

**Midcourse  
Review**



**Occupational  
Safety and Health** **20**

**Lead Agency:**

Centers for Disease Control and Prevention

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# Goal: Promote the health and safety of people at work through prevention and early intervention.

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## Introduction\*

The workplace, where most people spend many of their waking hours, can be a hazardous place. Despite the continued decline in the reported numbers of occupational injuries, 4.1 million workers sustained work-related injuries in 2003 in the private sector alone.<sup>1</sup> During the same year, an average of 15 workers died from work-related injuries each day.<sup>2</sup>

A single, comprehensive, national system for reporting work-related chronic disease does not exist. Therefore, several data sources and published studies are used to estimate the magnitude of occupational disease. Although they are likely to underestimate the true burden of occupational illnesses, these combined sources indicate that approximately 49,000 to 67,000 workers die each year from such illnesses.<sup>3,4</sup>

Work-related injury and illness also take an enormous economic toll on employers, workers and their families, and society overall. For example, employers in private industry alone spent \$50.8 billion in 2003 on wage payments and medical care for workers who missed 6 or more days from work as a result of getting hurt on the job.<sup>5</sup>

To provide a framework to foster occupational safety and health research, the National Occupational Research Agenda (NORA) was created in 1996 by the National Institute of Occupational Safety and Health (NIOSH), in partnership with more than 500 public and private organizations and individuals.<sup>6</sup> The NORA process has resulted in consensus on the top 21 occupational research priorities for the Nation, including traumatic injuries, musculoskeletal disorders, allergic and irritant dermatitis, hearing loss, and organization of work. Significant commonalities exist between NORA research priority areas and the Healthy People 2010 objectives. NORA has therefore been serving as a catalyst for moving the Nation toward the targets.

NORA is preparing to use a sector-based approach to better guide research to practice within workplaces. The sectors are based on the North American Industry Classification System,<sup>7</sup> which replaced the U.S. Standard Industrial Classification system and which enables the comparison of statistics throughout North America. The 20 sectors are categorized into 8 groups with similar occupational safety and health issues.<sup>8</sup> NIOSH and its partners will form eight Sector Research Councils in agriculture, forestry, and fishing; construction; health care and social assistance; manufacturing; mining; services; transportation, warehousing, and utilities; and wholesale and retail trade.<sup>8</sup> A ninth group, the Cross-Sector Research Council, will address research needs affecting multiple sectors.<sup>8</sup> With members from industry, labor, academia, government, and professional and trade associations, each council will identify priorities that will guide actions to promote safe and healthy workplaces.

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\* Unless otherwise noted, data referenced in this focus area come from Healthy People 2010 and can be located at <http://wonder.cdc.gov/data2010>. See the section on DATA2010 in the Technical Appendix for more information.

*Steps to a HealthierUS Workforce* has been introduced to encourage workplace health programs that focus on both personal and workplace risk factors.<sup>9</sup> Launched in 2004, the initiative is the first of its kind to unite researchers, policymakers, practitioners, and industry and labor leaders with the goal of protecting workers, promoting individual workers' health, and improving working conditions.

Another initiative, called Research to Practice (r2p), aims to further reduce illness and injury by increasing workplace use of effective NIOSH and NIOSH-funded research findings.<sup>10</sup> Through NIOSH, the U.S. Department of Health and Human Services (HHS) continues to work with partners to develop effective products, translate research findings into practice, target dissemination efforts, and evaluate and demonstrate their effectiveness.<sup>11</sup>

## **Modifications to Objectives and Subobjectives**

The following discussion highlights the modifications, including changes, additions, and deletions, to this focus area's objectives and subobjectives as a result of the midcourse review.

Modifications were made to two occupational safety and health objectives. For elevated blood lead levels (20-7), the objective was reworded from "reduce the number of persons who have elevated blood lead concentrations from work exposures" to "reduce the proportion of adults who have elevated blood lead concentrations." The baseline was also modified to reflect the change in measurement. For needlestick injuries (20-10), the objective was revised to reflect the population that can be monitored by currently available data sources: "health care workers" was limited to "hospital-based health care workers." Studies are being funded that will provide more information on needlestick injuries among health care workers who are not hospital based.<sup>12</sup>

Because the data source for work-related assaults (20-6) was redesigned, the baseline for this objective was changed from 0.85 to 1.10 assaults per 100 workers aged 16 years and older to better characterize the population at risk.

The developmental objective regarding work-related, noise-induced hearing loss (20-11) will be tracked using data from the Survey of Occupational Injuries and Illnesses, which has been collecting hearing loss data since 2004. By the end of the decade, two data points are anticipated for establishing a baseline and assessing a trend.

## **Progress Toward Healthy People 2010 Targets**

The following discussion highlights objectives that met or exceeded their 2010 targets; moved toward the targets, demonstrated no change, or moved away from the targets; and those that lacked data to assess progress. Progress is illustrated in the Progress Quotient bar chart (see Figure 20-1), which displays the percent of targeted change achieved for objectives and subobjectives with sufficient data to assess progress.

As shown in Figure 20-1, occupational skin diseases or disorders (20-8) exceeded its target. Moving toward their targets were work-related injury deaths (20-1), work-related injuries (20-2), overexertion or repetitive motion injuries (20-3), pneumoconiosis deaths (20-4), work-related assaults (20-6), elevated blood lead levels (20-7), and needlestick injuries (20-10). One objective could not be assessed because only baseline data were available at midcourse, and none moved away from its target.

