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Testimony

Before the Senate Committee on Health, Education, Labor and Pensions

"Principles of Integrated Health: A Path to Health Care Reform"

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I. Introduction

Good afternoon Madam Chairwoman and members of the Committee. I would like to thank the Committee for inviting me to testify today on the subject of integrative health as a means of health reform, particularly as it relates to businesses and workplace health promotion programs. My name is Dr. Catherine Baase and I am a board certified Family Practice physician and the Global Director of Health Services for The Dow Chemical Company. I have direct responsibility for leadership and management of all Occupational Health, Epidemiology, and Health Promotion staff and programs around the world. In addition to these roles, I am deeply involved in the design and implementation of Dow's Health Strategy for employees, retirees, and their families.

My testimony focuses on workplace health promotion programs, the rationale for their adoption, Dow's positive experience with them and policy recommendations that will expand their effective use and very important public health impact. I hope to provide some insights on how companies can provide successful, comprehensive health programs for their people which result in healthy and enriched lives for individuals while simultaneously delivering an improved economic impact to the organization. Employee health and workplace health promotion programs should be viewed and managed as strategic investments in the health of populations, rather than simply costs. There are many ways that government can support and encourage corporate health promotion efforts.

At Dow, we have seen concrete results from our commitments to workplace health promotion that advance our business goals, our corporate social responsibility commitments and deliver highly valued services to Dow people.

We are a proud leader in our national health discussion and believe that health is of paramount importance to the success of individuals, families and every enterprise - both private and public. As a company, we care about our employees and their health is vital to us personally and to the progress of our organizations.

I would like to acknowledge Garry Lindsay and the Partnership for Prevention, and the staff of the National Business Group on Health, for their assistance and contributions in compiling some of the information related to health prevention and workplace health promotion programs.

II. Health Reform – The Role of the Workplace

We have in this country what has been described as an “illness” care system and not a health care system. We do not focus on health outcomes. The dialogue and debate about the many ills of our health care system has escalated in recent weeks because of the economic crisis and the substantial funding for health included in the economic stimulus bill that was signed into law last week. As implementation of the stimulus bill’s health provisions begins, it is vital that we keep sight of the fact that the “health” of our people is the critical outcome and leading indicator of the success of our expenditures. The money we spend on health is an investment in our sustainable future and intended to make people healthier. How much we spend or who has access to our illness care system has limited meaning if we’re not focused on results and whether our health is sustained or improving. Every dollar should seek maximum value.

From a results and outcomes perspective, the situation of our current overall health is not a positive story. As an example, I’m sure you have all seen the tremendously disturbing maps of our country as they illustrate, over time, the dramatic epidemic of obesity. According to the Centers for Disease Control, in 2007, only one state (Colorado) had a prevalence of obesity less

than 20%. Thirty states had a prevalence equal to or greater than 25%; three of these states (Alabama, Mississippi and Tennessee) had a prevalence of obesity equal to or greater than 30%.¹

Health issues including obesity are among the broadest social concerns we have. They affect every aspect of our lives – in our roles as individuals, family members, citizens or business persons. From the business perspective, based on data from the Towers Perrin Health Care Cost Survey, we project average health care costs will increase 6% this year alone to an average total per employee cost of \$9,552. While the rate of growth is holding steady with prior year increases, companies and their employees still face record-high costs in 2009. Costs of this magnitude – and continuing increases above core economic inflation – are clearly problematic, most especially now, in a steep recessionary environment.

To put this in perspective, for an individual company like Dow, the total economic impact (direct and indirect costs) related to the health of our people exceeds \$700 million annually. We spend nearly \$300 million per year on direct health care costs in the U.S. alone. From our 2007 summary, this was about 30 cents per share or 70% of what we spent on research and development.

From the cost of health care to the impact of worker health on productivity, every business or enterprise clearly has a natural alignment between the health of its people and its overall success. The two are closely interwoven. So, it is of consequence there is now consensus that current and future spending in employee health is unsustainable, and poses a significant threat to the overall competitiveness of American businesses within the global marketplace.

Recently, employers have implemented a number of approaches to manage the supply of health care resources - and the demand - sometimes through greater cost-shifting to the employee. However, leading organizations have realized managing health benefit costs alone without a balanced focus to ensure achievement of health outcomes is a matter of dwindling returns.

One popular aspect of corporate health efforts is to focus on primary prevention and risk avoidance, thus keeping the majority of the workforce (and its dependents) low risk and healthy. Why is this the case? First, a significant percentage of deaths in the United States are associated

¹ Centers for Disease Control, <http://www.cdc.gov/nccdphp/dnpa/Obesity/trend/maps/index.htm>.

primarily with modifiable, lifestyle-related behaviors. Remarkably, more than one-third of total mortality is attributed to three general risk factors: tobacco use, poor diet/low physical activity (and their influence on obesity), and excessive alcohol consumption.^{2,3}

Beyond the quality of life impact, the annual social costs associated with tobacco use and obesity are \$192 billion and \$117 billion, respectively. They are major risk factors for chronic health conditions such as cardiovascular disease, chronic obstructive pulmonary disease, cancer, and diabetes.^{4,5}

Further, research is showing it is more cost-effective to invest in preventive health practices, such as preventive screenings, immunizations, health risk appraisals, behavioral coaching, and health awareness/education, rather than spending resources exclusively on the small minority of employees/dependents who are responsible for high-cost health claims.⁶ This is not to say employers should neglect high-cost employees. To the contrary, best-practice research is demonstrating the total value of an integrated, population-based strategy that addresses the health needs of all employees, dependents, and retirees across the health continuum.

A majority of employers report they have established some health promotion efforts in the workplace. Regrettably, as reflected in the findings of the 2004 National Worksite Health Promotion Survey, the majority of employers have not implemented a successful strategy – only 6.9% of surveyed organizations met the criteria for a comprehensive health promotion program.⁷ This is far short of the 75% target included in the Healthy People objectives for the Nation, which shows there are still significant barriers to adopting – on a large scale – worksite health

² Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual Causes of death in the United States, 2000. *JAMA*. 2004;291(10):1238-1245. (see also Correction: actual causes of death in the United States, 2000. *JAMA*. 2005;293(3):293- 294.)

