

TerranearPMC Safety Share

Week of June 3, 2013 – Total Worker Health

A few weeks ago I had the pleasure to listen to L. Casey Chosewood, the Senior Medical Officer for *Total Worker Health* at NIOSH. He talked about the reasons why occupational health needed to encompass more than just workplace risks if America is to reverse several disturbing trends.

Today, emerging evidence recognizes that both work-related factors and health factors *beyond the workplace* jointly contribute towards many health and safety problems that affect today's workers and their families. Traditionally, workplace health and safety programs have been compartmentalized. That is, *health protection* programs have focused squarely on safety, reducing worker exposures to risk factors arising in the work environment itself, while most *health promotion* programs have focused on lifestyle factors off-the-job that place all persons, including workers, at risk. A growing body of science supports the effectiveness of combining these efforts through workplace interventions that integrate health protection and health promotion programs. So, in June 2011, NIOSH launched the Total Worker Health (TWH) Program as an evolution of the NIOSH Steps to a Healthier US Workforce.

TWH is defined as a strategy that integrates occupational safety and health protection with health promotion to prevent worker injury and illness and to advance worker health and well-being. The TWH Program supports the development and adoption of ground-breaking research and best practices of several approaches that address health risk from both the work environment (physical and organizational) and individual behavior. Traditionally, Health Protection is perceived as including programs that focus on reducing hazards and exposures at workplaces to prevent occupational injury and illness. On the other hand, the concept of Health Promotion has included interventions aimed mainly at reducing lifestyle risk factors by promoting healthy behaviors and actions, and, as such, are aimed at promoting individual change.

TWH was inspired by emerging research on the impact of sedentary work on employee health and by new employer initiatives that aim to decrease sedentary work, such as Wellness Programs. A sit-stand workstation allows the user to intermittently sit or stand while working on the computer, participating in a conference call, or performing other work. The customizable workstation allows users to easily transition between a seated and standing work position multiple times throughout the day.

The health and well-being of working people and their families are greatly influenced by the quality of their work environments, whether resulting directly from exposures to physical hazards on the job and risks associated with the organizational context, or indirectly through the impact of work on health behaviors.

Individual health-related behaviors are the prime target of TWH, which aims to promote healthy behaviors such as not using tobacco, weight control, healthy diet, physical activity, seat belt use, influenza vaccinations, adherence to screening guidelines (e.g., mammography screening, blood pressure, cholesterol), substance abuse prevention, case management (e.g., diabetes), and sun exposure prevention, as key examples.

Presently, occupational disease and injury continue to account for a considerable proportion of the burden of disease in the United States. Data indicate that 6.1 million illnesses and injuries occurred in 1997 in private-sector employment settings, while 6,238 workers died of occupational diseases in that same year (that was 1997; for recent years, this number hovers around 5000). From 1973 through 1997, the number of lost workdays attributable to occupational illnesses and injuries rose from 1.9 million to 2.9 million per year. Meanwhile, individual health behaviors also play a significant role in our national health outcomes. For example, tobacco accounts for 18% of total mortality, and diet and physical activity account for 17%.

Through evidence gathered by the NIOSH TWH program, it has been concluded that the effects of life risks and job risks are not independent of one another. Take, as an example, exposure to tobacco. Some of the same toxic agents present in tobacco smoke are also hazards in the worksite (e.g., benzene), and thus workers who smoke may be doubly exposed through their exposures on the job. In addition, tobacco smoke and toxic agents found in the worksite may interact synergistically, increasing the profound effect beyond the simple addition of the two exposures alone (such is the classic example of those who smoke and work in the asbestos abatement industry). Workplace chemicals may also be transformed into more harmful agents by smoking. For example, the heat generated by burning tobacco may increase the toxicity of other chemicals inhaled as a cigarette is smoked. Similarly, tobacco use has been associated with stressful work organization, which is another type of occupational risk.

A major issue that's relevant to the TWH of any workforce is the prevalence of chronic health conditions. Data compiled by NIOSH reported that in 2006, US healthcare spending was more than \$2 trillion and employers on average pay more than one third of this cost. Chronic health conditions are on the rise across all age groups in the US, and it is expected that in the near future conditions such as diabetes, heart disease, cancer will add an enormous burden to already high costs of healthcare. Employers will be particularly impacted as they provide medical benefits for employees and absorb the costs of absenteeism and long-term and short-term disability claims.

Historically, there has been a disconnect between those responsible for health protection and those responsible for health promotion in the workplace. Most health protection programs are separated from workplace health promoting programs. Sometimes, when resources are sparse, the programs can even seem to compete for funding. What NIOSH has concluded is that Workers' risk of disease is increased by exposure to both occupational hazards and individual risk related behaviors; risks can be drastically reduced through Worker participation in integrated programs rather than through individual intervention. In addition, workers at highest risk for exposures to hazardous working conditions are often most likely to engage in risk-related health behaviors and live in higher risk communities.

In short, TWH is a concept that has recognized that our risk-factors outside of work are directly intertwined with occupational safety and health. One cannot be diligent in safety and health during work hours and simply ignore those same principles that provide us with ways to ensure our well-being once we leave our jobs. By not having safety and well-being incorporated into our daily lifestyle, we will be providing a negative impact to our safety and health both at work and in our personal lives.

Healthy citizens are the greatest asset any country can have

Winston Churchill