**Objectives that met or exceeded their targets.** Occupational skin diseases or disorders (20-8) exceeded the targeted change by 20 percent. While preventable, occupational skin diseases or disorders were the second leading cause of occupational illness in 2001.<sup>13</sup>

NIOSH has extensive intramural and extramural programs to respond to the high numbers and preventable nature of skin diseases or disorders. One initiative is the NORA Dermal Exposure Research Program (DERP).<sup>14</sup> DERP is an intramural program with the overall goal of promoting the development of improved NIOSH policies and recommendations for identifying and controlling harmful exposures of the skin to chemicals. In the past few years, most DERP research has focused on skin as a route for chemical absorption, including hand-to-mouth transfer.<sup>15</sup> In the years following the establishment of NORA (1997–2001), the rate for chemicals and chemical products as the source of occupational skin diseases or disorders declined 40 percent (25 percent for dermatitis).<sup>16, 17</sup> In addition, several hundred skin-related Health Hazard Evaluations have been conducted, including an investigation to address congressional concerns about handling irradiated mail after the 2001 anthrax attacks.<sup>18</sup>

**Objectives that moved toward their targets.** Seven objectives moved toward their targets: work-related injury deaths (20-1), work-related injuries (20-2), overexertion or repetitive motion injuries (20-3), pneumoconiosis deaths (20-4), work-related assaults (20-6), elevated blood lead levels (20-7), and needlestick injuries in hospital-based health care workers (20-10).

Overall, work-related injury deaths (20-1a) met 38 percent of the targeted change. Industry-specific rates also improved. Achieving 52 percent of the targeted change, construction (20-1c) showed the largest improvement; the smallest gain was made in mining (20-1b), which achieved 1 percent of the targeted change.<sup>19, 20, 21</sup> In 2002, the highest fatality rates were observed in mining (23.5 deaths per 100,000 workers) and agriculture, forestry, and fishing (22.7 deaths per 100,000 workers), followed by construction (12.2 deaths per 100,000 workers) and transportation (11.3 deaths per 100,000 workers).<sup>2</sup>

Examples of programs addressing work-related injury death challenges include transportation initiatives, interventions aimed at reducing the incidents associated with mining fatalities, such as roof support technologies, and the Fatality Assessment and Control Evaluation (FACE) program.<sup>22, 23</sup> FACE aims to identify work situations with a high risk of fatality and to disseminate prevention strategies to employers, workers, unions, public agencies, and others.<sup>22</sup> In 2003, the FACE program targeted four priority areas for investigations: deaths of youth under 18 years of age, deaths in roadway construction work zones, deaths involving machinery, and deaths of Hispanic or immigrant workers.

Work-related injuries (20-2) achieved 42 percent of the targeted change for all industries (20-2a). The largest improvement occurred in mining, with 64 percent of the targeted change achieved (20-2f), followed by manufacturing with 60 percent of the targeted change achieved (20-2g). Rates for adolescent workers aged 15 to 17 years (20-2h) were the least improved, advancing to 14 percent of the targeted change.<sup>21</sup>

Despite improvements, nonfatal occupational injuries remain a significant public health problem. Inexperience and minimal training in occupational safety and health continue to result in high rates for emergency department visits among younger workers (20-2h).<sup>24, 25</sup> Differences in the industries in which fatal and nonfatal occupational injuries are concentrated also present a challenge. For example, the highest fatality rates occur in mining and agriculture, while the highest nonfatal injury rates occur in construction and manufacturing, with high rates also in health services.

Accordingly, to prevent nonfatal as well as fatal injuries, research and prevention efforts should continue to focus on high-risk settings, occupations, and populations. For example, the National Children's Center for Rural and Agricultural Health and Safety<sup>26</sup> translates research on children's injuries in agriculture to practical prevention measures through efforts such as the North American Guidelines for Children's Agricultural Tasks. This resource assists parents in assigning farm jobs to their children 7 to 16 years of age, living or working on farms.<sup>27</sup>

The rate for overexertion or repetitive motion injury and illness cases involving days away from work (20-3) met 45 percent of the targeted change. From a baseline of 675 injury and illness cases per 100,000 workers in 1997, the rate dropped to 522 per 100,000 workers in 2001.

More than 30 percent of all nonfatal occupational injuries and illnesses with days away from work continue to be attributable to overexertion and repetitive motion.<sup>28</sup> To help combat this issue, research continues on the relationship between musculoskeletal disorders and physical and psychological stressors.<sup>29, 30</sup>

For pneumoconiosis deaths in persons aged 15 years and older (20-4), the 20 percent achievement of the targeted change reflected a gradually improving long-term trend. Pneumoconiosis is preventable through control of exposure to occupational dusts, and progress toward prevention has been noted since the baseline. Pneumoconiosis deaths of persons aged 15 years and older decreased from 2,928 in 1997 to 2,718 in 2002 and moved toward the 2010 target of 1,900. Enhanced medical screening programs for coal miners may help target "hot spots" of pneumoconiosis occurrence for preventive interventions.<sup>31</sup>

Also, a personal dust monitor has been developed. This monitor is the first device that allows immediate determination that a coal miner is exposed to airborne dust at concentrations posing a risk of pneumoconiosis.<sup>32</sup> It represents the first advancement in monitoring coal worker dust exposure in over 30 years.

