

The Power of Prevention in the Battle of the Bulge

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In 1736, Benjamin Franklin said, “An ounce of prevention is worth a pound of cure.” However, old Ben had no way to know that for Americans in the 21st century, the extra pounds we have amassed in our society are on the verge of bringing our nation to its knees – with the only sustainable solution being to leverage the power of prevention.

The weight of our nation is creating a public health crisis so profound that it is undermining the health and productivity of our workforce as well as our global economic competitiveness, and even threatens our long-term national security. Fully two-thirds of Americans are overweight or obese with one-third of American children being overweight or obese. Largely, due to this societal tsunami of obesity, the CDC estimates that nearly 26 million Americans have diabetes, while 79 million U.S. adults have pre-diabetes and yet less than 7 percent of those people with pre-diabetes are aware of it. In addition to diabetes, individuals with obesity are far more likely to develop other chronic diseases like heart disease, hypertension, asthma and cancer. Not only are these and other types of chronic conditions deadly (more than 70 percent of all deaths in the U.S. are related to chronic conditions) and costly (chronic conditions represent 80 percent of all healthcare costs), the productivity and quality of life lost is far greater.¹

A NATIONWIDE COMPLEX

For Americans, over 50 percent of all causes of death are related to lifestyle – and only 20 percent related to genetics.² In fact, largely how we live dictates how we die – and we are simply living too large. Unfortunately, as described by Swinburn, et al., we have developed an “Obesogenic Environment” – which refers to a community, workplace and home ecosystem that promotes gaining weight and one that is not conducive to weight loss, that is, an environment that helps or contributes to obesity.³

Walpole, et al. offer another interesting perspective about obesity in that, “although the concept of biomass is rarely applied to the human species, the ecological implications

of increasing body mass are significant and ought to be taken into account when evaluating future trends and planning for future resource challenges. Scenarios suggest that global trends of increasing body mass will have important resource implications and that unchecked, increasing BMI could have the same implications for world energy requirements as an extra 473 million people. Tackling population fatness may be critical to world food security and ecological sustainability.”⁴

The reality we must recognize is that the weight of our society is also weighing down our economy. Airplanes, ferry boats and other public transportation systems now require more fuel to transport people who weigh more. In a Los Angeles Times article by Steve Chawkins entitled, “Obesity Wave Hits Vessels’ Calculation of Capacities,” it revealed how the Coast Guard had to increase its standard average passenger weight by 25 pounds per person when calculating the carrying capacity for boats. This sad truth even impacts happy places like Disneyworld where rides have had to allow for bigger riders. Unfortunately, it is not “a small world after all.”

Furthermore, the waist line impacts the bottom line for employers. Obesity-related illness is estimated to carry an annual cost of \$190.2 billion.⁵ According to Finklestein, et al, after controlling for race and ethnicity, income, education levels, insurance coverage, marital status and smoking, the researchers found that healthcare costs and productivity loss increased with body mass index (BMI).⁶

For example, female employees with BMIs between 30 and 34.9 experienced 6.3 days of lost time per year in presenteeism (lowered performance while at work), a number that jumped to 22.7 days in women with BMIs over 40. Also men in the lower BMI category lost 2.3 days of at-work productivity per year, while men with BMIs over 40 lost 21.9 days – three full weeks of lost productivity at work.

That same study revealed that men with BMIs of 30 to 34.9 cost \$1,143 more each per year in medical expenditures, missed more workdays and had more lost productivity at work than normal-weight men. Men with BMIs between 35 and 39.9 cost \$2,491 more each, and men with BMIs over 40 cost \$6,087

more. Women showed a similar pattern with BMI between 30 and 34.9, costing \$2,524 extra each year, while a BMI between 35 and 39.9 cost \$4,112. Each woman with a BMI over 40 cost on average \$6,694 more than a normal-weight woman.

All told, obesity among full-time workers costs \$73.1 billion per year, the researchers estimated. That’s the equivalent of hiring 1.8 million new workers at annual salaries of \$42,000, which is what the average American makes each year.⁶

Research published in the *Journal of Occupational and Environmental Medicine*, showed that health conditions in the workforce caused an average monetized health-related productivity loss of 2.3 times the medical and pharmacy expenditures for chronic health conditions (\$2.3:\$1). In that study, medical and pharmacy claims were matched with the health-related presenteeism and absenteeism data obtained from the Dr. Ron Kessler (Harvard)/WHO Health and Work Performance Questionnaire (HPQ) to identify the top health conditions driving total cost for employers. That multiyear study of more than 150,000 workers indicated that employers who focus only on medical and pharmacy costs in creating employee health strategies may misidentify the health conditions that most impact the productivity of their employees and the bottom line for the company. The study found that when health-related productivity costs are measured along with medical and pharmacy costs, the top two chronic health conditions driving these overall health costs were depression and obesity.⁷

