

ACOEM GUIDANCE STATEMENT

Healthy Workforce/Healthy Economy: The Role of Health, Productivity, and Disability Management in Addressing the Nation's Health Care Crisis

Why an emphasis on the Health of the Workforce is Vital to the Health of the Economy

Special Committee on Health, Productivity, and Disability Management

The United States' health care system is on a collision course with demographic trends and economic realities. In its May 2008 issue, the health policy journal *Health Affairs* predicted that "if current trends persist, sometime between 2016 and 2020 existing federal revenues will cover only health entitlements, Social Security, debt service, and a smaller defense budget, leaving nothing for anything else, including the environment, education or new health initiatives."¹ (These trends are independent of the 2008 crisis in the financial markets.) The aging and retirement of the baby boomers—the so-called "silver tsunami"—is accompanied by an increased burden of chronic disease across all age groups that threaten the U.S. pipeline of healthy, productive workers. The balance between economic net contributors ("workers") and those dependent on government programs, ie, Social Security retirement and disability programs, Medicare, and Medicaid, is undergoing a radical shift.

How can the U.S. meet its obligations to programs such as Medicare and Medicaid as well as Social Security if the engine that supplies

financing, the workforce, is aging and weakened by chronic disease? Simply providing insurance for everyone in the U.S. will not solve this problem. Nor will spending more money on the traditional model of "sick-care" and eventual late-stage medical interventions.

The time has come to accept the fundamental reality that the impending budgetary squeeze, the current health crisis and the workplace are inextricably linked. The workforce is the engine that drives the economy and supports the financial underpinnings of the health care system. The working-age population is, therefore, the key to assuring the future availability of health care in the U.S. Fiscal soundness can be advanced through strategic investment in the health and productivity of the working-age population through a new preventive-based paradigm centered in the workplace.

Environmental Assessment

The United States needs a healthy, able and available workforce to compete in the global economy, and to do this must maintain a critical balance of net contributors versus net dependents. The current workforce of net contributors is aging and is increasingly burdened with chronic illnesses, functional impairments, and work disability, some of which could have been prevented, delayed, or mitigated.

Also of concern is the return on the investment in federal programs such as Social Security Disability, Medicare, and Medicaid. Current federal programs "feed sick care" and "starve prevention," so the taxpayers' investments are not producing the return that they could. The delivery of optimal preventive and early intervention services to currently employed people and the young (our future workforce) is constrained by legislative entitlements that force the government to allocate most dollars to caring for back-end health care problems (many of which could have been prevented) and is also limited by a health insurance industry with inconsistent emphasis on or appreciation of health promotion. In the health care realm, continuing to invest in high technology sick care is a low-leverage investment compared with equivalent investments in preventive and early intervention services when measured in years of productive or high quality life saved.

Additionally, the benefit design and administrative procedures in Social Security disability and public medical programs create disincentives to healing and healthy behavior and promote passive dependency, and at the national policy level, there is very little conversation between the health care sector and the employment sector except about the cost of health care.

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In both governmental programs and private sector organizations, there is little interconnection between the purpose and process of health care delivery and the purpose and outcomes of the stay-at-work and return-to-work (RTW) program process. Employers are not held responsible for helping people stay healthy and employed—and are often able to shift the benefit costs of their employees who become work disabled onto the public programs, both Medicare and Social Security. Some disability insurers do not employ substantial and effective efforts to improve health, functionality, or prevent long term disability and, like employers, are often able to shift the costs to the public through Social Security. Attending physicians often overlook the connection between what they do and maintaining the country's productive workforce, and are typically not reimbursed for it.

Now that 130 million people in the U.S. are living with one or more chronic illness, the question arises—what do “health promotion” and “wellness” programs look like for people who are chronically-ill and/or functionally impaired? Logically speaking, it is still important to offer primary prevention services aimed at the “still-at-risk-because-nothing’s-happened-yet” aspects of people’s lives even though they may already have been dealing with serious problems/challenges in another part of their lives.

In this paper, “prevention” is defined as anything that effectively reduces these adverse outcomes. Health promotion, health education, lifestyle management, safety engineering, hazard recognition, job ergonomics and organizational design, nutrition, prenatal care, immunizations and other wellness services are all primary prevention strategies because they help people stay healthy and productive. Screening and early detection programs, health coaching, biometric testing and pro-active work disability prevention programs

are secondary prevention strategies because they can identify conditions earlier than they would have been by typical clinical manifestation. Disease management, evidence-based quality care management, RTW programs and vocational rehabilitation are tertiary prevention strategies because they can limit the destructive and often disabling impact of serious medical conditions on function in daily life and work, can protect or restore productive lifestyles, and can reduce future costs.