The objective for work-related assaults (20-6) achieved 72 percent of the targeted change. Many efforts have been undertaken in the past decade to decrease work-related assaults. Examples include the Workplace Violence Research and Prevention Initiative<sup>33</sup> and conferences like "Partnering in Workplace Violence Prevention: Translating Research to Practice."<sup>34</sup>

Elevated blood lead levels (20-7) met 24 percent of its targeted change of no employed adults with levels greater than 25 micrograms per deciliter. Elevated blood lead levels can cause a range of adverse health outcomes in individuals—from kidney or nervous system damage to potential infertility.<sup>35</sup> Through the Adult Blood Lead Epidemiology and Surveillance (ABLES) program, currently active in 37 States, cases of excessive lead exposure in adults are tracked and responded to. Through NIOSH, HHS is collaborating with State ABLES personnel and the Association of Occupational and Environmental Clinics to develop national clinical guidelines to improve the identification and treatment of lead overexposure in adults.

Needlestick injuries among hospital-based health care workers (20-10) met 60 percent of the targeted change. A substantial proportion of these injuries could be prevented through the use of safer medical devices and a comprehensive program of training and safe work practices. NIOSH develops

recommendations for exposure management, disseminates strategies for reducing exposures, and conducts a variety of training and education programs. NIOSH also has partnered with hospitals, home health care agencies, nursing homes, and dental offices to identify, select, evaluate, and implement safer medical devices. Also, some health care facilities that already use medical devices are assisting other health care facilities by sharing their experiences.<sup>36, 37</sup> These facilities have agreed to discuss how each step was accomplished, the barriers they encountered, how barriers were resolved, and, most important, the lessons learned.

**Objectives that demonstrated no change.** One objective did not show any movement toward or away from its target: work-related homicides for persons aged 16 years and older (20-5). The jobs where workers are at risk of being murdered share a number of common factors, including interacting with the public, handling exchanges of money, working alone or in small numbers, and working during late night or early morning hours. Examples of occupations with high homicide rates include taxicab drivers, police, gas station workers, and security guards. The strategies discussed in the section on work-related assaults (20-6) also address this objective.

**Objectives that moved away from their targets.** At the time of the midcourse review, no objectives moved away from their targets.

**Objectives that could not be assessed.** Two objectives lacked data to assess progress for the midcourse review: worksite stress reduction programs (20-9) and work-related, noise-induced hearing loss (20-11).

The progress of worksite stress reduction programs (20-9) is tracked by the National Survey of Worksite Health Promotion Activities (NSWHP). At the midcourse, only baseline data were available. For a rough midcourse comparison, the National Organizations Survey, a nationally representative survey of organizational practices among 507 U.S. companies, was used as an alternate data source. Analysis showed that 59 percent of companies with more than 50 employees reported providing stress management programs.<sup>38</sup> This substantially better rate found in the National Organizations Survey suggests improvement will be found in the results of the 2004 NSWHP. Formal appraisal of the NSWHP data collected in 2004 is anticipated for assessing progress by the end of the decade.

Work-related, noise-induced hearing loss (20-11) is also anticipated to have at least two data points to assess the progress by the end of the decade. Hearing loss is the most common occupational disease.<sup>39</sup> Because hearing loss is gradual and painless, workers do not necessarily recognize hearing loss and how it may affect their quality of life. NIOSH conducts significant research and prevention activities aimed at miners and construction workers for whom hearing loss is a major health problem.<sup>40, 41</sup>

## **Progress Toward Elimination of Health Disparities**

The following discussion highlights progress toward the elimination of health disparities. The disparities are illustrated in the Disparities Table (see Figure 20-2), which displays information about disparities among select populations for which data were available for assessment.

Limited data were available to assess disparities among select racial and ethnic groups, genders, education and income levels, and persons with and without disabilities. Bureau of Labor Statistics (BLS) fatality data are analyzed by race, ethnicity, and gender for selected industry categories that are different and therefore not comparable to the categories used for estimating total industry rates (20-1b through e). Numbers, but not rates, by race, ethnicity, and gender are available for other BLS data, such as the data used for overexertion or repetitive motion (20-3) and work-related homicides (20-5). As a result, consistent and reliable data on disparities existed for only two subobjectives: injury deaths in all industry (20-1a) and injuries of adolescent workers (20-2h).

The disparity between the fatal injury rate for workers in the Hispanic population and the black non-Hispanic population (the best group rate) was closing (20-1a). Overall, the fatal injury rate for the Hispanic group had a disparity gap of 10 percent to 49 percent from the best rate. However, the fatal injury rate for the Hispanic group also decreased by about 25 percentage points between 1998 and 2003. The fatal injury rate for the white non-Hispanic population varied from the best rate by less than 10 percent, which was not statistically significant; data were unavailable for all other racial and ethnic groups.

