



The Health of the Workforce and Its Impact on Business

A Special Report

from the

ACOEM Health-related Productivity Roundtable



AMERICAN COLLEGE OF
OCCUPATIONAL AND
ENVIRONMENTAL MEDICINE

THE HEALTH OF THE WORKFORCE AND ITS IMPACT ON BUSINESS

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EXECUTIVE SUMMARY

Employee illnesses and injuries place a burden on workers, employers, and the economy. According to the National Safety Council, work injuries in 2001 cost Americans \$132.1 billion or \$970 per worker.¹ As employers have improved workplace safety in the U.S., they now recognize the additional impact on business from *non-occupational* illnesses and injuries, particularly as the workforce ages. On average, for every one dollar of direct medical costs that an employer pays out, two to three dollars (with up to 10 dollars in certain industries) are paid out due to related indirect costs.² In March 2003, with a grant from Pfizer Inc, the American College of Occupational and Environmental Medicine (ACOEM) convened a Health-related Productivity Roundtable. The goal of the Roundtable was to develop consensus statements on the value and impact of employee health enhancement activities, including a perspective on the return on investment (ROI) of these initiatives. The Roundtable participants developed a list of actions for further research and collaborative studies on health and wellness in the workplace and its impact on business, health care providers, insurers, and employees.

Key Findings

Initial efforts to quantify the impact of non-occupational illnesses and injuries have led to an increased awareness of the problem, as well as to a growing awareness of opportunities for improvement in employee health status. It is important for employers to take a comprehensive approach to worker health protection and disease prevention. Studies have shown that integrating messages on job and behavioral risks may prove to be an effective means of enhancing motivation to change health behaviors.³ Companies operating in challenging and competitive economic environments are turning their attention toward understanding the total impact of health and wellness on their bottom line and looking for the solid business case that would enable them to justify an investment in health improvement. Innovative ideas, tools, programs, and partnerships with providers and other groups involved in healthcare are just now beginning to demonstrate measurable results. Employers of all sizes are beginning to discover a competitive edge through investments in health and safety.

The Roundtable participants developed an action agenda to further advance the field of health and wellness and to assist employers in making changes to enhance the health of the workplace and to improve the profitability of the enterprise. The action agenda calls for expanding research and demonstration opportunities in health and safety, fostering policy changes to promote health and wellness, and communicating and marketing successful programs. Some specific actions include:

- Develop a set of metrics, which can be tracked longitudinally to define, quantify, and benchmark the “health” of an employee population.
- Implement projects to collect health-related productivity metrics that can be used to calculate ROI.
- Build additional research and demonstration projects to show that improved health is equal to an increase in safety and productivity and a decrease in total cost.
- Identify examples of programs that produce results.
- Identify and disseminate effective employer initiatives that demonstrate a safer and healthier workplace and improve worker productivity.
- Develop guidelines for the selection of providers that enhance employee health and productivity.
- Catalogue, analyze, and evaluate technologies available to promote health-related productivity and/or identify gaps in such technology.
- Quantify the total economic impact of health and wellness on the business community.
- Encourage organizations to incorporate specific objectives on health and productivity into the *Healthy People 2010* objectives.
- Collaborate with other organizations to advance health and productivity awareness to all stakeholders.

Employers are facing escalating health care costs, the need to leverage human capital, and an aging workforce. Appropriate investment in worker health care has a positive impact on the bottom line.

INTRODUCTION -----

Rising “direct” and “indirect” costs of employee illnesses and injuries are driving corporate “health and productivity” initiatives. Employee work and non-workplace-related illnesses and injuries place a burden on workers, employers, and the economy. According to the National Safety Council, work injuries in 2001 cost Americans \$132.1 billion or \$970 per worker.¹ As employers have improved workplace safety standards throughout the U.S., they now recognize the more significant impact on business from *non-occupational* illnesses and injuries, particularly as the workforce ages. On average, for every one dollar of direct medical costs that an employer pays out, two to three dollars (with up to 10 dollars in certain industries) are paid out due to related indirect costs.²

While important to all businesses, the prevention and treatment of chronic diseases are especially important in knowledge-based industries (financial services, health care, and technology), where the costs of poor health can exceed the manual worker costs.⁴ In the year 2010, 19 percent of the workforce will be age 55 and older.⁵ Corporations will face increasing productivity challenges associated with chronic diseases in an aging workforce.