In fact, a study at the Milken Institute has calculated that seven chronic conditions (cancer, heart disease, hypertension, mental disorders, diabetes, pulmonary conditions and stroke) are costing the U.S. economy alone more than \$1 trillion per year – with anticipated growth rates of the prevalence of those seven conditions to yield an illness burden of \$4 trillion per year by 2023. However, as compared to this “business as usual” scenario, plausible estimates of potential gains (avoided losses) associated with reasonable improvements in prevention, detection and treatment of just those seven conditions would cut annual

treatment costs in the U.S. by \$217 billion and reduce health-related productivity losses by \$905 billion by 2023. A compelling statement from that study was, "...the single most important way to reduce the burden of disease and reduce costs to society is to reduce obesity."⁸

PUSHING PREVENTION

The clinical science of preventive medicine focuses on wellness and health promotion and health risk assessment to keep people healthy (primary prevention); and early identification/diagnosis of illness through age/gender/risk appropriate screening and biometric testing (secondary prevention); as well as earlier evidence-based intervention/treatment for people with health conditions to deter complications and the disabling impact of those conditions as well as reduce costs (tertiary prevention).

Furthermore, according to the CDC, 80 percent of heart disease and type 2 diabetes as well as 40 percent of cancer are preventable if Americans ate a healthy diet, exercised regularly and did not smoke.

To reduce the burden of chronic illness in our nation we have to reduce the health risks that lead to those conditions. As health risks go, so go health costs. Reduce the risks, and you can reduce the costs.

Studies continue to document how organizations with comprehensive wellness programs achieve remarkably lower total healthcare costs, with shorter sick leaves, reductions in long- and short-term disability, and improved general workforce health. Medical costs fall by about \$3.27 and absenteeism costs fall by about \$2.73 for every \$1.00 spent on comprehensive workplace wellness and prevention programs, according to a Harvard meta-analysis study of the literature published in *Health Affairs*.⁹

Increasingly, to bring about real change to the corporate bottom line, employers are looking beyond healthcare benefits as a cost to be managed and rather to the benefits of good health as investments to be leveraged.

In a study published in the journal of *Population Health Management*, among a cohort of 2,606 employees from multiple employer groups who participated for one year in The Prevention PlanTM from U.S. Preventive Medicine, we found significant reductions in 10 of 15 key health risk measures that are predictors of future conditions. The cohort also showed a net movement from higher to lower

overall health risk levels: 48.70 percent moved from high (5 or more risk factors) to moderate overall risk (3-4 individual risk factors); 46.35 percent moved from moderate to low overall health risk (two of fewer individual health risk factors); and 15.65 percent moved from high to low overall risk.¹⁰

A sub-cohort of 1,298 employees from the initial study group was re-evaluated after two years on their personalized Prevention Plan. Of those individuals that started at baseline in the high-risk category, the following health risk reductions were documented: 90.7 percent improved physical activity; 89.4 percent improved blood pressure; 78.3 percent reported less health-related sick days; 76.2 percent improved cholesterol levels; 74.2 percent reduced stress; 70 percent lowered fasting blood sugar out of the pre-diabetes range; 60 percent improved HDL; 22.6 percent quit smoking/tobacco use; and 16.6 percent improved BMI measures.¹¹

There has never been a better time to focus on prevention, and there are some encouraging signs that we might finally be moving in that direction. Michelle Obama is helping lead the way with her specific efforts aimed at the obesity crisis. There are significant planks for prevention built into the Patient Protection Affordable Care Act (PPACA), which promotes evidence-based clinical prevention with incentives and grants for comprehensive workplace wellness programs; incentives for local governments to improve community wellness; science-based nutrition information for families; and health screenings with personalized prevention plans covered by Medicare. PPACA also established a National Prevention Council which has subsequently developed a National Prevention Strategy.

One of the most relevant outcomes of an increased emphasis on prevention would be for individuals – helping them avert a personal crisis, preventing a chronic illness and adding quantity and quality to their lives. At a higher level, a commitment to prevention would help reduce the burden of risk and illness to our entire society, unleash financial and clinical resources through the enhanced capacity of physicians and hospitals, improve the health and productivity of our nation's workforce, lower healthcare costs and, ultimately, enhance the vitality of our nation's economy.

In order to achieve true and sustainable

healthcare cost control, we must focus on the *health* in health reform and transform our nation's reactive care system to a proactive, wellness-based system – built on the pillars of prevention. It turns out old Ben was right. CI

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