³ Flegal KM, Graubard BI, Williamson DF, et al. Excess deaths associated with underweight, overweight, and obesity. *JAMA*. 2005;293:1861-1867.

⁴ Christakis NA, Fowler JH. The spread of obesity in a large social network over 32 years. *N Engl J Med*. 2007;357(4):370- 379.

⁵ American Cancer Society. *Smoking Costs US \$157 Billion Each Year*.

http://www.cancer.org/docroot/NWS/content/NWS_1_1x_Smoking_Costs_US_157_Billion_Each_Year.asp

Accessed February 14, 2009.

⁶ Health Management Research Center. (2008) *Cost Benefit Analysis and Report 2008*. University of Michigan, Ann Arbor, MI.

⁷ Linnan L, Bowling M, Childress J, Lindsay G, et al. Results of the 2004 National Worksite Health Promotion Survey. *Am J Public Health*. 2008;98(1):1-7.

promotion practices by organizations both large and small.⁸ Research has demonstrated several elements are required for the effectiveness of workplace health promotion efforts. These are illustrated in the language of the proposed Healthy Workforce Act which describes employers should have all four of the following components in their health promotion programs: Awareness, Motivation Strategies to Engage Employees, Skill Building Programs, and Supportive Environments.

For additional information, I direct you to the Partnership for Prevention’s workplace health promotion policy paper entitled *Workplace Health Promotion: Policy Recommendations that Encourage Employers to Support Health Improvement Programs for their Workers* which was authored by Dr. Ron Z. Goetzel, Ph.D., Research Professor and Director, Institute for Health and Productivity Studies, Emory University, and Vice President, Consulting and Applied Research, at Thomson Reuters, and his colleagues at the Institute for Health and Productivity Studies, Emory University, Dr. Enid Chung Roemer, Ph.D., Rivka C. Liss-Levinson, and Daniel K. Samoly.

III. The Rationale for Corporate or Workplace Health Promotion Programs

In keeping health at the center of health reform, it is valuable to review the determinants of health. Many similar analyses of these factors are available. In the recent Shattuck Lecture article entitled “We Can Do Better — Improving the Health of the American People” by Steven A Schroeder, MD, published in the *New England Journal of Medicine (NEJM)*, February 15, 2009, we see another poignant reminder of the opportunities to improve population health.

Dr. Schroeder states, “Health is influenced by factors in five domains — genetics, social circumstances, environmental exposures, behavioral patterns, and health care (Fig. 1).

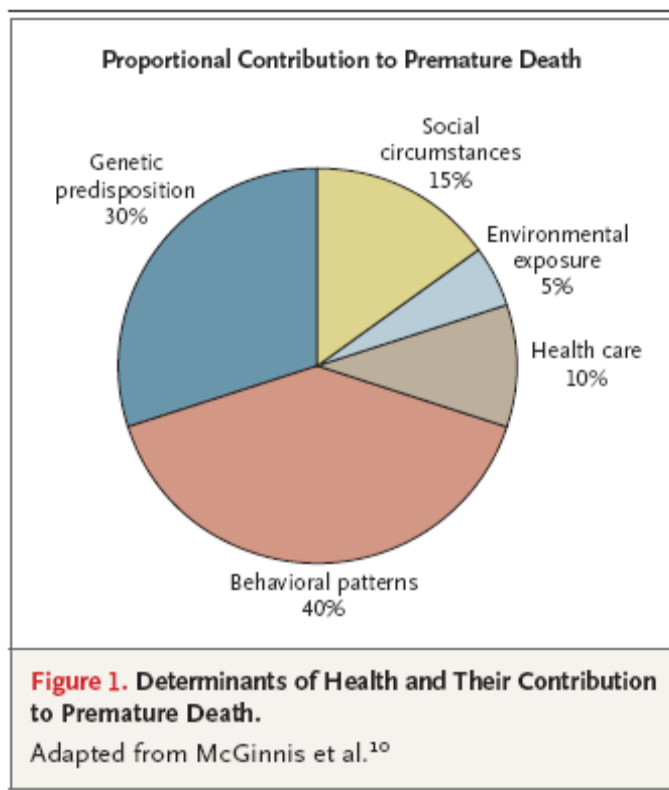
When it comes to reducing early deaths, medical care has a relatively minor role. Even if the entire U.S. population had access to excellent medical care —which it does not — only a small fraction of these deaths could be prevented. The single greatest opportunity to improve health and reduce premature deaths lies in personal behavior. In fact, behavior causes account for nearly 40% of all deaths in the United States. Although there has been disagreement over the

⁸ U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.

actual number of deaths that can be attributed to obesity and physical inactivity combined, it is clear these risk factors, along with smoking, are the top behavioral causes of premature death. Clinicians and policymakers may question whether behavior is susceptible to change or whether attempts to change behavior lie outside the province of traditional medical care.”⁹

Of all the five domains of the determinants of health outcomes, behavior patterns have the largest proportion of impact at 40% while health care accounts for only 10%. As noted by Dr. Schroeder, it is vital to have an effective mechanism to affect behavior. Corporate health programs and worksite health promotion represent an ideal opportunity to have impact on health behaviors for adults and their families.¹⁰

FIGURE 1



The role of employers in improving public health has received minimal attention in discussions of health care reform, even though the potential for achieving large-scale health and economic

⁹ Steven A. Schorder, M.D., "We Can Do Better - Improving the Health of the American People" *New England Journal of Medicine*, 357;12 September 20, 2007.

¹⁰ Steven A. Schorder, M.D., "We Can Do Better - Improving the Health of the American People" *New England Journal of Medicine*, 357;12 September 20, 2007.

impact among working-age adults is undeniable.¹¹ After closely examining their organizations' data, many large U.S. companies have concluded poor health increases employees' utilization of health care services and diminishes employee performance, safety, and morale. For a business, workers in poor health, as well as those with behavioral risk factors, mean greater medical expenditures, more frequent absenteeism, increased disability, more accidents and sub-optimal productivity.^{12,13,14,15,16,17,18,19,20}

Over the past 30 years, many enlightened employers have put in place comprehensive, multi-component health promotion programs. They have come to appreciate the important role these programs play in improving the health and well-being of their workers, which in turn can increase worker productivity and improve benefit costs.²¹ Many of these employers also believe health promotion programs can significantly influence an organization's ability to attract and retain top talent who are drawn to a healthy company culture which encourages a work-life balance.²² In fact, some employers have made employee health promotion initiatives part of their overall emphasis on sustainability and corporate social responsibility.²³

¹¹ Goetzel, RZ, *Workplace Health Promotion: Policy Recommendations that Encourage Employers to Support Health Improvement Programs for their Workers*. A Prevention Policy Paper Commissioned by Partnership for Prevention. Washington, DC December 2008

¹² Goetzel RZ, Long SR, Ozminkowski RJ, Hawkins K, Wang S, Lynch W. Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting US Employers. *Journal of Occupational and Environmental Medicine*. 2004;46(4):398-412.