Initial efforts to quantify the impact of non-occupational illnesses and injuries on worker productivity have led to a growing awareness of opportunities for intervention. It is important for employers to take a comprehensive approach to worker health protection and disease prevention. Studies have shown that integrating messages on job and behavioral risks may prove to be an effective means of enhancing motivation to change health behaviors. Because elimination of job risks is a high priority for workers, reduction of job risks may be required in order to gain credibility with employees and to increase their receptivity to health education messages regarding individual health behaviors.³

Companies are operating in a challenging and competitive economic environment. Many are seeking to understand the total impact of health and wellness on their bottom line and looking for the solid business case that will enable them to justify investments in worker health.

The quality of health care provided to employees with both occupational and non-occupational injuries and illnesses impacts worker absenteeism and productivity. It is known that as the health of a nation’s population improves, so does its gross national product (GNP) and productivity. In fact, “recent decades have witnessed large increases in economic output across OECD (Organisation for Economic Co-operation and Development) countries with increases in

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standards of living and working conditions as well as in health and educational attainment.”⁶ Therefore, companies are searching for models and best practices that promote a healthier workforce and increase productivity.

Research indicates that employers can reduce non-occupational injuries and illnesses, and measure these results, just as they have done in the occupational illnesses and injuries arena. Employers of all sizes are beginning to discover a competitive edge through investments in worker health.

Innovative ideas, tools, programs, and partnerships with organizations responsible for health care are just now beginning to demonstrate measurable results. There is a need to communicate and share these findings to further advance the field.

METHODOLOGY

Roundtable Goals – Consensus and Action Statements

To address the issue of the health of the workforce and its impact on business, the American College of Occupational and Environmental Medicine (ACOEM), supported by an unrestricted educational grant from Pfizer Inc, convened a Health-related Productivity Roundtable. The Roundtable consisted of a small group of leaders from key sectors of business and health who met in Washington, D.C., on March 24-25, 2003. (Appendix A contains a list of Roundtable participants).

The Roundtable's first goal was to discuss and develop consensus statements on the value and impact of health enhancement activities for employees, including a perspective on the return on investment (ROI) of these initiatives. The Roundtable participants then developed a list of action items for further research and collaborative studies relating to the impact of worker health on business, health care providers, insurers, and employees.

Questions Proposed

During this two-day interactive meeting, the participants addressed the following three questions:

- 1 What specific elements should be used to describe the total economic impact of health that demonstrate the ROI and compelling business case for employers to invest in health-related productivity initiatives?**
- 2 What are the tools and resources that can be mobilized to implement successful health innovations?**
- 3 What specific actions could be taken to most effectively advance the field of health and wellness in the workplace?**

Participants developed the following statement to guide their discussion:

The scope of the consensus statements involve the total impact of illness or wellness on the U.S. economy and includes health problems due to work and work problems due to decrements in health. The participants agreed to include in their consideration any medical condition that impacts employees and their ability to perform the job. They also recognized that the continuum of health might impact broad varieties of job categories and an employee's ability to perform from an adequate to a high level of performance.

Consensus Statements

Consensus statements were developed for each of the three questions posed to the ACOEM Roundtable participants.

QUESTION 1:

What specific elements should be used to describe the total economic impact of health that demonstrate the ROI and compelling business case for employers to invest in health-related productivity initiatives?

The Roundtable participants noted that a variety of elements are needed to describe the total economic impact of health and wellness on the business community, both on a macroeconomic level and on a microeconomic level. Capturing the ROI for health and wellness programs is difficult. Limited studies have been conducted to date. There was agreement on key principles related to assessing the total economic impact of health and wellness, which can be utilized to demonstrate the ROI.

TOTAL ECONOMIC IMPACT

Measurement

The total economic impact of health and wellness on the business community should be measured (**quantified**) using occupational and non-occupational medical and wage replacement costs, and lost productive time due to absenteeism and presenteeism.*

Characterization

The total economic impact should be **characterized** by considering factors such as health (illness, disease, symptoms), demographics (age, gender), and work factors (industry, job type, work divisions) specific to the corporation.