Several efforts are under way to address the need for improved surveillance, prevention, outreach, education, and training for the Hispanic population, with a special emphasis on those who are foreign born. For example, through its Spanish-language website,<sup>42</sup> NIOSH provides translations of selected publications and links to other Spanish-language materials, as well as referral to a toll-free number for followup inquiries. In 2004, “The Symposium on Immigrant Worker Safety and Health” focused on improving surveillance and intervention research regarding immigrant workers.<sup>43</sup>

With regard to gender, the disparity in injury death rate (20-1a) for male workers was more than 100 percent greater than the rate for female workers, reflecting higher employment levels of males in those industries at substantial risk for injury deaths. The nonfatal injury rate (20-2h) for male workers 15 to 17 years of age was also higher than the rate for female workers; however, the disparity decreased 10 to 49 percentage points between 1998 and 2000.

## Opportunities and Challenges

Barriers to achieving the occupational safety and health objectives include gaps in scientific knowledge, problems in systematic evaluation of interventions, difficulty in establishing the work-relatedness of some medical conditions, lack of public awareness of prevention measures, and the view that certain preventable conditions are an acceptable risk of employment. Through NIOSH, HHS is addressing these barriers with research, surveillance, prevention and intervention, information and training, and capacity-building programs.

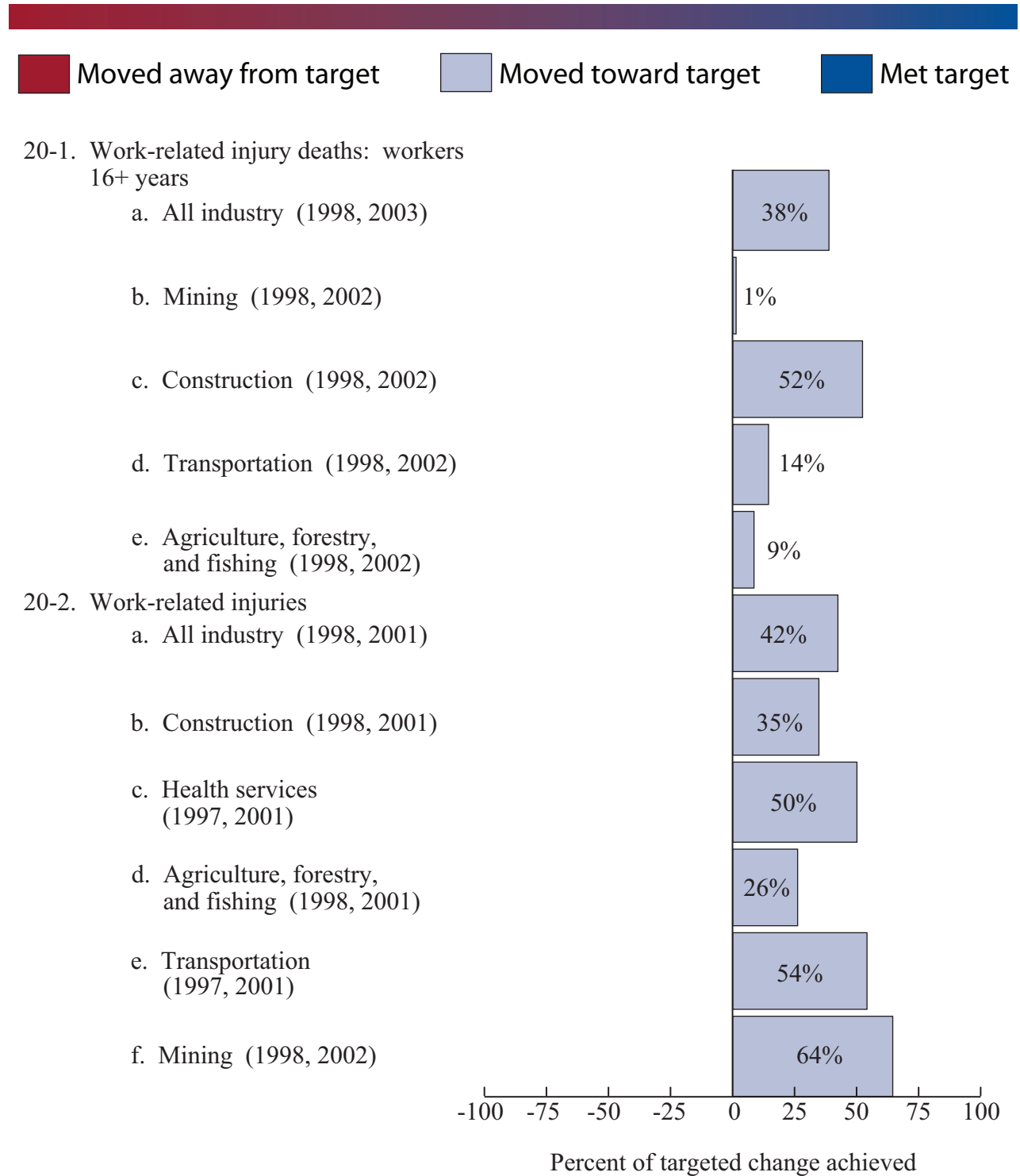
## Emerging Issues

As the workforce and workplace change, new occupational safety and health challenges emerge, such as the increasing participation of older workers in the workforce and the changing organization of work.<sup>44, 45</sup> For example, NIOSH studies in mining suggest that the percentage of injured or ill workers aged 45 years and older has been steadily increasing and that older injured workers typically have the highest median number of days lost per injury.<sup>46</sup> Additional efforts targeting interventions to specific populations at risk, such as older workers, will be taken in the future.<sup>47</sup>



