
 Manufacturing	Throughout workday Defects per million opportunities (DPMO) Production plan variance Manhour per equivalent unit
 Retail	Comp stores sales growth year over year Inventory turnover Profit per customer visit Sales per selling hour
 Telecom	First call resolution (FCR) rate Contact quality
 Transportation (air)	Turnaround time % of on-time departures/arrivals Revenue per available seat per mile Profit per airplane

The road ahead: Next generation validation for health management programs

Health management research has evolved over time. Initially, the industry focused on a medical cost-savings model. As a result, a substantial body of peer-reviewed research connects health risks to medical cost increases, and health management interventions to medical costs savings.

Over time, research has also focused on a productivity savings model. Although more limited in scope, there is some research that connects health risks to productivity losses and health management interventions to productivity improvements.

This opinion paper suggests it's time for another research evolution — one that connects health risk reduction to improvements in business performance metrics such as revenue, market value, shareholder returns and other operational metrics.

- First, we review existing peer-reviewed research, which connects the existence of health risk factors to productivity loss.
- Next, we bring to light the progress made in connecting health management interventions to productivity improvements, in addition to the limited progress made in connecting health management interventions to business performance metrics.
- Finally, we highlight the need for additional research exploring the correlation between health care risk reduction and improvements in business performance metrics.

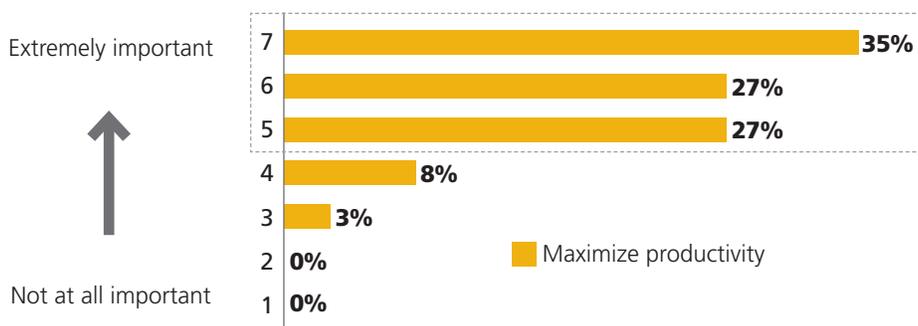
Health risks linked to productivity loss

Eighty-nine percent of employers surveyed believe offering health and wellness programs is important to maximizing productivity, according to a recent Optum research study (see Figure 2). And it's no surprise, considering that a sizeable portion of the health management literature has demonstrated that as health risks increase, productivity decreases (see Table 1).

Employees' health-related productivity costs are, on average, 230 percent greater than medical and pharmacy costs.

Source: *Health and Productivity as a Business Strategy: A Multi-Employer Study* (Loeppke et. al), Journal of Occupational and Environmental Medicine.

[Figure 2] Eighty-nine percent of employers surveyed believe offering health and wellness programs is important to maximizing productivity



Source: *Driving Value: Estimating the Health and Economic Impact of Health & Disease Management Services*, Optum

Researchers have found that health-related productivity losses cost employers substantially more than medical and pharmacy costs.¹ Employee health problems lead to approximately 41 minutes of absence and 2 hours and 29 minutes of lost productivity each week.² In any given workweek, that amounted to more time spent impaired while at work than being absent from the job.

Self-screening tools such as health risk assessments (HRAs), along with productivity measurement instruments like the Work Limitations Questionnaire (WLQ) and Health and Work Performance Questionnaire (HPQ), have made it possible for researchers to explore this connection between health risk factors and diminished productivity in depth. Using these types of instruments, a study of 7,026 employees of a national financial services company found that workers who decreased their health risks — whether a lifestyle factor such as smoking, or a psychological factor such as job satisfaction — generally experienced increased productivity.³ Conversely, those who developed or experienced exacerbated health risks saw a decrease in on-the-job productivity, often referred to by worksite health promotion researchers as presenteeism.