¹³ Anderson D, Whitmer R, Goetzel R, et al. The relationship between modifiable health risks and group-level health care expenditures: A group-level analysis of the HERO database. *American Journal of Health Promotion*. 2000;15(1):45-52.

¹⁴ Goetzel RZ, Jacobson BH, Aldana SG, Vardell K, Yee L. Health Care Costs of Worksite Health Promotion Participants and Non-Participants. *Journal of Occupational and Environmental Medicine*. 1998;40(4):341.

¹⁵ University of Michigan. *The Ultimate 20th Century Cost Benefit Analysis and Report*. 2000:45-52.

¹⁶ Mercer Human Resource Consulting. *National Survey of Employer-Sponsored Health Plans - survey highlights*. <http://www.mercerhr.com/referencecontent.jhtml?idContent=1258390>. July 3, 2006.

¹⁷ Mercer Human Resource Consulting. *Mercer/Marsh Survey on Health, Productivity, and Absence Management Programs*. <http://www.mercerhr.com/pressrelease/details.jhtml/dynamic/idContent/1231700>. July 12, 2006.

¹⁸ Goetzel RZ. *Examining the Value of Integrating Occupational Health and Safety and Health Promotion Programs in the Workplace*. Department of Health and Human Services, Public Health Services, Centers for Disease Control and Prevention, National Institute of Occupational Safety and Health, 2005:1-61.

¹⁹ Goetzel RZ, Juday TR, Ozminkowski RJ. What's the ROI? *A Systematic Review of Return-On-Investment Studies of Corporate Health and Productivity Management Initiatives*. AWHP's Worksite Health. 1999;6(3):12-21.

²⁰ Goetzel RZ, Hawkins K, Ozminkowski RJ, Wang S. The Health and Productivity Cost Burden of the "Top 10" Physical and Mental Health Conditions Affecting Six Large US Employers in 1999. *Journal of Occupational and Environmental Medicine*. 2003;45(1):5- 14.

²¹ Linnan L, Bowling M, Childress J, et al. Results of the 2004 National Worksite Health Promotion Survey. *American Journal of Public Health*. 2008;98(1).

²² Wolfe R, Parker D, Napier N. Employee Health Management and Organizational Performance. *The Journal of Applied Behavioral Science*. 1994;30(1):22-42.

²³ Health Enhancement Research Organization. <http://www.the-hero.org/>. August 4, 2008; and Goetzel R, Ozminkowski R. The Health and Cost Benefits of Worksite Health Promotion Programs. *Annual Review of Public Health*. 2008;29:303-323.

Dow believes any reform of our health care system must contain a broad approach to prevention which incorporates clinical preventive services, public health and community-based interventions. As a vital component of a true “health” system, companies can make a positive difference in the health of their people, and can have a peripheral impact in the communities where they operate. Well-conceived workplace health promotion programs can improve employees’ health and quality of life, reduce their risks for disease, control unnecessary health care utilization, limit illness-related absenteeism, and decrease health-related productivity losses.

The worksite is the right place to tackle many of our health problems because adults spend so much of their active, waking hours at work. As Dr. Goetzel points out, health promotion programs make sense because:

- Workplace programs can reach large segments of the population not exposed to and engaged in organized health improvement efforts;
- Workplaces contain a concentrated group of people who share common purpose and culture;
- Communication with workers is straightforward;
- Social and organizational supports are available;
- Certain policies, procedures and practices can be introduced and organizational norms can be established; and
- Financial or other types of incentives can be offered to gain participation in programs.²⁴

Further, there is a logical basis for workplace health prevention:

- 1) Many of the diseases and disorders are preventable;
- 2) Many of these diseases and disorders are triggered by modifiable health risks;
- 3) Many modifiable health risks are associated with increased health care costs and decreased worker productivity;
- 4) Modifiable health risks can be improved through health promotion and disease prevention programs;
- 5) Improvements in the health risk profile of a population can lead to reductions in health care costs and absenteeism, and heightened productivity; and

²⁴ Testimony of Ron Z. Goetzel, Ph.D., before the House Armed Services Committee Subcommittee on Military Personnel, March 12, 2008.

- 6) Well-designed and well-implemented worksite health promotion and disease prevention programs can save money and produce a positive return on investment (ROI).²⁵

In over three decades of research, the University of Michigan Health Management Research Center (HMRC) has demonstrated the association between health risks and excess health and productivity-related costs. As Charts 2 and 3 (from the HMRC) illustrate, increased health risks equate to higher health care costs, whereas reduced health risks equate to lower overall costs. Simply put: costs follow risks.²⁶