Expression of Impact in Business Terms

The economic impact of health-related worker productivity loss needs to be described in business terms in order to build a common language linking and expressing health and business measures. Business metrics include:

- Dollar profit per employee
- Dollar profit per product
- Dollars per full-time equivalent (FTE) worker
- Percent of the cost of goods sold
- Percent of payroll (useful for non-profit organizations)
- Percent of revenue (total and per employee)
- Percent of expenses (useful for non-profit organizations)

Complexities of Total Impact

The total economic impact of health and wellness on worker productivity includes complex issues such as:

- *Considering and adjusting for group trends and confounding variables.* This includes understanding the impact of the quality of health care on disability, addressing high-cost populations, and adjusting for demographics within an organization.
- *Advancing new metrics.* Until recently, the impact of illnesses and injuries has been primarily quantified using direct medical expenditures and absenteeism to address indirect costs. However, a developing trend

is to use questionnaires that assess presenteeism (i.e., time not on task, decreased quality of work, decreased quantity of work). Examples of such questionnaires include the Work Limitations Questionnaire (WLQ), Health and Performance Questionnaire (HPQ), Stanford Presenteeism Scale (SPS-6), Work Productivity and Activity Impairment Questionnaire (WPAI), and SF-32. These questionnaires include self-reported productivity measures in determining worker productivity.

- *Bringing other factors into focus.* Factors beyond the employees' health also must be considered, including determining the impact of employee health initiatives on family members (e.g., care-giver issues, employee assistance programs). There may be issues within an organization that influence productivity such as the organization of work itself, employee satisfaction, life stress, and personal life and financial problems. Diversity in the workforce and health disparities in population and employer groups (e.g., migrant workers) also should be considered.

The total economic impact of health and wellness on the business community should be measured (quantified) using occupational and non-occupational medical and wage replacement costs, and lost productive time due to absenteeism and presenteeism.

Return on Investment (ROI)

Investment in the correct health, wellness, and safety programs can result in a positive ROI for an organization. Understanding the complete impact of health on the organization is important in order to target interventions where the opportunities are the greatest. Each organization is different and metrics should be modified and customized to best fit the needs of the organization. This can be accomplished by segmenting organization-wide information and providing analysis by geographic or business units.

Statistical models do exist to assess the potential cost effectiveness of health and safety programs in both the public and private sector. For example, the Wharton Model⁸ incorporates the following steps:

- Cost of imperfect health
- Roll up of the business metrics (e.g., the cost for a company)
- Benchmark company metrics against industry standard
- Evaluate the incremental payroll cost of one industry's metrics against the standard
- Design programs with options on how to mitigate those incremental costs
- Implement programs and measure effectiveness

An organization's team orientation, time sensitivity, and the autonomy of the workforce should determine the choice, application, and customization of the economic model used.

Business Case Conclusions

Business and other organizations are poised to activate health and wellness programs because of converging trends that employers are facing (i.e., the "perfect storm" – escalating health care costs, pressure on bottom line, need to leverage human capital, and an aging workforce). Experience is demonstrating that ap-

propriate investment in health has a positive impact on business performance. If the health of the workforce improves, ultimately total health costs and workplace performance will be impacted positively – resulting in business success.

However, as with previous work with health and safety programs, *enhanced health and productivity* must become part of the value system of the organization's culture. Effective health programs and the resulting ROI is ultimately the responsibility of the chief executive officer (CEO) and chief financial officer (CFO). It must be a priority to educate them about the ways to contain costs and improve health and productivity.

Though the CEO makes the final decisions, it is important to educate others in management because they also have leadership responsibilities for their employees. Therefore, the *organizational climate and culture*

of the entire management team has collective responsibility to improve health and resulting productivity.

QUESTION 2:
What are the tools and resources that can be mobilized to implement successful health innovations?

ROI is ultimately the responsibility of the chief executive officer (CEO) and chief financial officer (CFO). It must be a priority to educate them about the ways to contain costs and improve health and productivity.

