## 10 Occupational Safety and Health



Lead Agency: Centers for Disease Control and Prevention

## OCCUPATIONAL SAFETY AND HEALTH

The American workplace is changing and becoming more diverse. Women now comprise 46 percent of the labor force and are projected to be 47 percent by the year 2000. Minorities, 23 percent of the workforce in 1994, will be 27 percent by the year 2000. The median age of the American worker, 37.9 years in 1992, will be 39.2 years by 2000.

Another factor in the changing workplace is that the United States has evolved from a manufacturing to a service economy. The growth in employment now is concentrated in small businesses. There also have been changes in the organization of work—expanded duty hours, compressed work weeks, shift work where the employees' hours vary, and longer work periods without breaks. These changes increase the challenges of preventing occupational diseases, injuries, and deaths.

Workplaces are the frontier for linking occupational and environmental health since many environmental exposures occur at the workplace. Environmental justice issues apply to all levels of employees but especially the entry-level and lower paid workers. Additional research is needed to establish the health effects of exposures at work to stress and environmental hazards. Also essential is evaluation research to document effective prevention of work-related injuries and diseases. Improved data from surveillance systems are needed for early detection and continuous assessment of the type and frequency of occupational diseases, injuries, and deaths.

## **Review of Progress**

While work-related injury deaths have been reduced from 6 to 5 per 100,000 workers in 1993, nonfatal injuries at work have fluctuated between 8.3 in 1988 and 7.9 per 100 workers in 1993. However, among certain occupational categories the death rates are more than double and continue to require specific interventions. For construction workers, for example, work-related injury deaths have fallen from a 1983–1987 baseline of 25 per 100,000 workers to 14 in 1993. Work-related injuries that resulted in medical treatment, lost time from work, or restricted work activity declined from a 1983–1987 baseline of 14.9 per 100,000 construction workers to 12.0 in 1993. Transportation workers' death rates have fallen from 15.2 to 13 per 100 workers over this same time period, yet the injury rates have increased from 8.3 to 9.1 per 100.

Cumulative trauma disorders are increasing. Increases in reported cumulative trauma disorders may be due to heightened awareness and better reporting as well as to changes in work design such as increased automation and job specialization, both of which increase the amount of repetition required by the worker. The incidence per 100,000 workers has more than tripled from 100 to 368 between 1987 and 1992. Among the special target populations in this objective, manufacturing workers experienced cumulative trauma disorders at a rate of 355 per 100,000 workers in 1987, compared with 1,241 in 1992. Similarly, the rate for meat production work-

ers' is increasing—3,920 per 100,000 in 1987, compared with 8,475 per 100,000 in 1992. These trends make the year 2000 targets seem quite elusive.

Occupational skin disorders are also on the rise. From a 1983–87 baseline of 64 per 100,000 full-time workers, the 1992 rate increased to 82 per 100,000 workers. This increase may be due to increased awareness by both workers and health care professionals, increased reporting of occupational skin disorders, or possible shortcomings in prevention.

Another threat to employee health is exposure to lead in the workplace. The National Institute for Occupational Safety and Health (NIOSH) estimates that approximately 30,000 workers are occupationally exposed to lead (extrapolated from reports from 22 States). Occupationally exposed workers may be taking home lead on their clothes, person, or automobile that could expose their children to this contaminant.

No national data are available on the proportion of workers exposed to average daily noise levels that exceed 85dBA. NIOSH estimates about 25 percent of workers in all employment sectors are exposed to this dangerous level of noise.

Hepatitis B infections among occupationally exposed workers are on the decline. The 1987 baseline has been revised to 3,090 cases; in 1993 there were 727 cases. This trend parallels the rise in hepatitis B vaccinations. The 1989 baseline showed that only 37 percent of occupationally exposed workers had been immunized. In 1994, 71 percent of occupationally exposed workers had received protection from a vaccination for hepatitis B.

Motor vehicle crashes are the leading cause of fatal injury death in the workplace. A HEALTHY PEOPLE 2000 objective tracks the extent to which worksites with 50 or more employees mandate employee use of occupant protection systems such as safety belts during all workrelated motor vehicle travel. A survey of worksites showed that in 1992, 82.4 percent of worksites with 50 or more employees had such mandates. This same survey also



established the baseline for the proportion of worksites with 50 or more employees that have implemented worker health and safety programs. In 1992, 63.8 percent of employers reported having such programs in place.

Research is needed to identify aspects of back injury programs that are effective in preventing injury. In 1985, 28.6 percent of worksites with 50 or more employees had such programs; in 1992, 32.5 percent actively were working to prevent back injuries.

Another risk reduction objective seeks to increase to 50 the number of States that implement occupational safety and health plans for the identification, management, and prevention of work-related disease and injuries within the States. The 1989 baseline showed that 10 States had such plans; in 1992, 32 States had these plans. Because Federal standards have been established for occupational exposure to airborne asbestos fibers, cotton dust, coal mine dust, and silica dust, objective 10.11 has been achieved.

While much of the focus of occupational safety has been on large employers, there is a need to address small businesses. In 1991, 26 States were providing consultation and assistance to small businesses to implement safety and health programs for their employees.

Primary care providers can play an important role by routinely eliciting information from patients on their occupational health exposures. However, a 1992 provider survey showed that the percent of clinicians routinely inquiring or counseling about work-related health risks was very low. Among family physicians and pediatricians, 7 percent reported that they routinely inquire about work-related risks, while 8 percent reported that they routinely counsel about work-related risks. For other providers the results were: obstetricians/gynecologists, 6 percent and 10 percent, and nurse practitioners, 14 percent and 10 percent. More attention is needed in training primary care providers in understanding the impact of occupation on health.

## **1995 Revisions**

Two new objectives have been added to this priority area. One seeks to reduce the rate of homicides occurring in the workplace, the third leading cause of fatal injury for workers and the leading cause of injury death for women in the workplace. This problem of violent behavior must be addressed to ensure the safety of U.S. workers.

The second new objective complements objective 10.11 and seeks to reduce the ageadjusted mortality for four major preventable occupational lung diseases (byssinosis, asbestosis, coal workers' pneumoconiosis, and silicosis) to 7.7 per 100,000. This reduction is possible to achieve if exposures are limited and certain high-risk occupations are targeted for interventions.

Adolescent workers have been added as a special population target for reducing work-related injuries.

The baseline in objective 10.5 for hepatitis B was revised; the target has been proportionately adjusted. The target for objective 10.6 at 95 percent has been made more challenging because the baseline showed that 82 percent of worksites with 50 or more employees required use of occupant protection systems.

Two existing objectives from other priority areas are being added to the Occupational Safety and Health priority area. They are objectives 3.11, worksite smoking policies, and 3.12, clean indoor air laws from the Tobacco priority area.