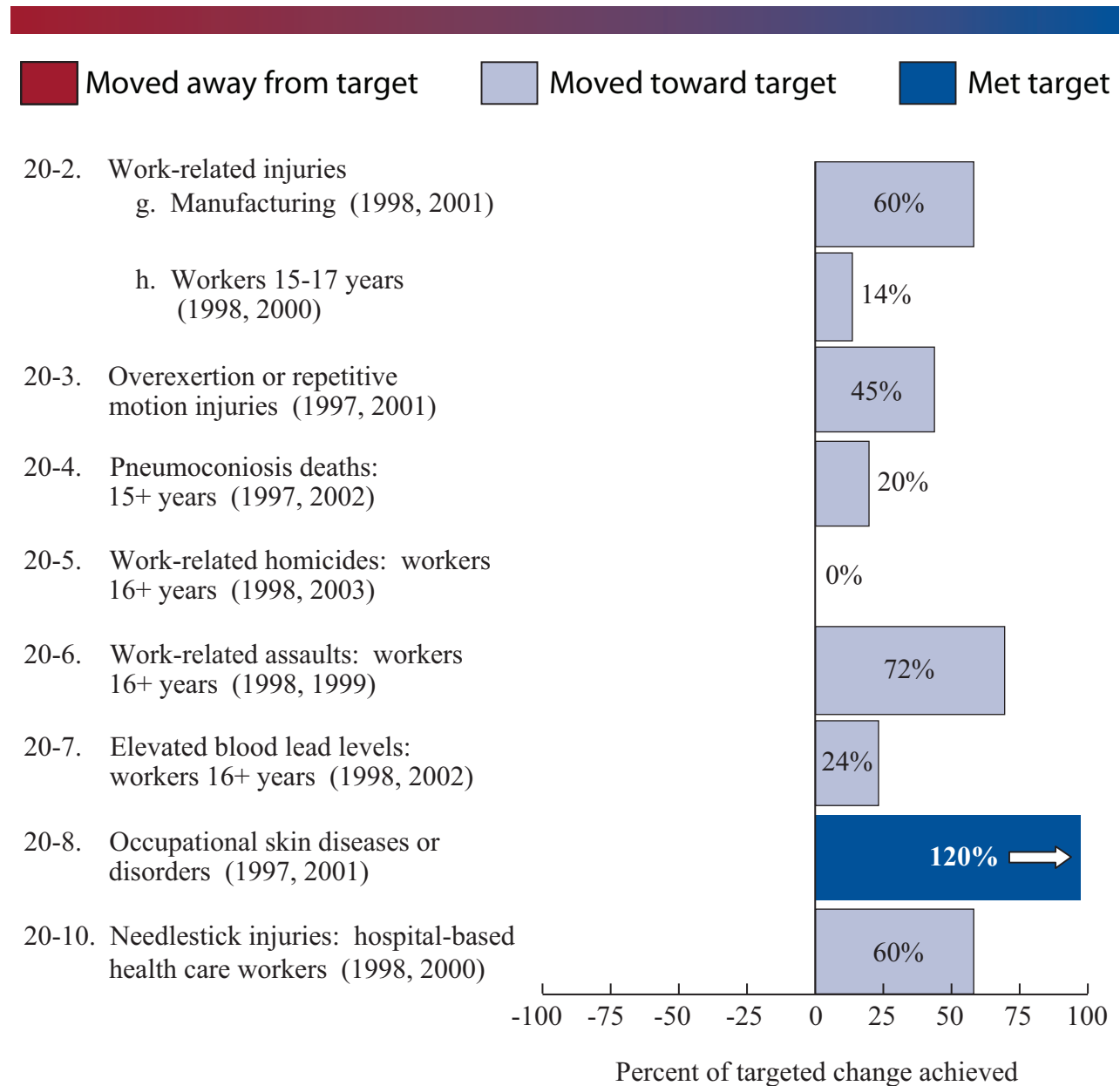
The nature of work also has been changing, with a continued trend toward longer hours of work, organizational restructuring and downsizing, increased use of contracted and temporary employees, and an increase in telecommuting.<sup>44, 48</sup> A recent review shows a pattern of deteriorating performance on psychophysiological tests as well as increased injuries while working long hours.<sup>49</sup> Government, industry, labor, and universities need to continue collaborating to better understand the associations between the changing nature of work and its effects on worker safety and health and to identify efficacious interventions.<sup>50, 51</sup>

**Figure 20-1. Progress Quotient Chart for Focus Area 20: Occupational Safety and Health**



See notes at end of chart. *(continued)*

**Figure 20-1.** (continued)



**Notes:** Tracking data for objectives 20-9 and 20-11 are unavailable.

Years in parentheses represent the baseline data year and the most recent data year used to compute the percent of the Healthy People 2010 target achieved.

$$\text{Percent of targeted change achieved} = \left( \frac{\text{Most recent value} - \text{baseline value}}{\text{Year 2010 target} - \text{baseline value}} \right) \times 100$$

**Figure 20-2. Disparities Table for Focus Area 20: Occupational Safety and Health**

Disparities from the best group rate for each characteristic at the most recent data point and changes in disparity from the baseline to the most recent data point.