Other studies have explored how specific health risks factors such as cigarette and alcohol use have diminished productivity at great cost to employers. Life dissatisfaction, job dissatisfaction and poor health, among other risk factors, can contribute to self-reported work limitations, translating into productivity losses totaling \$2,592 per employee per year.⁴ Researchers have also underlined obesity as a major driver of absenteeism and contributor to increased productivity costs for employers, totaling an estimated \$11.7 billion annually in the United States.⁵ Compared to employees of average weight, overweight and obese employees are responsible for a 10 to 12 percent higher presenteeism rate.⁶ On an individual basis, overweight and obese employees cost employers \$201 and \$644 more per year, including both medical costs loss and on-the-job productivity loss.⁷

Employee health problems lead to:



2 hours 29 minutes of lost productivity and



41 minutes of absence each week.

¹ *The Relationship Between Health Risk and Productivity*, Journal of Occupational and Environmental Medicine, Vol. 46, No. 7, July 2004, p. 741.

² *The Association Between Health Risk Change and Presenteeism*, JOEM, Vol. 48, No. 3, March 2006, p. 252.

³ *The Association of Health Risks with On-the-Job Productivity*, JOEM, Vol. 47, No. 8, Aug. 2005.

⁴ *The Cost of Obesity in the Workplace*, JOEM, Vol. 52, No. 10, Oct. 2010. Also, see *Occupation-Specific Absenteeism Costs Associated with Obesity and Morbid Obesity*, JOEM, Vol. 49, No. 12, Dec. 2007.

⁵ *A Multi-Worksite Analysis of the Relationships Among BMI, Medical Utilization and Worker Productivity*, JOEM, Vol. 52, No. 1, January 2011.

⁶ *Ibid.*

⁷ *Impact of a Health Promotion Program on Employee Health Risks and Work Productivity*, American Journal of Health Promotion, Vol. 22, No. 1, Sept./Oct. 2007.

[Table 1] A literature sample of health risks linked to productivity loss

This table represents a sampling of peer-reviewed studies from the health management literature, highlighting those that demonstrate how employee health impacts productivity.

STUDY	JOURNAL	KEY FINDINGS
<i>The Cumulative Impact and Associated Costs of Multiple Health Conditions on Employee Productivity</i> (Iverson et. al)	Journal of Occupational and Environmental Medicine Vol. 52, No. 12, December 2010	<ul style="list-style-type: none"> • Overall productivity losses due to 13 different health conditions totaled more than 27 days per employee, approximately 12.3 percent of employee capacity.
<i>The Relationship Between Health Risks and Health and Productivity Costs Among Employees at Pepsi Bottling Group</i> (Henke et. al)	Journal of Occupational and Environmental Medicine Vol. 52, No. 5, May 2010	<ul style="list-style-type: none"> • Of 10 health risk factors examined, weight, blood pressure, glucose and cholesterol represent the most significant cost to employers. • Even a 1-percentage-point reduction in employees' health risks result in annual per capita savings ranging from \$83.02 to \$103.39. • Employers can reduce these costs and net substantial savings by targeting these risk factors through comprehensive health management programs.
<i>A Multi-Worksite Analysis of the Relationships Among Body Mass Index, Medical Utilization and Worker Productivity</i> (Goetzel et. al)	Journal of Occupational and Environmental Medicine Vol. 52, Suppl. 1, January 2010	<ul style="list-style-type: none"> • Compared to normal weight employees, presenteeism rates were 10 and 12 percent higher for overweight and obese employees. • Obese and overweight workers cost employers \$644 and \$201 more per employee per year, respectively.
<i>Health and Productivity as a Business Strategy: A Multi-Employer Study</i> (Loeppke et. al)	Journal of Occupational and Environmental Medicine Vol. 51, No. 4, April 2009.	<ul style="list-style-type: none"> • Researchers establish a strong link between employee health and productivity. • Health-related productivity costs far outpace medical and pharmacy costs, on average by \$2.30 to \$1. • Chronic conditions can result in lost productivity costs.
<i>The Relationship Between Modifiable Health Risk Factors and Medical Expenditures, Absenteeism, Short-Term Disability and Presenteeism Among Employees at Novartis</i> (Goetzal et. al)	Journal of Occupational and Environmental Medicine Vol. 51, No. 4, April 2009.	<ul style="list-style-type: none"> • Researchers found three factors — high biometric laboratory values, cigarette and alcohol use, and poor emotional health — led to higher levels of presenteeism for men and women, and higher absenteeism for women. • Companies have the ability to reduce medical expenditures and productivity loss if they can reduce health risks for their employees.
<i>The Association Between Health Risk Change and Presenteeism Change</i> (Burton et. al)	Journal of Occupational and Environmental Medicine, Vol. 48, No. 3, March 2006.	<ul style="list-style-type: none"> • Workers who decreased their health risks experienced increased productivity. • Workers who developed risk factors saw decreased productivity. • Each risk factor increased or reduced resulted in a 1.9 percent productivity loss over time, \$950 productivity change per year per risk.
<i>The Association Between Health Risks and On-the-Job Productivity</i> (Burton et. al)	Journal of Occupational and Environmental Medicine Vol. 47, No. 8, Aug. 2005.	<ul style="list-style-type: none"> • Productivity loss totaled between \$1,392 and \$2,592 per employee per year.
<i>The Relationship Between Health Risks and Work Productivity</i> (Boles et. al)	Journal of Occupational and Environmental Medicine Vol. 46, No. 7, July 2004	<ul style="list-style-type: none"> • Presenteeism resulted in an average of 41 minutes of absense and 2 hours and 29 minutes of lost productivity per employee during the workweek.