Evidence Supporting Occupational and Environmental Initiatives in the Workplace

Preventive interventions of many types have been shown to be effective including behavior change, benefits design, economic policy, health education, workplace environment and safety culture, public health, and direct medical care services. The way their effectiveness has generally been assessed is by looking for changes in utilization and costs for medical care. However, other outcome derivatives such as changes in presenteeism (present at work but functioning impaired), absenteeism (lost time, productivity loss, continuity loss), the productivity loss that results, as well as costs for disability benefits, and workforce participation must also be considered. Following are specific examples of studies on the efficacy of prevention interventions.

- There are data indicating that well-designed, integrated and supported health promotion programs in industry can reduce health care costs, at least over a short term. Not all studies have shown this, but the evidence does favor somewhere between a \$1.50 and a \$3.00 return on dollars invested.²⁻⁴ In a 2008 report by Naydeck et al, the health prevention program showed a four-year savings of \$1,335,524.² When program expenses of \$808,403 were factored in, the resulting analysis yielded an ROI of \$1.65 for every

dollar spent on the program. This study demonstrates that comprehensive health promotion programs have the potential for lowering health care costs. The July 2007 Conference by the EU Platform on Diet, Physical Activity and Health provided limited evidence on the cost-effectiveness of health promotion in the workplace and articulated the need for further studies in workplace health promotion programs.³

- Well-integrated and supported health enhancement initiatives have been shown to improve health status and productivity in the workplace. For example, Burton et al demonstrated that individuals who reduced their health risks generally saw an improvement in productivity whereas those that increased their health risks or remained the same showed decreased productivity.⁵ The Yen et al study in 2006, demonstrated that one third of the company's costs in medical, pharmacy, and absenteeism was associated with increased health risks.⁶ Numerous studies have shown that the most effective initiatives include integrated health risk assessment, health promotion, health coaching, disease management, disability management, and care coordination services.⁵⁻²⁷
- Research also has demonstrated how appropriate treatment, workplace-linked case management and accommodation and appropriate follow-up can significantly reduce work disability associated with musculoskeletal conditions. There is also a literature on success of specific accommodations in averting work disability, but this often does not indicate that there was usually a parallel occupational health component.²⁸⁻³⁰
- Early interventions that insure an appropriate workplace response, maintain the worker's relationship to the workplace, and make adjustments to achieve a good fit between the worker and the job can be paramount in work disability prevention and RTW. Broadening the focus to include work disability as a separate issue, and the use of

non-medical interventions to treat it can achieve remarkable success, even after very prolonged withdrawal from work. The implementation and support process, driven by a broader conceptual model, is essential to RTW in prolonged work disability.^{31–35}

A New Agenda for Preventive-Based Measures in the Workplace

The American College of Occupational and Environmental Medicine (ACOEM), the nation's leading medical organization devoted to worker health and safety, has developed a realistic action agenda to address these issues. ACOEM believes that more attention and resources should be devoted to health-related services that protect the employability of the working-age population to maximize workforce participation and productivity. Logically, improving health and function as well as supporting people to stay at or RTW preserves employability among working age persons and enhances their attendance and productivity at work. This has been researched and evidence generally supports this proposition. Government should preferentially invest in high-impact services that preserve or improve the overall health and function of the workforce to maintain a proper balance between economic net contributors and net dependents (those dependent on government programs).

In an environment in which health care costs are skyrocketing, the sensible approach is to reduce the burden of illness driving the need for care, and the most powerful way to accomplish this is by focusing on evidence-based prevention. A growing body of research demonstrates the connection between certain preventive practices, improved health and functional status, and lowered total costs—essentially proving the scientific and economic case for prevention. Some studies have shown a return of as much as \$3 per \$1 invested. ACOEM's members are

leaders in this approach—referred to as health and productivity management—which has been extensively studied and is yielding positive results for employers.

Moving the health agenda forward by focusing on prevention in the workplace has the added benefit of addressing the vital issue of America's global competitiveness. Because worker health and the ability to thrive in the world economy are clearly aligned, both are advanced by a new emphasis on prevention.