		Characteristics															
		Race and ethnicity							Gender		Income			Disability			
		American Indian or Alaska Native	Asian	Native Hawaiian or other Pacific Islander	Two or more races	Hispanic or Latino	Black non-Hispanic	White non-Hispanic	Summary index	Female	Male	Poor	Near poor	Middle/high income	Summary index	Persons with disabilities	Persons without disabilities
<b>Population-based objectives</b>																	
20-1a.	Work-related injury deaths: workers 16+ years, all industry (1998, 2003) † 1					↓	B		↓	B							
20-2h.	Work-related injuries: workers 15-17 years (1998, 2000) †									B	↓						

**Notes:** Data for objectives 20-1b through e, 20-2a through g, and 20-3 through 20-11 are unavailable or not applicable.

Years in parentheses represent the baseline data year and the most recent data year (if available).

Disparity from the best group rate is defined as the percent difference between the best group rate and each of the other group rates for a characteristic (for example, race and ethnicity). The summary index is the average of these percent differences for a characteristic. Change in disparity is estimated by subtracting the disparity at baseline from the disparity at the most recent data point. Change in the summary index is estimated by subtracting the summary index at baseline from the summary index at the most recent data point. See Technical Appendix for more information.

The <b>best group rate</b> at the most recent data point.	<input type="checkbox"/> B	The group with the best rate for specified characteristic.	<input type="checkbox"/> b	Most favorable group rate for specified characteristic, but reliability criterion not met.	<input type="checkbox"/>	Best group rate reliability criterion not met.		
<b>Percent difference from the best group rate</b>								
Disparity from the best group rate at the most recent data point.	<input type="checkbox"/>	Less than 10 percent or not statistically significant	<input type="checkbox"/>	10-49 percent	<input type="checkbox"/>	50-99 percent	<input type="checkbox"/>	100 percent or more
	<b>Increase in disparity (percentage points)</b>							
Changes in disparity over time are shown when the change is greater than or equal to 10 percentage points and statistically significant, or when the change is greater than or equal to 10 percentage points and estimates of variability were not available.	↑	10-49	↑↑	50-99	↑↑↑	100 or more		
	<b>Decrease in disparity (percentage points)</b>							
Availability of data.	<input type="checkbox"/>	Data not available.	<input type="checkbox"/>	Characteristic not selected for this objective.				

† Measures of variability were not available. Thus, the variability of best group rates was not assessed, and the statistical significance of disparities and changes in disparity over time could not be tested. See Technical Appendix.

1 Baseline data by race and ethnicity are for 2000.

## Objectives and Subobjectives for Focus Area 20: Occupational Safety and Health

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**Goal:** Promote the health and safety of people at work through prevention and early intervention.

As a result of the Healthy People 2010 Midcourse Review, changes were made to the Healthy People 2010 objectives and subobjectives. These changes are specific to the following situations:

- Changes in the wording of an objective to more accurately describe what is being measured.
- Changes to reflect a different data source or new science.
- Changes resulting from the establishment of a baseline and a target (that is, when a formerly developmental objective or subobjective became measurable).
- Deletion of an objective or subobjective that lacked a data source.
- Correction of errors and omissions in *Healthy People 2010*.

Revised baselines and targets for measurable objectives and subobjectives do not fall into any of the above categories and, thus, are not considered a midcourse review change.<sup>1</sup>

When changes were made to an objective, three sections are displayed:

1. In the Original Objective section, the objective as published in *Healthy People 2010* in 2000 is shown.
2. In the Objective With Revisions section, strikethrough indicates text deleted, and underlining is used to show new text.
3. In the Revised Objective section, the objective appears as revised as a result of the midcourse review.

Details of the objectives and subobjectives in this focus area, including any changes made at the midcourse, appear on the following pages.

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<sup>1</sup> See Technical Appendix for more information on baseline and target revisions.

**NO CHANGE IN OBJECTIVE  
(Data updated and footnoted)**

**20-1. Reduce deaths from work-related injuries.**

**Target and baseline:**

Objective	Reduction in Deaths From Work-Related Injuries	1998 Baseline	2010 Target
		<i>Deaths per 100,000 Workers Aged 16 Years and Older</i>	
<b>20-1a.</b>	All industry	4.5	3.2
<b>20-1b.</b>	Mining	23.6	16.5
<b>20-1c.</b>	Construction	14.5 <sup>1</sup>	10.1 <sup>2</sup>
<b>20-1d.</b>	Transportation	11.8	8.3
<b>20-1e.</b>	Agriculture, forestry, and fishing	23.3 <sup>3</sup>	16.3 <sup>4</sup>

**Target setting method:** Better than the best for 20-1a; 30 percent improvement for 20-1b, 20-1c, 20-1d, and 20-1e. (Better than the best will be used when data are available.)

**Data source:** Census of Fatal Occupational Injuries (CFOI), DOL, BLS.

<sup>1</sup> Baseline revised from 14.6 after November 2000 publication.

<sup>2</sup> Target revised from 10.2 because of baseline revision after November 2000 publication.

<sup>3</sup> Baseline revised from 24.1 after November 2000 publication.