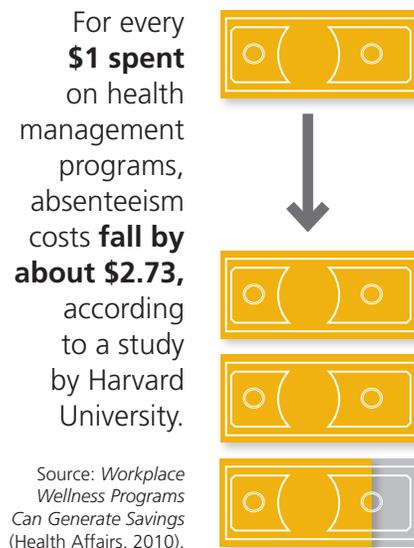
The value of health management interventions

If health risk factors lead to diminished productivity, then health management program interventions provide employers an opportunity to increase employee productivity, while also increasing a broad array of industry-specific business metrics.⁸ But here, the body of relevant research is much more limited, and further, forward-looking research is needed to reveal the full extent to which employers stand to gain from investments into such programs.

In the research that does exist, though, companies with top-tier health management programs have been found to reap considerable productivity-related returns (Table 2). In fact, for every \$1 spent on health management programs, absenteeism costs fell by about \$2.73, according to a study by Harvard University.⁹

Firms with the most effective health and productivity programs saw 1.8 fewer days of absenteeism, lower levels of presenteeism and turnover.¹⁰ Two-thirds of highly effective companies reported less than 10 percent of lost time due to employees not being fully engaged, compared with roughly one-third of companies with low effectiveness scores.¹¹ A UK-based study that included a multi-component health management program intervention group and control group found that an additional 6.32 hours of fully productive working time was gained over a 4-week period.¹²

Firms with the most effective health and productivity programs are not only linked to higher workforce productivity and lower rates of work loss, but also stronger business performance than their competitors. These firms experienced 28 percent higher shareholder returns and 11 percent higher revenue per employee — a difference of \$132,000 industry-adjusted revenue per employee.¹³



Companies with the most effective health and productivity programs experience:

11 percent
higher revenue per employee

1.8
fewer days absent

28 percent
higher shareholder returns

Source: *The Health and Productivity Advantage: Staying@Work*, Towers/Watson & National Business Group on Health, 2009/2010.

8 *The 2007–2008 Staying@Work Survey Report*, National Business Group on Health.

9 *Workplace Wellness Programs Can Generate Savings* (Health Affairs, 2010).

10 *The Health and Productivity Advantage: Staying@Work*, Towers Watson & National Business Group on Health, 2009/2010.

11 Ibid.

12 *AJHP – Impact of a health Promotion Program on Employee Health Risks and Productivity*, Mills et al, 2007.

13 *Pathway to Health and Productivity: Staying @ Work*, Towers Watson & National Business Group on Health, 2011/2012.

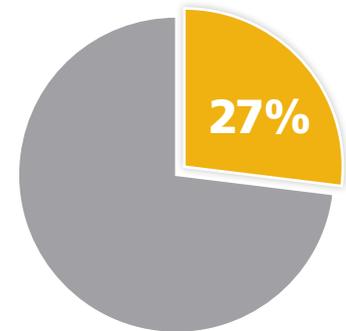
[Table 2] A literature sample of health management interventions linked to productivity savings and business performance metrics

This table features a sampling of studies that begin to show how health management program interventions impact productivity.