Although the field is in its infancy, research to date is providing early evidence of the positive impact of health and wellness programs for both profit- and not-for-profit organizations. These innovations and successful initiatives need to be more widely understood, evaluated, and applied in a variety of business settings to further the development and progress of health-related productivity.

To that end, the Roundtable participants developed consensus statements about current tools and resources that can be mobilized to effect change. All of these activities must take into consideration the role of the individual and the need to have employees as motivated partners to be optimally successful. Methods and corporate initiatives should take care to assure that messages and methods engage the individuals effectively in an atmosphere of trust.

* Presenteeism is the health-related productivity loss while at paid work. Presenteeism may include: 1) time not on task (e.g., in the workplace, but not working); 2) decreased quality of work (e.g., increased injury rates, product waste, product defects); 3) decreased quantity of work; 4) unsatisfactory employee interpersonal factors (e.g., personality disorders); and 5) unsatisfactory work culture.⁷

Current Measurement Tools

Measurement tools currently exist to assess both absenteeism and presenteeism in the workplace. In 2002, ACOEM conducted a study to determine the capability of some of these instruments to be applied across various types of industries and disease states.⁷ Among those reviewed by ACOEM were the:

- Employee Health Coalition (EHC) of Tampa Assessment Instrument
- Health and Performance Questionnaire (HPQ)
- Stanford Presenteeism Scale (SPS-6)
- Migraine Work and Productivity Loss Questionnaire (MWPLQ)
- Work Limitations Questionnaire (WLQ)
- Work Productivity and Activity Impairment Questionnaire (WPAI)

There are a number of other instruments also available. Appendix B contains a list of some resources, as well as web sites and corporations to contact for more information on existing and emerging tools.

Data

Businesses currently collect a myriad of data that can be used to assess their individual health issues. Types and categories of data that can be used to assess the impact and measure the improvement of health in the workplace include:

- Scattered absence including paid time off
- Short-term disability
- Family Medical Leave Act (FMLA)
- Long-term disability
- Employee turnover
- Employee satisfaction
- Worker productivity (e.g., telephone call center, claims processed, etc.)
- Workers compensation
- Health status
- Health risk appraisal
- Health Plan Employer Data and Information Set (HEDIS) and other measures of quality care

To be useful, these data sets should be analyzed by level of organization, region, industry, plant/facility, company, department, and/or supervisor to identify trends and causes that might be unique to an area, supervisor relationship, location, product, etc. Business productivity data should be integrated with health-related data (biologic and productivity) to form a common set of understandings and measurements. A common language must be developed to create consistent relationships between the two.

Employers need to process data in ways that will enable them to target particular trends and gauge results. For example, employers should be able to process, capture, and analyze data by medical plan and/or provider, and by the demographics of their workforce. They should be able to integrate and analyze health-related productivity data in an “employee-centric” (aka, integrated) fashion. Where feasible, electronic medical records should be facilitated to capture and analyze clinical data that can be used in population health management. However, there are confidentiality and ethical issues to consider

when collecting and analyzing data. It is prudent and necessary for all organizations to assure compliance with all relevant legal provisions including the Health Insurance Portability and Accountability Act of

Business productivity data should be integrated with health-related data to form a common set of understandings and measurements.

1996 (HIPAA).

A source of valuable data also could be obtained from audit procedures for providers and plans. Payers and consumers need to assess providers and plans in terms of health-related productivity. Just as there are performance measures for medical care quality, these should be established for the impact of providers and plans on health-related productivity.

Currently lacking are appropriate benchmarks for companies to measure their status in health and wellness compared to the national average. Roundtable participants believe it would be beneficial to collect and have a central data base for employers that would allow companies to access a full compendium of benchmarks and “best practices” for health-related productivity applicable to specific industry sectors, types of health-related productivity strategies, and/or measures. Access to this type of data would allow companies to model and customize programs and studies to meet their own situation.

QUESTION 3:

What specific actions could be taken to most effectively advance the field of health and wellness in the workplace?

Given the potential for the considerable positive economic impact of health and wellness programs on business, Roundtable participants developed an action agenda. In general, the action agenda includes expanding research and demonstration opportunities, making policy changes, and communicating and marketing successes. Specific actions are listed below. Also listed are some potential barriers to implementation that organizations should be aware of and for which they can plan proactively.