<sup>4</sup> Target revised from 16.9 because of baseline revision after November 2000 publication.

**ORIGINAL OBJECTIVE**

**20-2. Reduce work-related injuries resulting in medical treatment, lost time from work, or restricted work activity.**

**Target and baseline:**

Objective	Reduction in Work-Related Injuries Resulting in Medical Treatment, Lost Time From Work, or Restricted Activity	1997 Baseline (unless noted)	2010 Target
		<i>Injuries per 100 Full-Time Workers</i>	
<b>20-2a.</b>	All industry	6.2	4.3
<b>20-2b.</b>	Construction	8.7	6.1
<b>20-2c.</b>	Health services	7.9 (1997)	5.5
<b>20-2d.</b>	Agriculture, forestry, and fishing	7.6	5.3
<b>20-2e.</b>	Transportation	7.9 (1997)	5.5

### ORIGINAL OBJECTIVE *(continued)*

<b>20-2f.</b>	Mining	4.7	3.3
<b>20-2g.</b>	Manufacturing	8.5	6.0
<b>20-2h.</b>	Adolescent workers	4.8 (1997)	3.4

**Target setting method:** 30 percent improvement. (Better than the best will be used when data are available.)

**Data sources:** Survey of Occupational Injuries and Illnesses, DOL, BLS; National Electronic Injury Surveillance System (NEISS), CPSC.

### OBJECTIVE WITH REVISIONS

**20-2. Reduce work-related injuries resulting in medical treatment, lost time from work, or restricted work activity.**

**Target and baseline:**

Objective	Reduction in Work-Related Injuries Resulting in Medical Treatment, Lost Time From Work, or Restricted Activity	1997 1998 Baseline (unless noted)	2010 Target
		<i>Injuries per 100 Full-Time Workers</i>	
<b>20-2a.</b>	All industry	6.2	4.3
<b>20-2b.</b>	Construction	8.7	6.1
<b>20-2c.</b>	Health services	7.9 (1997)	5.5
<b>20-2d.</b>	Agriculture, forestry, and fishing	7.6	5.3
<b>20-2e.</b>	Transportation	7.9 (1997)	5.5
<b>20-2f.</b>	Mining	4.7	3.3
<b>20-2g.</b>	Manufacturing	8.5	6.0
<b>20-2h.</b>	Adolescent workers	4.8 (1997) 4.9	3.4 3.5

**Target setting method:** 30 percent improvement. (Better than the best will be used when data are available.)

**Data sources:** Survey of Occupational Injuries and Illnesses (SOII), DOL, BLS; National Electronic Injury Surveillance System (NEISS), CPSC, and NIOSH.

### REVISED OBJECTIVE

**20-2. Reduce work-related injuries resulting in medical treatment, lost time from work, or restricted work activity.**

## REVISED OBJECTIVE *(continued)*

### Target and baseline:

Objective	Reduction in Work-Related Injuries Resulting in Medical Treatment, Lost Time From Work, or Restricted Activity	1998 Baseline (unless noted)	2010 Target
		<i>Injuries per 100 Full-Time Workers</i>	
<b>20-2a.</b>	All industry	6.2	4.3
<b>20-2b.</b>	Construction	8.7	6.1
<b>20-2c.</b>	Health services	7.9 (1997)	5.5
<b>20-2d.</b>	Agriculture, forestry, and fishing	7.6	5.3
<b>20-2e.</b>	Transportation	7.9 (1997)	5.5
<b>20-2f.</b>	Mining	4.7	3.3
<b>20-2g.</b>	Manufacturing	8.5	6.0
<b>20-2h.</b>	Adolescent workers	4.9 <sup>1</sup>	3.5 <sup>2</sup>

**Target setting method:** 30 percent improvement. (Better than the best will be used when data are available.)

**Data sources:** Survey of Occupational Injuries and Illnesses (SOII), DOL, BLS; National Electronic Injury Surveillance System (NEISS), CPSC, and NIOSH.

<sup>1</sup> Baseline and baseline year revised from 4.8 and 1997 after November 2000 publication.

<sup>2</sup> Target revised from 3.4 because of baseline revision after November 2000 publication.

## NO CHANGE IN OBJECTIVE

### **20-3. Reduce the rate of injury and illness cases involving days away from work due to overexertion or repetitive motion.**

**Target:** 338 injuries per 100,000 full-time workers.

**Baseline:** 675 injuries per 100,000 full-time workers due to overexertion or repetitive motion were reported in 1997.

**Target setting method:** 50 percent improvement. (Better than the best will be used when data are available.)

**Data source:** Survey of Occupational Injuries and Illnesses (SOII), DOL, BLS.



## NO CHANGE IN OBJECTIVE

### 20-4. Reduce pneumoconiosis deaths.

**Target:** 1,900 deaths.

**Baseline:** 2,928 pneumoconiosis deaths among persons aged 15 years and older occurred in 1997.

**Target setting method:** 10 percent fewer than the number of pneumoconiosis deaths projected for 2010 based on a 15-year trend (1982–97).