CHART 2

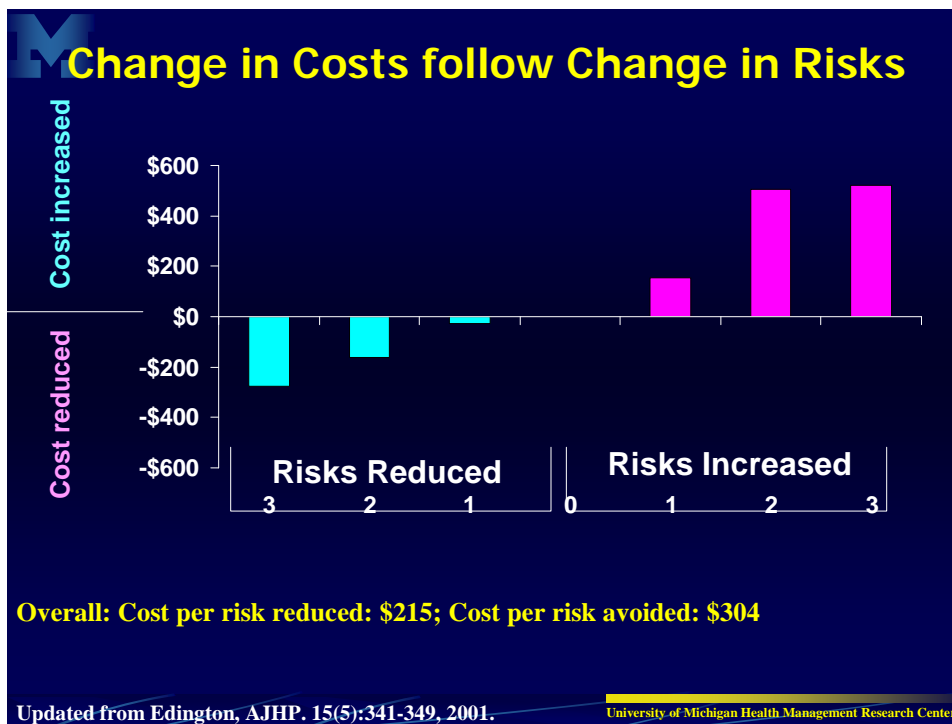
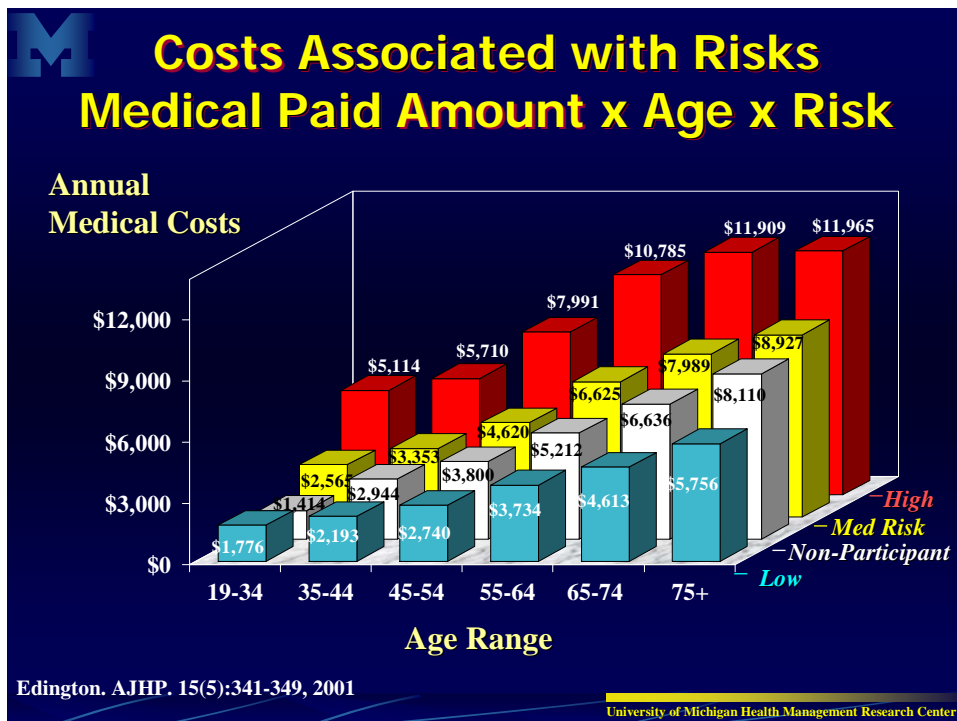


CHART 3

²⁵ Testimony of Ron Z. Goetzel, Ph.D., before the House Armed Services Committee Subcommittee on Military Personnel, March 12, 2008.

²⁶ Health & Vitality Ink Communications. *The Case for Health Promotion Programs*. 2002.



The HMRC has demonstrated the same associations between health-related risks and productivity-related costs attributed to disability, workers' compensation, and presenteeism. The HMRC has also shown excess health risks (e.g., three or more co-morbid health risks such as inactivity, excess body weight, and tobacco use) are independent of the cost burden of chronic disease. In other words, excess health risks further compound the total cost burden of managing chronic health conditions such as chronic obstructive pulmonary disease, diabetes, and heart disease.²⁷

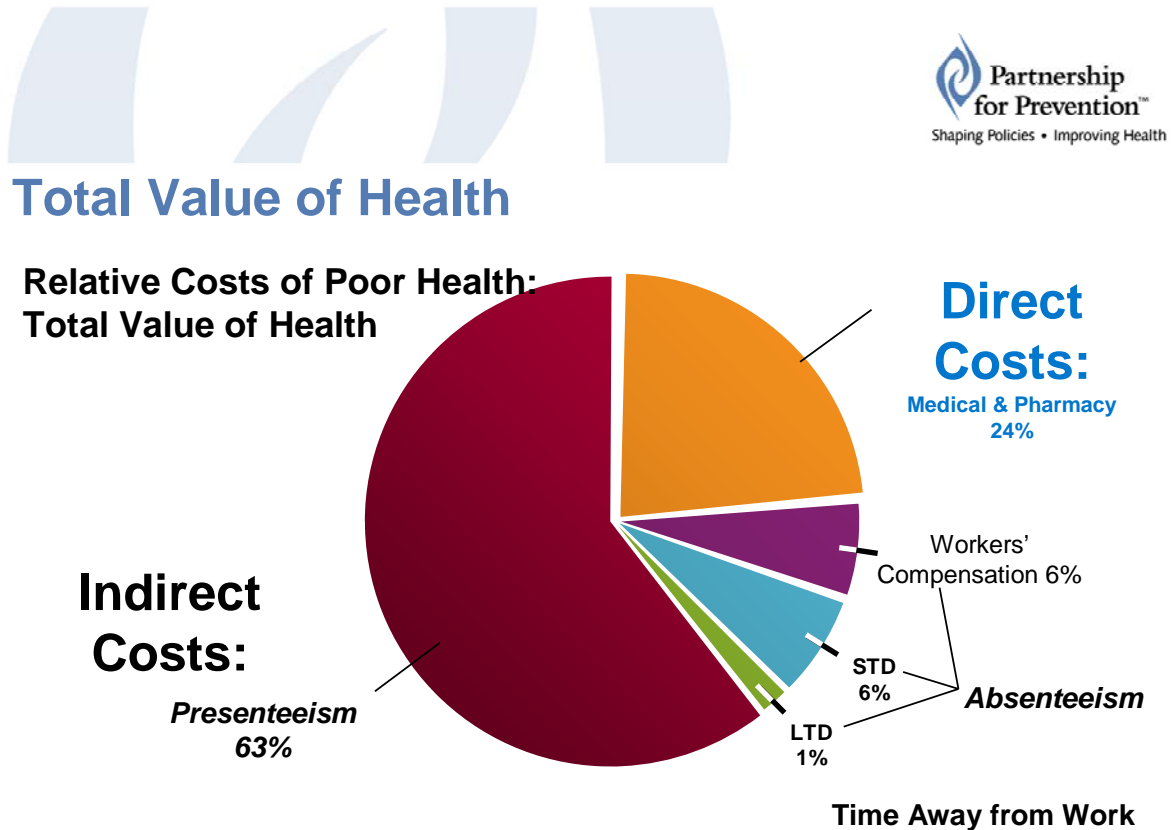
It is important for organizations to address not only high-cost groups (e.g., heart disease, asthma, diabetes) through such interventions as disease management programs, but also address "at risk" groups who exhibit modifiable risk factors (e.g., obesity, low physical activity, poor diet, tobacco use) which are associated with chronic health conditions and further exacerbate their management once diagnosed.