Strategies to Date

To date, the field has been driven by successful employer initiatives, either through using readily available data or collecting new information, specifically to assess the health outcomes of defined programs.

The field has also been helped by:

- Sophisticated use of health risk assessments and similar tools.
- Funding from pharmaceutical companies and others that stimulate scientific validation of early demonstration projects.
- Information technology and databases that are:
 - 1) linkable and comparable; and
 - 2) now more readily available to employees through health initiatives for health management.

To impact the entire field, the value equation needs to shift from quantifying direct medical costs to quantifying total (direct and indirect) cost. The impact of health on human and business performance needs to shift from a cost to be justified to an investment that should be leveraged (i.e. allow employers to “buy health care” rather than merely “pay for medical care”).

Research and Demonstration Projects

As research into and application of new programs continues, those in the field of health-related productivity and employers can benefit from the experience of others by implementing projects with metrics of health-related productivity that are already defined – to build databases of experience and case studies that will yield further quantifiable evidence to share. Additional research and demonstration projects should be conducted and documented to show that improved health is equal to an increase in safety and productivity and a decrease in total cost.

Current initiatives that seek to assess the corporate health of a company include:

- *Healthy People 2010* targets
 - HEDIS type measures
 - Functional health status (e.g., SF-36)

As previously stated, there is a lack of national data for benchmarking. A simple set of metrics that can be easily measured and which can be used for

national benchmarking would assist companies in understanding their position relative to a national norm. A mechanism to define methods of quantifying the “health” of a population in an index or a set of metrics, which can be tracked longitudinally, is needed. Both the leading and lagging indicators of population health relevant to a corporate environment and those that are linked to economic outcomes and success of the enterprise must be identified.

Also, clear definitions of the attributes of a successful intervention and effective employer initiatives that achieve a safer/healthier workplace (i.e., immunize against the sick workplace syndrome) are needed. Much of the work ahead involves learning from work in progress and defining the measures and elements of the successful programs that can be replicated or customized for future interventions. It will be critical to continue to validate studies of the ROI for various interventions. Much of what is published today is based on cost savings or effectiveness, rather than on true ROI.

The impact of health on human and business performance needs to shift from a cost to be justified to an investment that should be leveraged. . . .

Goals for continued research and demonstration projects should also include:

- defining changes in the restructuring of disability and/or health benefit plans or other programs for the employer;
- identifying some data-driven priorities that could be implemented with a near term ROI for employers (quick hits/early successes); and
- cataloging, analyzing and evaluating the use of effective technologies to promote health-related productivity and/or identified gaps in technology.

The impact of “family friendly” workplace policies, including flex time, child or elder care, etc., may also be target for research and demonstration projects. Finally, it is essential to develop tools and a marketing message, especially for small and medium employers, regarding process and outcome measures to help select quality providers that enhance employee health and functionality.

Policy Actions

ACOEM, along with employers, should be actively involved in national policy advancement to:

- Develop and package an evidence-based message on health and productivity for policymakers.
- Organize briefings with key groups (i.e. the congressional prevention caucus, Partnership for Prevention, and the Business Roundtable).
- Promote a health-related productivity (HRP) data filter that can be used by employers for value-based purchasing with total cost/HRP as the ultimate currency; and
- Incorporate specific objectives on health and productivity through a mid-stream correction to *Healthy People 2010*.

Barriers to Consider

Barriers to successful implementation of health and wellness programs in the workplace may include:

- Potential legal and regulatory barriers such as HIPAA and FMLA.
- Lack of knowledge or awareness of predictive measures for effective health-related productivity activity.
- Alienation of the workforce such that workers do not engage in programs or services.
- Lack of standardization of outcomes, measurements, and processes.

Employers' interests are best served in the context of a maximally productive workforce, which derives . . . from employees' individual and collective work and their personal health, feeling of worth, and quality of life.

- System disincentives (e.g., benefit programs that reward only when an employee is ill or disabled and/or not at work, rather than benefits that an employee could enjoy as an incentive for being healthy and at work).

- Fragmentation of systems (i.e., system silos) including the separation of health/wellness programs from workplace safety and health programs.
- Costs of obtaining and implementing available instruments.