ACOEM's Advocacy is Based on Four Fundamental Principles That it Believes are Critical in Addressing the Growing Health Care and Budgetary Crisis

Keeping the Workforce Healthy and Productive is Essential to Keeping the Economy Strong. The nation's health system ills are increasing the burden of work disability among its citizens—and the progressive loss of net contributors to the economy. As the final safety net for disabled workers, Social Security's disability benefits programs (SSDI and SSI), Medicare and Medicaid carry the burden of citizens deemed unable to work. Logically, improving health and function as well as making it possible for people to stay at, or return to, work will both preserve employability and help relieve the impending strain on these huge federal programs. A healthy workforce is one of the best indicators of a nation's overall health.

Public Investment in "Better Health" as well as "Better Health Care" Should Advance Beneficial Societal Outcomes, Most Particularly Workforce Health and Productivity. At the national policy level, the health care debate has focused heavily on the medical/pharmacy costs of health care. However, research by experts in occupational medicine has shown that a focus only on medical/pharmacy costs obscures the full benefits of truly improving

the overall health and productivity of the workforce. Improving the health of workers can reduce total costs (health-related productivity loss plus disability benefit costs plus medical/pharmacy costs). An appropriate approach is to view health as a social investment to be leveraged rather than a cost to be justified. Therefore, the impact on the federal budget and the nation's economy—the delivered value to the country—of investing in healthier employees and, by extension, healthier citizens will be best seen in areas extending beyond Medicare and Medicaid.

The Workforce will Become Healthier and More Productive Through Prioritized Investment in Evidence-based Primary, Secondary, and Tertiary Prevention Strategies. Preventive strategies that focus either on the individual or the individual's environment can cost-effectively reduce adverse health conditions, preserve function, and enable employment. Health promotion, health education, safety engineering, hazard recognition, ergonomics and organizational design, nutritional support, prenatal care, immunizations are all examples of primary prevention strategies because they help people stay healthy and productive. Screening and early detection programs, health coaching, biometric testing and pro-active work disability prevention programs are secondary prevention strategies because they can identify and address problems at an early stage when prompt action can be curative or prevent progression. Disease management, evidence-based quality care management, RTW programs and vocational rehabilitation are tertiary prevention strategies because they can limit the destructive and disruptive impact of serious medical conditions on function in daily life and work, can protect or restore productive lifestyles, and can reduce future costs. All these strategies have important roles in preserving the function and employability of individuals.

These Strategies will Succeed Only if Spending on Prevention is Considered a Priority Rather than Discretionary and Only if Incentives are Realigned. Today's federal programs pay minimal attention to preventive health services. Current funding mechanisms allocate most government dollars to caring for medical conditions after they develop, many of which could have been prevented or delayed. Additionally, employers and disability insurers are not held responsible for helping people stay healthy and employed, and are often able to shift the benefit costs of employees that develop significant medical problems onto public programs such as Medicare and SSDI. In some ways, the benefit design and administrative procedures in Social Security's disability programs and Medicare actually create disincentives to healing and healthful behavior.

ACOEM's Seven-Point Action Plan for the Future

ACOEM is committed to supporting a national agenda for system reform that begins with protecting and strengthening the social and economic engine of the economy—the nation's workforce. The plan is built on seven key action points that should guide both public and private efforts:

1. A national consensus should be established for investment in programs to assure a healthy, able, and available U.S. workforce. We must no longer see prevention of disease, impairment, and work disability in the current and future working age population as discretionary. Spending on prevention must become a priority because modest expenditures on evidence-based preventive services offer a return on investment, including net financial savings, years of life saved and years of economic contribution preserved.
2. Programs for prevention and health improvement should be funded in parity with the way that Medicare, Medicaid and private insurers fund care of the sick. Public and private investment in sick care (especially low-leverage end-of-life care) should not be allowed to crowd out higher-leverage investments in prevention that can produce more social benefit for the same cost. There should be parity in the funding of high value evidence-based preventive services in both public and private programs. At a minimum, funding for delivery of preventive services to currently employed people as well as the workforce of the future must be put on an equal footing with existing funding mechanisms for sick-care.
3. Health policy makers and others should go beyond the "medical" definition of prevention to include interventions in other domains that have been shown to improve workforce health and productivity. Reform efforts should include priority investments aimed at increasing the use of evidence-based practices in workplace organizational, management, and safety practices; worksite programs in occupational, personal, and public health; benefits design; economic and social policy; and the delivery of non-traditional services to individuals beyond medical offices.
4. Access to evidence-based preventive and early intervention health care must be ensured. New efforts should focus on design and support of health promotion and early intervention medical services that have been shown to be appropriate investments of public funds, because they keep people healthy, functional, and contributing in the workforce.
5. Financial incentives that will shift consumers and health care providers toward primary and secondary prevention should be designed and implemented. Design employer-based initiatives that offer employees and their dependents incentives to engage in prevention (wellness, early detection and early intervention) programs. Redesign physician fee schedules to assure the economic viability of medical practices in which the physician spends time supporting prevention and health management strategies, including health promotion; addressing risk factors and early indicators to prevent progression to disease; preserving or restoring function; and protecting employability.
6. Preventive approaches should be integrated within new approaches to medical care delivery such as patient-centered physician-driven medical home models. Empowerment of consumers/patients and providing adequate infrastructure support to providers/physicians are important to the success of health and productivity enhancement strategies for individuals and populations. Workplace based and other employer health initiatives, (including on-site clinics and health enhancement programs) can coordinate with and support medical home models and other innovations in delivery of medical care.
7. As these strategies are implemented, major efforts should be taken to evaluate their impact using practical research and case studies designed to document the precise value the strategies are producing. Anticipate the need for refinement over time and employ an evidence-based approach to guide continuous improvement and maximize the return on public investment.

Why Occupational and Environmental Medicine?

The profession of OEM is positioned at the crossroads of the employer-employee-health system interface, making it a logical advocate for health system reform through workplace initiatives. Among all medical specialties, OEM physicians have unique training, expertise and perspective to understand the link between health and productivity as well as

how to help injured, ill and aging workers remain productive and at work. In addition, the OEM community has a high concentration of physicians trained in public health. Their focus on population-based health issues is critically important to health system reform. Thus, OEM physicians have a distinct and logical role to play in advocating for prevention-oriented programs that protect and assure the health of employed and productive citizens. ACOEM is positioned to serve as a central facilitator and convenor in the employer-employee-health system interface, working toward health system reform with partners ranging from not-for-profit health organizations to government and the corporate sector.