Today, there is sound evidence that investing in workplace health promotion programs provides organizations with a number of financial incentives which not only addresses escalating health care costs, but also provide a productivity management strategy. From the HMRC, we see (in

²⁷ Health Management Research Center. (2008) *Cost Benefit Analysis and Report 2008*. University of Michigan, Ann Arbor, MI.

Chart 4) the typical organizational profile of the economic impact of the health of a corporate population.

CHART 4



Edington, Burton. *A Practical Approach to Occupational and Environmental Medicine* (McCunney). 140-152. 2003

Consider the following:

The HMRC estimates an organization saves \$350 annually when a low-risk employee remains low risk, compared to a savings of \$153 when a high-risk employee's health risks are reduced.²⁸

One meta-review of 56 published studies of workplace health promotion programs shows:²⁹

- Average 27% reduction in sick leave absenteeism,
- Average 26% reduction in health care costs,

²⁸ Edington DW. Emerging research: a view from one research center. *American Journal of Health Promotion*. 2001;15(5):341-349; and University of Michigan Health Management Research Center. *The worksite wellness benefit analysis and report*. 1979- 2004;7-15.

²⁹ Chapman LS. Meta-Evaluation of Worksite Health Promotion Economic Return Studies: 2005 update. *The Art of Health Promotion*. 2005;19(6):1-11.

- Average 32% reduction in workers' compensation and disability management claims costs, and
- Average \$5.81-to-\$1 savings-to-cost ratio.

The question about return on investment for health promotion or prevention efforts has long been debated. I would like to bring to the attention of the committee the work of Dr. Steven Woolf in the February 4th, 2009 issue of the *Journal of the American Medical Association (JAMA)*, titled, "A Closer Look at the Economic Argument for Disease Prevention."

Dr. Woolf states, "The question of whether prevention saves money is incorrectly framed. Health care, like other goods, is not purchased to save money. The dollar can be stretched further— more goods can be acquired—by optimizing economic value. The proper question for a preventive (or therapeutic) intervention is how much health the investment purchases...Prevention accounts for only 2% to 3% of health care expenditures...Disease care is the dominant driver of health spending, and yet it evades the economic scrutiny applied to preventive services...The same questions posed for prevention must now be applied to disease treatments: does the intervention improve health outcomes, and how strong is the evidence? If the intervention is effective, is it cost-effective (a good value)? Can other options achieve better results, or the same results at lower cost? Throughout health care, the spending crisis requires a comprehensive search for ways to shift spending from services of dubious economic value to those with high cost-effectiveness or net savings. Whether those services are preventive or otherwise is not the point; what matters is prioritizing services that produce the greatest health benefits for the dollars spent. In that context it makes sense to invest in a well-defined package of preventive services that are effective and offer good economic value. Services that yield net savings—whether prevention or treatment—are priorities."³⁰

This article extracts and reinforces information developed in a white paper, "The Economic Argument for Disease Prevention: Distinguishing Between Value and Savings," by Dr. Woolf, Dr. Corinne G. Husten, M.D., M.P.H., Lawrence S. Lewin, Dr. James S. Marks, M.D., M.P.H., Dr. Jonathan Fielding, M.D., M.P.H., M.B.A., and Dr. Eduardo Sanchez, M.D., M.P.H., on behalf of Partnership for Prevention's National Commission on Prevention Priorities. This white

³⁰ Steven Woolf, MD, MPH, "A Closer Look at the Economic Argument for Disease Prevention," *Journal of the American Medical Association*. 2009;301(5):536-538 <http://jama.ama-assn.org/cgi/content/full/301/5/536>.

paper is accessible on the Web site:

<http://www.prevent.org/images/stories/PolicyPapers/prevention%20cost-effectiveness.pdf>.

At Dow, we have adopted this investment focus and health outcomes approach because the health of our company depends on the health of our people. The health of Dow's employees, their families and the communities in which we operate is a strategic priority and is seen as essential to the company's sustainability. One of Dow's four strategic themes is to "build a people-centric performance culture." This means attracting and retaining the most talented people from throughout the world, developing them, and rewarding them for the results they achieve with the goal of driving both personal and company success. Worksite programs are in many ways, an embodiment of our people-centric performance culture.

This is the rationale for workforce health programs: company health depends on employee health and there are clearly identifiable areas we can target to improve health, while at the same time reduce costs and improve productivity.

IV. The Dow Model

Dow has offered an employee occupational health program for 90 years and has had a focused health promotion program for more than 20 years. Dow has been recognized worldwide in the field of corporate health programs - particularly for its leadership, innovation and measurable outcomes. A few years ago, at the request of our CEO and executive team, we developed a business case analysis of our situation related to the health of Dow People. A simplified summary of the business case is:

- Dow has a very large economic impact associated with the health of our people,
- Translating this economic impact to cents/share demonstrates it as a significant priority,
- There is strong evidence that we have an opportunity to change the situation through improved quality, addressing waste and ineffectiveness in the system and through prevention,
- Health advocacy is a priority as reform agendas are vital to the future.