To maximize success, it is imperative to align the efforts of health protection, promotion, and productivity assessment with organizational priorities which are already established. Employers' interests are best served in the context of a maximally productive workforce, which derives, in a large part, from an employee's individual and employees' collective work and personal health, feeling of worth, and quality of life.

CONCLUSION

Overall, there is an emerging field of research showing great promise for the field of health and wellness in the workplace. It would be imprudent to ignore this evidence; however, the Roundtable participants recognize that there is a great deal of work to be done to further explore, document, and advance this field. Therefore, those interested in the field should seek to share information and learn from those who take action steps such as those suggested in this report.

The benefit for both small and large employers to make positive enhancements in their workplaces is substantial and critical in challenging economic times. Those who participated in this Roundtable look forward to seeing this potential realized and hope to contribute in bringing together the ideas and resources of those who can make it happen. Those organizations that are making strides in understanding the strength to be gained by leveraging a healthy workforce for competitive advantage to take action should share this knowledge. These developing practices will bring about a widespread economic impact for American industries and a cultural shift to recognize and support the business priority of workforce health.

Those organizations that are making strides in understanding the strength to be gained by leveraging a healthy workforce for competitive advantage to take action should share this knowledge.

- The total economic impact of health and wellness (or alternatively, injury and disease, or incapacity and disability) on the business community should be measured (quantified) using occupational and non-occupational medical and wage replacement costs, and lost productive time due to absenteeism and presenteeism.
- The total economic impact should be characterized by influencing factors such as health (illness, disease, symptoms), demographics (age, gender, diversity), and work factors (industry, job type, work divisions) specific to the organization.
- Organizations can optimally measure business impact by using the dollar profit per employee, dollar profit per product, the percent of payroll, etc.
- Business productivity data should be integrated with health-related data to form a common set of understandings and measurements.
- Businesses currently collect a myriad of internal data that can be easily analyzed to assess health status of employees and identify needed health and wellness programs.

CONSENSUS STATEMENTS

Following are the consensus statements on health and wellness in the workplace developed by the ACOEM Health-related Productivity Roundtable.

- Investment in the right health, wellness, and safety programs can have a positive ROI. To maximize success, it is imperative to align the efforts of health protection, promotion, and productivity assessment with organizational priorities that are already established.
- The impact of health on human and business performance needs to shift from a cost to be justified to an investment that should be leveraged.

ACTION AGENDA

In order to further advance the field of health and wellness in the workplace and assist employers in making changes to enhance the health of the workforce, the Roundtable participants developed these specific actions:

- Develop a set of metrics, which can be tracked longitudinally to define, quantify, and benchmark the “health” of an employee population.
- Implement projects to collect health-related productivity metrics, which can be used to calculate ROI.
- Build additional research and demonstration projects to show that improved health is equal to an increase in safety and productivity and a decrease in total cost.

- Identify examples of programs that produce results.
- Identify and disseminate effective employer initiatives that demonstrate a safer and healthier workplace and improve worker productivity.
- Develop guidelines for the selection of providers that enhance employee health and productivity.
- Catalogue, analyze, and evaluate technologies available to promote health-related productivity and/or identify gaps in such technology.
- Quantify the total economic impact of health and wellness on the business community.
- Encourage organizations to incorporate specific objectives on health and productivity into the *Healthy People 2010* objectives.
- Collaborate with other organizations to advance health and productivity awareness to all stakeholders.

This consensus statement was developed with the input from experts and experienced participants in the field of health and productivity. The recommendations demonstrate that progress is being made not only in identifying investment in health-related productivity, but also in identifying and continually developing metrics and resources that can demonstrate ROI.

At the same time, it is clear that these efforts are in their early stages. The true utility of the available metrics and interventions will only be realized with a substantially improved articulation of the issues – especially those that take a clinical and scientific evaluation together with a business model understanding. Innovative partnerships with employers, health care providers, professional medical organizations, and others with interests in employee health are using and sharing this type of information to further develop this field and maximize the potential of a healthy workforce.

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APPENDIX A

ACOEM Health-related Productivity Roundtable Participants

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APPENDIX B -----

Resources

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