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References

- McInturff WD, Weigel L. Déjà vu all over again: the similarities between political debates regarding health care in the early 1990s and today. *Health Aff (Millwood)*. 2008;27:699–704.
- Naydeck BL, Pearson JA, Ozminkowski RJ, Day BT, Goetzel RZ. The impact of the highmark employee wellness programs on 4-year healthcare costs. *J Occup Environ Med*. 2008;50:146–156.
- EU Platform on Diet, Physical Activity and Health. *Conference Diet, Physical Activity and Health at the Workplace*. Draft Summary Report. Brussels, Belgium: July 3, 2007. Available at: http://ec.europa.eu/health/ph_determinants/life_style/nutrition/platform/docs/ev_20070703_mi_en.pdf. Accessed November 17, 2008.
- Goetzel RZ, Ozminkowski RJ. The health and cost benefits of work-site health-promotion programs. *Annu Rev Public Health*. 2008;29:303–323.
- Burton WN, Chen CY, Conti DJ, Schultz AB, Edington DW. The association between health risk change and presenteeism change. *J Occup Environ Med*. 2006;48:252–263.
- Yen L, Schultz A, Schnueringer E, Edington DW. Financial costs due to excess health risks among active employees of a utility company. *J Occup Environ Med*. 2006;48:896–905.
- Edington DW, Burton WN. Health and productivity. In: McCunney RJ, ed. *A Practical Approach to Occupational and Environmental Medicine*. Philadelphia, PA: Lippincott; 2003:40–152.
- Berger ML, Howell R, Nicholson S, Sharda C. Investing in healthy human capital. *J Occup Environ Med*. 2003;45:1213–1225.
- Stewart WF, Ricci JA, Chee E, Hahn SR, Morganstein D. Cost of lost productive work time among US workers with depression. *JAMA*. 2003;289:3135–3144.
- Burton WN, Conti DJ, Chen CY, Schultz AB, Edington DW. The role of health risk factors and disease on worker productivity. *J Occup Environ Med*. 1999;41:863–877.
- Collins JJ, Baase CM, Sharda CE, et al. The assessment of chronic health conditions on work performance, absence, and total economic impact for employers. *J Occup Environ Med*. 2005;47:547–557.
- Loeppke R, Hymel PA, Lofland JH, et al. Health-related workplace productivity measurement: general and migraine-specific recommendations from the ACOEM Expert Panel. *J Occup Environ Med*. 2003;45:349–359. Erratum in *J Occup Environ Med*. 2003;45:940.
- Goetzel RZ, Long SR, Ozminkowski RJ, Hawkins K, Wang S, Lynch W. Health, absence, disability, and presenteeism cost estimates for certain physical and mental health conditions affecting U.S. employers. *J Occup Environ Med*. 2004;46:398–412.
- Conti DJ, Burton WN. The economic impact of depression in the workplace. *J Occup Environ Med*. 1994;36:983–988.
- Burton WN, Chen CY, Conti DJ, Schultz AB, Edington DW. Measuring the relationship between employees' health risk factors and corporate pharmaceutical expenditures. *J Occup Environ Med*. 2003;45:793–802.
- Edington DW. Emerging research: a view from one research center. *Am J Health Promot*. 2001;15:341–349.
- Burton WN, Pransky G, Conti DJ, Chen CY, Edington DW. The association of medical conditions and presenteeism. *J Occup Environ Med*. 2004;46(6 Suppl):S38–S45.
- Boles M, Pelletier B, Lynch W. The relationship between health risks and work productivity. *J Occup Environ Med*. 2004;46:737–745.
- Burton WN, McCalister KT, Chen CY, Edington DW. The association of health risks with on-the-job productivity. *J Occup Environ Med*. 2005;47:769–777.
- Loeppke R, Hymel P. Health and productivity enhancement. In: Moser R, Jr, eds. *Effective Management of Health and Safety Programs: A Practical Guide*. 3rd ed. Massachusetts: Beverly Farm; 2008:225–243.
- Loeppke R, Hymel P. Good health is good business. *J Occup Environ Med*. 2006;48:533–537.
- Loeppke R, Nicholson S, Taitel M, Sweeney M, Haufle V, Kessler R. The impact of an integrated population health enhancement and disease management program on employee health risk, health conditions and productivity. *Popul Health Manage*. 2008;11(6):287–296.
- Loeppke R, Taitel M, Richling D, et al. Health and productivity as a business strategy. *J Occup Environ Med*. 2007;49:712–721.
- World Economic Forum Report in cooperation with PricewaterhouseCoopers. *Working Toward Wellness: The Business Rationale*. World Economic Forum: Switzerland; 2008.
- Devol R, Bedroussian A, Charuworn A, et al. An Unhealthy America: The Economic Burden of Chronic Disease. Charting a New Course to Save Lives and Increase Productivity and Economic Growth. CA: Milken Institute; 2007.
- Watson Wyatt. Building an Effective Health and Productivity Framework. Staying at Work Report 2007/2008. National Business Group on Health; 2007:1–23.
- Loeppke R. The value of health and the power of prevention. *Intl J Workplace Health Manage*. 2008;1:95–108.
- Shaw WS, Linton SJ, Pransky G. Reducing sickness absence from work due to low back pain: how well do intervention strategies match modifiable risk factors? *J Occup Rehabil*. 2006;16:591–605.
- Shaw WS, Pransky G, Fitzgerald TE. Early prognosis for low back disability: intervention strategies for health care providers. *Disabil Rehabil*. 2001;23:815–828.
- Franché RL, Cullen K, Clarke J, Irvin E, Sinclair S, Frank J; The Institute for Work and Health (IWH). Workplace-based return-to-work interventions: a systematic review of the quantitative

- literature. *J Occup Rehabil.* 2005;15:607–631.
31. Guzman J, Hayden J, Furlan AD, et al. Key factors in back disability prevention: a consensus panel on their impact and modifiability. *Spine.* 2007;32:807–815.
 32. Loisel P, Buchbinder R, Hazard R, et al. Prevention of work disability due to musculoskeletal disorders: the challenge of implementing evidence. *J Occup Rehabil.* 2005;15:507–524.
 33. Pransky G, Shaw W, Franche RL, Clarke A. Disability prevention and communication among workers, physicians, employers, and insurers: current models and opportunities for improvement. *Disabil Rehabil.* 2004;26:625–634.
 34. Loisel P, Abenhaim L, Durand P, et al. A population-based, randomized clinical trial on back pain management. *Spine.* 1997;22:2911–2918.
 35. Bond GR, Xie H, Drake RE. Can SSDI and SSI beneficiaries with mental illness benefit from evidence-based supported employment? *Psychiatr Serv.* 2007;58:1412–1420.