This business case drove development of a simple yet powerful corporate level health strategy. Our CEO, Andrew Liveris, continues to be a strong advocate both internally and externally to Dow on the importance of health.

Dow's health strategy is built on four pillars:

1. Prevention
2. Quality and Effectiveness
3. Health System Management
4. Advocacy

The strategy includes all aspects of the impact of health for "Dow family" members (including employees, dependents and retirees). It is reflective of our belief in the alignment between the health of our people and the success of our company.

Based upon a long-term commitment, we have set multi-year goals as well as annual objectives for each pillar of the strategy.

To put this in bottom-line value for our company, our initial business case estimates illustrated that if we could keep our U.S. direct dollars in the lower end of projected inflation vs. the higher end, this alone would be worth 7 cents per share, which would be over \$50 million in 2008 (by comparing project spending at the lower inflation vs. average company experience). By 2013, if we can continue our progress to the "best performer" level, we anticipate we will have saved the Company a cumulative \$420 million over 10 years, and will contribute 10 cents per share in 2013.

Through studies, we estimated that by improving our primary health risk factors by just one percentage point each per year, we would save \$62 million in U.S. direct health care costs over 10 years. In studying the literature, I believe there is a real opportunity for improvement in safety, quality and effectiveness in health care which will lead to better health outcomes and much higher value for the dollar spent. It is commonly noted as much as 30% of health expenditures are unnecessary. Sophisticated purchasing, strong accountability, innovation and collaboration in our communities all represent further opportunities.

Driven by our 2004 strategy, many of our recent program dimensions are still young, but we are encouraged by the indicators of the positive health impact we are seeing already. Let me share a few from just the last couple years.

- We have seen increases in the percent of Dow people who believe Dow sincerely cares about their health and well-being. Using global assessments, we again saw an improvement of 2% in 2007 versus 2005 in employee perceptions.
- Approximately 85% of global employees and 75% of U.S. employees voluntarily participate in health assessments. According to satisfaction surveys, 95% value this option – which is why we are able to attain such high participation rates without direct financial incentives to participate.
- About 75% of our people globally and 90% in the U.S. participate in one or more internal Dow health services each year.
- We are reducing health risks in our global employee population especially for our top three risk targets of tobacco use, physical activity and obesity. Between 2004 and September 2008, we saw a 15 percentage point reduction in high risk people and an 18 percentage point increase in low risk people in these three categories.
- Using an established baseline of global employees from 2004, we have seen a decrease in the high risk level for 4 out of 8 health risk factors. Over this same period from 2004 through September 2008, we have increased the number of employees in the low risk category in 7 of the 8 measures.
- Through increased awareness and enhanced benefits coverage, Dow’s U.S. colorectal screening has improved 12% since January 2007 to 56%, slightly above the HEDIS (Healthcare Effectiveness Data and Information Set) benchmarks reported by the National Committee for Quality Assurance (NCQA) which represent national thresholds for commercially insured populations.
- Using U.S. data, we can illustrate the impact of just one of our key services, health advocacy case management, in total economic benefit (\$11.7 million) and absenteeism days saved (9,232) in 2007.

Focusing on the prevention health aspect of our strategy, our comprehensive health promotion program incorporates the best practice design and implementation characteristics mentioned earlier: Awareness, Motivation Strategies to Engage Employees, Skill Building Programs, and Supportive Environments. It includes a variety of health-related company policies and initiatives. They include: health screening, consultation, referral and follow up, health education through intranet and internet channels, small group programs, health/disease risk topic focused

campaigns, onsite wellness centers, self-care and consumer education, and tools such as the launch of an electronic personal health record. In addition, we offer strong prevention coverage in our health benefit plans, as well as initiatives to create a supportive environment such as our Healthy Workplace Index released in 2007. Our global strategy features corporate efforts and local plans to ensure we meet the needs of Dow's diverse workforce; and it emphasizes shared responsibility between the company, local leadership and employees for improved health.

Reducing Tobacco Use: The Dow Corporate Smoking Policy was first enacted in the United States in 1993. It has been updated and since January 1, 2003, all Dow property and meetings are smoke free. Outside of the U.S., all Dow buildings and meetings have been smoke free since January 1, 2004. The difference in the two policies represents the necessity for utilizing a multicultural approach. The global policy was written as a minimum standard with room for flexibility in actualizing it. Our programming also leverages company-wide energy, while encouraging value-adding localization.

One example is Dow's annual No Tobacco Day, which urged tobacco users to make a commitment to quit using tobacco for at least one day. Communicated in 15 languages across all Dow sites globally, tobacco users were asked to commit online. Participants received motivational messages and the chance to win gift card prizes (valued approximately \$50-\$200). In the inaugural year, six percent (6%) of tobacco users (representing 27 different countries) committed to quit and 56% met the 24-hour challenge. At six-months, 11% of surveyed participants remained tobacco-free. Site leaders from 30 sites also committed to making their work environment more supportive and sponsored activities like tobacco cessation workshops, tobacco-free worksites, free "cold turkey" lunches, educational sessions for employees' families, and free massages. In 2008, 434 Dow people from 21 countries committed to quit using tobacco during this event; 47% were successful for the 24-hour challenge.

Eliminating the negative impacts of tobacco use requires more than just a policy and program. As part of our comprehensive approach, we have strengthened our internal health counseling efforts and improved our U.S. medical benefit plan to cover tobacco cessation consultation and pharmacotherapy at 100%, using evidence-based, best practice recommendations from the National Business Group on Health and U.S. Preventive Services Task Force. After more than five years of a stagnant tobacco use rate of 18%, tobacco use has dropped two percentage points to 16%, in the last two years.

Increasing Physical Activity: Dow implemented a global year-long physical activity challenge, MOVE for Good Health, to increase emphasis on regular physical activity at both an individual and organizational level. Nearly 5,000 people from 53 countries registered for MOVE and made sustained changes in their physical activity level:

- 89% of previously sedentary participants became active (i.e. were sedentary at baseline and now exercise at least once per week);
- 47% of high-moderate risk participants moved into low risk during the program (i.e. started at high or moderate risk and now exercise three or more times per week); and
- MOVE contributed to a 2008 Dow global population improvement in physical activity level -- a one percentage point reduction in high risk (from 26% to 25%) and one percentage point increase in low risk (from 39% to 40%).