STUDY	JOURNAL/SPONSOR	KEY FINDINGS
<i>The Relationship Between 11 Health Risks and Medical and Productivity Costs for a Large Employer</i> (Kowlessar et. al)	Journal of Occupational and Environmental Management, 2011	<ul style="list-style-type: none"> • Obesity, high blood pressure, high triglycerides, inadequate exercise and high blood glucose were health risks identified as areas for potential savings to employers. • Cost reductions for employers, when certain risk factors are reduced by 2 percent, can total up to \$2.9 million.
<i>Workplace Wellness Programs Can Generate Savings</i> (Baicker et. al)	Health Affairs, Vol. 29, No. 2, Feb. 2010	<ul style="list-style-type: none"> • Every employer dollar spent on wellness programs yields a \$3.27 decrease in medical costs, and a \$2.73 decrease in absenteeism costs.
<i>The Impact of an Integrated Population Health Enhancement and Disease Management Program on Employee Health Risk, Health Conditions and Productivity</i> (Loeppeke et. al)	Population Health Management, Vol. 11, No. 6, 2008	<ul style="list-style-type: none"> • Integrated population health enhancement helps employees overcome health risks and obstacles to productivity. • Findings reinforce the view that “good health is good business.” • Absenteeism decreased across the impacted population of employees. • Employees took an HRA, and received personal health coaching through mailings and by phone.
<i>Impact of a Health Promotion Program on Employee Health Risks and Work Productivity</i> (Mills et. al)	American Journal of Health Promotion, Vol. 22, No. 1, September/October 2007	<ul style="list-style-type: none"> • A total of 618 employees participated in the program, compared to a control group comprised of 2,500 employees. • Outcomes studied included health risk factors and responses to the World Health Organization health and work performance questionnaire. Among those receiving the program, outcomes improved in all measures, including workplace absenteeism and work performance.
<i>Pathway to Health & Productivity: Staying@Work</i>	Towers Watson & National Business Group on Health, 2011/2012	<ul style="list-style-type: none"> • Companies with comprehensive wellness programs see 18 percent higher market premiums than companies with less effective programs. • Wellness programs offer industry-adjusted revenues that are 40 percent higher than competitor companies with low-effectiveness wellness programs, totaling a difference of \$132,000 per employee per year. • Employers saw a lower likelihood of unplanned absences and disabilities, increasing savings by 30 percent.
<i>The Health and Productivity Advantage: Staying@Work</i>	Towers Watson & National Business Group on Health, 2009/2010	<p>Companies with the most effective health and productivity programs experienced:</p> <ul style="list-style-type: none"> • 11 percent higher revenue per employee • 1.8 percent fewer days absent • 28 percent higher shareholder returns • Decreased presenteeism • Fewer lost days due to disability • Lower levels of turnover
<i>Driving Value: Estimating the economic impact of health and disease management services</i>	Optum	Value driver methodology provides a practical method for measuring and reporting leading indicators of value delivered from health management programs.

