

# Executive Perspective

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As we celebrate Workers Memorial Day, it is a time to reflect on health in the workplace. Increased research is needed to fully understand the impact of the changing workforce and workplace on worker health. Efforts need to be made to combine health prevention and promotion programs to create a stronger workforce.

Mary Beth Bigley, DrPH, MSN, ANP  
Acting Editor, *Public Health Reports*

## THE FACE OF OCCUPATIONAL SAFETY AND HEALTH: 2020 AND BEYOND

MARGARET KITT, MD, MPH  
JOHN HOWARD, MD

Every year on April 28, Workers Memorial Day, we honor those who have suffered injury, illness, and death on the job. Great strides have been made in workplace safety and health since Dr. Alice Hamilton and her colleagues began their historic investigation of occupationally related illnesses, as chronicled in her book, *Exploring the Dangerous Trades*.<sup>1</sup> However, as long as the cost of any job is an injury, illness, or death that results in physical, financial, or emotional hardship for a worker or a worker's family, we fall short as a nation.

There is no doubt that workplace hazards such as asbestos, coal-mine dust, and industrial chemicals still exist as in the days of Dr. Hamilton, despite great advancements in controlling exposures and reducing the toll of job-related impairment, disability, and death. However, the National Institute for Occupational Safety and Health (NIOSH) and its partners must not only deal with these legacy hazards, but also recognize new challenges resulting from the evolving nature of work as we move toward 2020 and beyond.

The pace of technological change and the rapid diffusion of information require a vigilant eye to recognize emerging hazards often before their risks are fully understood or characterized. For example, novel materials such as nanoparticles have potential implications for worker health risk that have not been fully defined. There are also likely exposures to toxic materials in relatively new "downstream" processes (e.g., electronic-waste recycling) where the hazards may not be well recognized.

As baby boomers age, the composition of the U.S. workforce is changing. Many workers are remaining in the workplace past traditional retirement age for multiple reasons, such as overall improved health, economic necessity, or changing expectations of work-life

balance. More people have multiple careers during the course of their life span. With the baby-boom cohort aging, its share of the labor force, and, ultimately, its exit from the workforce, is projected to keep the growth of the labor force low at an estimated 0.6% per year in the next 50 years.<sup>2</sup> Along with an aging workforce comes an increased prevalence of chronic conditions affecting health, physical ability, or mental dexterity that will require attention to different workplace accommodations.

The U.S. workforce continues to diversify, with minority groups projected to expand their share of the workforce into the future. Since the 1970s and 1980s, women's labor force participation rates have dramatically increased, stabilizing at about 59% in 2005, and women are projected to continue to play a significant role in the workplace for years to come.<sup>2</sup> This greater diversity has many positive aspects, but it also means that the occupational safety and health needs of the 21st century workforce will differ in many significant ways from those of the more homogeneous 20th century workforce.

The workplace itself is also changing. The shift from a manufacturing base to growth in the services sector has affected the distribution of workers not only by industry and occupation, but also by geographical region.<sup>3</sup> With increased technology and automation, work becomes more sedentary, affecting the risk for onset or worsening of a range of chronic diseases associated with lack of physical activity, such as heart disease, obesity, and diabetes. Telecommuting is commonplace, as we live more and more in a virtual world, so personal contact with coworkers may be more limited. More people are working extended hours, which may increase the likelihood of worker injuries associated with fatigue. Longer work days can have serious implications for family well-being, including one's inability to care for ill children or aging parents because of competing work demands. Employers may see (1) declines in workers' ability to function due to fatigue, (2) the possibility of errors, (3) poor productivity,

and (4) high turnover rates, resulting in more costs for training new employees. Work-related fatigue has broader implications as well for general public safety, such as the role of fatigue as a risk factor for motor vehicle crashes and medical errors.<sup>4</sup>

There is also increased movement toward contingent work, where a nontraditional worker-employer relationship exists. This trend includes the use of contractors and part-time and temporary employees. According to the Bureau of Labor Statistics, contingent workers are more likely to be young, female, black, or Hispanic, and have lower incomes and fewer benefits.<sup>5,6</sup> Although contingent work may be desirable for some individuals, the associated job insecurity may be a significant source of stress for many other workers and their families. Globalization and international offshoring of jobs also contributes to job insecurity in some sectors. These factors, in addition to demands for increased productivity, may result in widely prevalent mental health and psychosocial diseases associated with stress, anxiety, and depression.<sup>7</sup>

Although absenteeism is problematic for workers and employers, “presenteeism” (i.e., being at work but not functioning up to capacity) is not always readily apparent. Presenteeism can result from numerous health conditions including migraine headaches, asthma, chronic lower-back pain, and depression. The challenge is to identify cost-effective steps that businesses can take to recover productivity losses from presenteeism<sup>8</sup> while improving the quality of work/life for workers.

Increased research is needed to explore the impacts of a changing workforce and workplace, while not abandoning the ongoing task of controlling or eliminating many of the historical but persistent hazards Dr. Hamilton and her colleagues began investigating years ago. NIOSH, along with its extramural partners, has embarked on one strategy to develop a more com-

prehensive approach to the evolving workplace—Total Worker Health™ (TWH™). Instead of the traditional approach of addressing occupational health and personal health as separate imperatives, TWH™ attempts to recognize the synergies between the two and to truly meld traditional workplace health and safety programs with health promotion programs to build and maintain a healthier workforce.<sup>9</sup> Safer, healthier, and happier workers are essential for achieving increased productivity, lower medical costs, and other benefits to families, communities, the U.S. economy, and society as we look ahead to the next decade.

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Margaret Kitt is the Deputy Director for Program and John Howard is the Director at the National Institute for Occupational Safety and Health (NIOSH), in Atlanta, Georgia.

Address correspondence to: Margaret Kitt, MD, MPH, National Institute for Occupational Safety and Health, 1600 Clifton Rd. NE, MS E-20, Atlanta, GA 30333; tel. 404-498-2500; e-mail <ajy8@cdc.gov>.

The findings and conclusions in this article are those of the authors and do not necessarily represent the views of NIOSH.

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