Since 2005, efforts to improve access to physical activity at Dow worksites, global physical activity challenges, and partnerships with groups like the U.S. President's Council on Physical Fitness and Sports have helped support a 7% increase in our low risk population and a 10% reduction in high risk for physical activity in the U.S. alone. Globally the improvements were 14% and 11%, respectively.

Impacting Overweight and Obesity Issues: Dow is participating in National Heart, Lung, and Blood Institute (NHLBI) funded research to examine the health and economic benefits of worksite and environmental interventions on overweight and obesity. The environmental interventions, called *LightenUP*, aim to decrease unhealthy eating and increase physical activity among workers and include:

- Moderate-level treatments which introduce relatively inexpensive environmental changes to the physical environment, such as walking paths, healthy food choices, nutritional information in vending machines and cafeterias, and employee recognition;
- More intensive-level treatments encourage an organizational culture of healthy behaviors through leadership training, top management involvement, integration of behavior change programs into the company's established business practices and leadership accountability; and

- Control sites continued to receive the core health promotion programs, including individual based programming (e.g. counseling), but did not receive the environmental interventions.

After one year of the study, researchers found employees who participated in the *LightenUP* interventions reduced their blood pressure risk and maintained a steady weight when compared to employees at control sites who received only individual-focused interventions. After two years, we are seeing an increase in physical activity, better nutrition habits, reduction in tobacco use, increase in leadership support and increase in employee awareness. These results suggest even moderate changes to the work environment can have a positive impact on employees by reducing at least one health risk and helping the well stay well. Preliminary analysis of our year three data indicates some significant results. It appears average weight loss at the intervention sites was significantly greater than at control sites, as were the reductions in mean blood pressure and cholesterol levels. Intervention sites also achieved significantly greater improvements in diet and exercise. These results indicate adding environmental interventions to individual-level programs improve biometric and behavioral risk factors.

In addition, to addressing modifiable risk factors, Dow health promotion efforts engage employees, retirees and family members as active participants in their health care. Dow's Positive Action health care consumerism program increased awareness of the consumer's role, helped participants become more comfortable with the U.S. health care system and taught valuable skills such as self-care and adequately preparing for a doctor's visit. In the nine months following the program pilot, participants experienced fewer health care claims than non-participants, which equated to a half million dollars in savings to employees and approximately \$300,000 in savings to Dow within the first year after the program.

The success of The Dow Chemical Company in establishing and maintaining a global culture of health can be seen as a systematic process. The support of leadership is unquestionably ingrained and the health of employees is directly linked to business goals and objectives. This approach and strong focus on prevention translates to comprehensive worksite health promotion which is uniquely tailored to Dow employees. I'm proud to report Dow is one of the few companies which have shown a global approach is not only possible but successful as well.

Community Impact

Beyond our employees and their families, Dow has a longstanding commitment to the health of the communities in which we operate, which can be traced back to Founder Herbert H. Dow.

Over the years, Dow has worked hard to establish:

- Employee health programs which are recognized for their excellence;
- Community advisory panels at all major production locations;
- Direct financial contributions to health needs in communities as an integral part of corporate giving;
- Medical departments at major sites which work closely with local community health services; and
- Public health value because we perform and publish important health research.

One example of community partnership is Dow's investment to help establish the Michigan Health Information Alliance, MIHIA, a multi-stakeholder collaborative covering eleven counties in central Michigan which is dedicated to improving the health of the people in the region through the innovative use of health information. MIHIA is also a Chartered Value Exchange as designated by the Department of Health and Human Services through the Agency for Healthcare Research and Quality. Aligned with the mission is a commitment to advance the cornerstones of value-driven health care through the development and implementation of interoperable health information technology, and the dissemination of price and quality information.

Another example is Dow's funding and leadership to build a community YMCA in Plaquemine, Louisiana near one of our sites. In each case, Dow targeted its investment with community needs which also aligned with our Health Strategy - using the broader community to help create a more supportive environment for the health of Dow people and support the entire community.

Over the course of our efforts, we have learned many lessons which may be useful to any business undertaking workplace health programs:

- Establish the entire effort upon a principle of serving the best health outcomes for individuals and maintain integrity with this throughout every aspect of operation. It builds trust which is invaluable to long term success.

- The creation of a business case is essential to secure management commitment.
- Determine the total economic impact of all health related costs both direct and indirect.
- Establishment of a corporate strategy is essential.
- It is imperative to have a long term view and commitment for the health strategy.
- Companies should establish a measurement strategy to set priorities and track outcomes.
- Creation of internal partnerships of related functional groups is a success factor.
- Implementation strategies should include individuals and small groups.
- Inclusion of cultural considerations.
- Efforts must align to company business priorities.
- Understand the role of all stakeholders including labor organizations in achieving success.
- Ensure absolute privacy and confidentiality of all personal health data.
- Program/services design and implementation must be culturally sensitive.
- Companies should develop and adhere to a clearly documented operating discipline which is supported by all applicable functions within the organization.

These results affirm the value our specific efforts and of corporate health programs generally. With a sustained focus, we will continue to have an impact on the health of our people, because corporate health strategies offer one of the best opportunities to effectively engage adults to maintain and improve health.

V. Policy Recommendations

There are many steps government can take to encourage businesses to implement workplace health program and reward those that have them. Health policy groups, business groups and their combined coalitions are working to provide constructive policy recommendations in this arena. For example, Dow has joined with a number of companies and associations, through the Workplace Wellness Alliance which is sponsored by the U.S. Chamber of Commerce and the Partnership for Prevention in an effort to encourage the federal government to enact legislation and regulations supporting employer based wellness programs.

First, I believe a change in tax policy is needed to improve employee wellness and reduce obesity. The current tax treatment of wellness, fitness, health promotion, and weight

management programs for employees poses a barrier and disincentive to more comprehensive employer-sponsored wellness programs.