Summaries of selected literature

- *Pathway to Health and Productivity: Staying@Work*** (Towers Watson & National Business Group on Health, 2011/2012): In this national study of 335 human resource and/or health benefit managers representing 7.8 million employees across all major industries, a compelling business case emerges underscoring why employers should care about the health of their employees. Put quite simply, “employers with effective [health management] programs achieve significantly better business outcomes,” the researchers write. Among those business outcomes: 18 percent higher market premiums than companies with less effective programs; industry-adjusted revenues that are 40 percent higher than competitor companies with low-effectiveness health management programs, totaling \$132,000 per employee per year. Also, employers reporting saw a lower likelihood of unplanned absences and disabilities, increasing a company's savings by 30 percent. Meanwhile, the survey provides external validation to those companies that are spending more on health management programs. According to the survey, 89 percent of respondents report that health and productivity is a “core component of their organizational health strategy.” In addition, spending on such programs has increased 50 percent over the past two years, and “virtually all respondents expect their organization's support of health and productivity programs to increase over the next two years.”
- *Health and Productivity as a Business Strategy: A Multi-Employer Study*** (JOEM, 2009): This study, which examines health-related lost productivity among 10 employers comprising 51,648 employees, establishes a firm link between health and productivity. Using the self-reported Health and Work Performance questionnaire and more than a million employee medical pharmacy claims, researchers found that health-related productivity costs are significantly higher than medical and pharmacy costs. “The results show that on average, for every \$1 of medical and pharmacy costs, there are \$2.30 of health-related productivity costs in lost work time from absenteeism and presenteeism,” the researchers wrote. “Employers need to explore new ways of integrating absence and presenteeism data into their current data collection and evaluation strategies.”
- *Workplace Wellness Programs Can Generate Savings*** (Health Affairs, 2010): This meta-analysis of the literature underscores the efficacy of health management programs, finding that their combined return on investment and value of investment yields decreased medical costs by \$3.27 for every dollar spent on health management programs, while absenteeism costs fell by roughly \$2.73. “Large employers adopting wellness programs see substantial positive returns, even within the first few years of adoption,” researchers wrote. “Although these benefits surely accrue in part to the employee, it is also likely that they accrue in part to the employer — in the form of either lower replacement costs for absent workers or an advantage in attracting workers to the the firm.”
- *The Relationship Between 11 Health Risks and Medical and Productivity Costs for a Large Employer*** (JOEM, 2011): This examined 11 health risk factors among 77,410 employees at a large U.S. employer based in the Midwest — and it points to the implementation of targeted health management programs as a way for employers to reap significant savings through reduction of health risks. Employees participated in a comprehensive health management program aimed at simultaneously decreasing health risks and increasing their productivity. In doing so, they received a health assessment, access to a Web portal, a health newsletter and lifestyle coaching by telephone. “By linking the health risk profile of each employee to relevant financial metrics,” researchers wrote, “the employer was able to determine the relative economic and productivity cost burdens placed on the company by workers with health risks, and consider targeted health improvement interventions aimed at reducing the costliest risks.” Obesity, high blood pressure and high blood glucose were health risks identified as areas for potential savings to employers. Cost reductions for employers, when certain risk factors are reduced by 2 percent, can total up to \$2.9 million.



Health and productivity costs totaled approximately 27 percent of payroll in the U.S., a 22 percent increase from 2005.

Source: *Pathway to Health and Productivity: Staying @ Work*, Towers Watson & National Business Group on Health, 2011/2012

- **Impact of a Health Promotion Program on Employee Health Risks and Work Productivity** (AJHP, 2007): In this paper, researchers studied the impact of a health promotion program on employees' health risks and productivity at a multinational corporation based in the United Kingdom. A total of 618 employees participated in the program, compared to a control group comprised of 2,500 employees. Only about half of the control group (or 1,242 people) completed the questionnaire. Outcomes studied included health risk factors and responses to the World Health Organization health and work performance questionnaire. Among those receiving the program, outcomes improved in all measures. "The results suggest that a well-implemented multi-component workplace health promotion program can produce sizeable changes in health risks and productivity," researchers concluded. The ROI over a four-week period was £115.21 (\$227). Over the course of the 12-month study, this is equivalent to a return of £691.26 (\$1,364) per individual.

Conclusion

A review of several dozen peer-reviewed studies and business publications demonstrates several key takeaways for business leaders:

1. The prevalence of health risk factors in an employee population can have a significant impact on medical costs and employee productivity and, when addressed and decreased, can result in meaningful savings for the employer.
2. The implementation of comprehensive health management programs can substantially boost productivity metrics such as absenteeism and self-reported presenteeism measures.
3. Unfortunately, the current literature reviewed falls short on demonstrating the full extent to which such programs can influence key business and performance metrics, including shareholder value, and revenue and call volume per employee, among others. These are the metrics necessary to build a stronger business case for health management interventions, especially among a company's senior leaders.
4. To fully estimate the potential of health management interventions, and to gain the support of business line leaders, new research that connects health management programs to key business performance metrics is required.

Over the next several months, Optum will focus on filling this vacuum, as we measure the impact health management program interventions have on next-generation business performance metrics. Additionally, Optum will begin to define and explore the many dimensions of "total well-being" and their impact on productivity and business performance metrics. Senior leadership should expect more forward-looking research soon from Optum.

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