While current tax law allows employers to deduct all of their costs toward employee wellness as business expenses, generally, the value of employer contributions to employees for these purposes must be reported as income subject to taxation by employees—including payment for fitness, nutrition, and weight management programs. Only employees for whom these programs and activities are required or prescribed as part of treatment for medical conditions—including medical obesity—do not have to report employer contributions as taxable income. Current tax law also does not allow employees to use pre-tax dollars to pay for fitness facility fees, exercise programs, nutrition classes, or weight management classes unless they are prescribed or required as part of treatment regimens for medical conditions. In other words, our current tax code provides tax incentives for medical care and treatment but does not provide tax incentives for maintaining health and wellness.

Furthermore, the complicated tax requirements create an administrative burden for employers who are trying to do the right thing by offering health and wellness programs to employees. Employers who pay for these services on behalf of their employees must determine for which employees their contributions are considered taxable income and for which employees they are not taxable, raising health information privacy issues along with the extra administrative burden.

The solution: Extending favorable tax treatment for employer-contributions to pay for employee health and wellness programs would remove a major barrier to more widespread adoption of these programs and lead to a healthier America.

Consider the following:

- Employees should be able to use pre-tax dollars (including through Section 125 cafeteria plans, HSAs and FSAs) to pay for health and wellness activities, programs and purchases including fitness, nutrition, and weight-management programs.
- Employer contributions toward employee expenses for health and wellness, activities, programs and purchases should be excludable from income for tax purposes.

- People should be allowed to deduct any post-tax out-of-pocket expenses for health and wellness activities, programs, and purchases from their taxes (irrespective of whether it is for medical treatment or for wellness, health maintenance and disease prevention and whether or not their total health care expenses are below the 7.5% adjusted gross income threshold).

Additionally, I want to share recommendations from the Partnership for Prevention with you because they are based on the central premise which supports all workplace health programs: *keeping people healthy contains costs and increases productivity*. Many of the recommendations are geared towards the development, promotion and adoption of best practices workplace health programs.

1. Better communicate to employers the benefits of workplace health programs

Innovative approaches are needed to communicate to employers the economic costs associated with poor health, the options available to reduce health risks, and the cost savings and productivity gains possible through workplace health programs. Federal, state, and local health agencies, alone and in partnership with businesses, should leverage their extensive marketing and communication networks to share information about exemplar health programs to employers that have meager or non-existent programs.

2. Increase funding for research to evaluate and improve workplace health programs

There has been some government funding support for evaluating workplace health programs, but most research in this area has come from the private sector. As a result, our current data and understanding are limited. More government support is needed for studying the science underlying workplace-based programs and the effectiveness of these programs in improving health, lowering costs, and increasing productivity. We also need translational research so these programs can be adapted for businesses of all types and sizes.

3. Develop tools and resources to support employer workplace health programs

Several tools and resources for workplace health promotion have already been developed and disseminated with the support of government funding, but more tools and resources are needed to help employers design, implement, and evaluate their programs. These tools will enable employers to establish their case for health promotion programs, identify partners, and evaluate their program's outcomes.

4. Pilot innovative health promotion programs at federal, state, and local departments and agencies

Most government agencies have not implemented evidence-based health programs for their own employees and dependents. By doing so, they can not only function as role models for private sector businesses but they can function as experimental employer laboratories providing models of successful program execution other public and private organizations can emulate.

5. Honor and reward America's healthiest organizations

Government programs to recognize and reward innovative companies and organizations which have successfully implemented health promotion programs should be expanded. Greater recognition and prestige for businesses demonstrating effective leadership in health promotion will elevate their stature as innovators in the field. To stay competitive to attract and maintain top talent, other businesses will take notice and adopt or enhance their own workplace programs.

6. Create an employers' health promotion resource center

A government-supported resource center would collect, develop, and disseminate objective, easy-to-use, and accessible workplace health promotion information and act as a clearinghouse for resources, tools, and expertise to support employer efforts. Employers could then judge the relative merits and cost-effectiveness of alternative health promotion models.

7. Establish a public-private technical advisory council

Many large employers can afford to hire expert consultants who help them structure effective programs, but smaller employers often cannot. A public-private technical advisory council would draw upon the expertise of private consultants and experts in government who would volunteer their time to support employers wishing to implement health promotion programs. The council could be set up in a similar fashion as other government advisory panels, such as the U.S. Preventive Services Task Force.

8. Establish collective purchasing consortia for small employers.

Federal agencies should establish collective health promotion purchasing consortia, similar in design to multi-employer trusts, which would define common health and business objectives for employers in a given community, achieve consensus on health program designs, issue requests for proposal to vendors and health plans, support the establishment of performance guarantees related to the success of these programs, and help ensure evaluations which can be used to enhance programs.

9. Support establishment of workplace health program certification and accreditation programs

Several established review and accreditation organizations, such as the National Committee for Quality Assurance, have introduced review processes focused on workplace health programs and their vendors to objectively assess their quality. Support of these accreditation and certification initiatives will help establish minimum standards for quality and performance against which vendors and others engaged in implementing workplace programs are held. In turn, these initiatives will spur program improvements and encourage more companies to enhance or initiate programs.

In addition to these “best practices” promoting recommendations, there are additional ways government can accelerate the adoption of workplace health programs. Tax incentives for introducing or expanding workplace health programs can accelerate the adoption of workplace programs. Such incentives are important because many businesses, particularly in the current economic environment, consider workplace health programs to be cost prohibitive. Tax

incentives would encourage more employers to adopt workplace health programs as part of their business strategies.

VI. Summary

As the nation moves into the full fledged debate about the future of health care, it is imperative we consider all possible options to keep Americans well. Worksite health programs, such as those implemented by Dow around the world, are key components of empowering people to take control of their health.

We know our employees are the foundation of our company. As we implement our Dow Health Strategy to seek the best health outcomes for our people, we keep the company in good health. Worksites offer one of the best opportunities to effectively engage adults to maintain and improve health, and Dow has demonstrated establishing and maintaining a culture of health in the workplace is possible. We look forward to working with you and other public and private sector leaders to improve and expand workplace health promotion programs. With sustained focus we will continue to have a positive impact on the health of our people.

About Dow

Dow was founded in Michigan in 1897 and is one of the world's leading manufacturers of chemicals and plastics. We supply more than 3,300 products to customers in 160 countries around the world, including hundreds of specialty chemicals, plastics, agricultural and pharmaceutical raw materials for products essential to life. About half of our employees are in the U.S., and we help provide health benefits to more than 34,000 retirees in the US.