**Data source:** National Surveillance System for Pneumoconiosis Mortality (NSSPM), CDC, NIOSH.

## NO CHANGE IN OBJECTIVE

### 20-5. Reduce deaths from work-related homicides.

**Target:** 0.4 deaths per 100,000 workers.

**Baseline:** 0.5 deaths per 100,000 workers aged 16 years and older were work-related homicides in 1998.

**Target setting method:** 20 percent improvement. (Better than the best will be used when data are available.)

**Data source:** Census of Fatal Occupational Injuries (CFOI), DOL, BLS.

## NO CHANGE IN OBJECTIVE (Data updated and footnoted)

### 20-6. Reduce work-related assaults.

**Target:** 0.78<sup>1</sup> assaults per 100 workers.

**Baseline:** 1.10<sup>2</sup> assaults per 100 workers aged 16 years and older were work-related during 1987–92.

**Target setting method:** 29 percent improvement. (Better than the best will be used when data are available.)

**Data source:** National Crime Victimization Survey, DOJ, BJS.

<sup>1</sup> Target revised from 0.60 after November 2000 publication.

<sup>2</sup> Baseline revised from 0.85 after November 2000 publication.

### ORIGINAL OBJECTIVE

**20-7. Reduce the number of persons who have elevated blood lead concentrations from work exposures.**

**Target:** Zero persons per 1 million.

**Baseline:** 93 per million persons aged 16 to 64 years had blood lead concentrations of 25 µg/dL or greater in 1998 (25 States).

**Target setting method:** Total elimination.

**Data source:** Adult Blood Lead Epidemiology and Surveillance Program, CDC, NIOSH.

### OBJECTIVE WITH REVISIONS

**20-7. Reduce the proportion number of persons adults who have elevated blood lead concentrations from work exposures.**

**Target:** Zero persons per 100,000 employed adultspersons.

**Baseline:** 12.1 per ~~million~~100,000 employed ~~persons~~ adults aged 16 ~~to 64~~ years and older had blood lead concentrations of 25 µg/dL or greater in 1998 (24~~5~~ States).

**Target setting method:** Total elimination.

**Data source:** Adult Blood Lead Epidemiology and Surveillance Program (ABLES), CDC, NIOSH.

### REVISED OBJECTIVE

**20-7. Reduce the proportion of adults who have elevated blood lead concentrations.**

**Target:** Zero per 100,000 employed adults.

**Baseline:** 12.1 per 100,000 employed adults aged 16 years and older had blood lead concentrations of 25 µg/dL or greater in 1998 (24 States).

**Target setting method:** Total elimination.

**Data source:** Adult Blood Lead Epidemiology and Surveillance Program (ABLES), CDC, NIOSH.

### NO CHANGE IN OBJECTIVE

**20-8. Reduce occupational skin diseases or disorders among full-time workers.**

**Target:** 47 new cases per 100,000.

### NO CHANGE IN OBJECTIVE *(continued)*

**Baseline:** 67 new cases of occupational skin diseases or disorders per 100,000 full-time workers occurred in 1997.

**Target setting method:** 30 percent improvement. (Better than the best will be used when data are available.)

**Data source:** Survey of Occupational Injuries and Illnesses (SOII), DOL, BLS.

### NO CHANGE IN OBJECTIVE

**20-9. Increase the proportion of worksites employing 50 or more persons that provide programs to prevent or reduce employee stress.**

**Target:** 50 percent.

**Baseline:** 37 percent of worksites with 50 or more employees provided worksite stress reduction programs in 1992.

**Target setting method:** 35 percent improvement.

**Data source:** National Worksite Health Promotion Survey (NWHPS), Partnership for Prevention and OPHS, ODPHP.

### ORIGINAL OBJECTIVE

**20-10. Reduce occupational needlestick injuries among health care workers.**

**Target:** 420,000 annual needlestick exposures.

**Baseline:** 600,000 occupational needlestick exposures to blood occurred among health care workers in 1996.

**Target setting method:** 30 percent improvement. (Better than the best will be used when data are available.)

**Data sources:** National Surveillance System for Health Care Workers, CDC, NCID, NCHSTP, NIP, NIOSH.

### OBJECTIVE WITH REVISIONS

**20-10. Reduce occupational needlestick injuries among hospital-based health care workers.**

**Target:** ~~420,000~~269,000 annual needlestick exposures to blood among hospital-based health care workers.

### OBJECTIVE WITH REVISIONS *(continued)*

**Baseline:** ~~600,000~~384,000 occupational needlestick exposures to blood occurred among hospital-based health care workers in 1996~~98~~.

**Target setting method:** 30 percent improvement. (Better than the best will be used when data are available.)

**Data sources:** National Surveillance System for Health Care Workers (NaSH), CDC, NCID, NGHSTP, NIP, NIOSH; and Exposure Prevention Information Network (EPINet), International Health Care Worker Safety Center, University of Virginia.

### REVISED OBJECTIVE

**20-10. Reduce occupational needlestick injuries among hospital-based health care workers.**

**Target:** 269,000 annual needlestick exposures to blood among hospital-based health care workers.

**Baseline:** 384,000 occupational needlestick exposures to blood occurred among hospital-based health care workers in 1998.

**Target setting method:** 30 percent improvement. (Better than the best will be used when data are available.)

**Data sources:** National Surveillance System for Health Care Workers (NaSH), CDC, NCID, and Exposure Prevention Information Network (EPINet), International Health Care Worker Safety Center, University of Virginia.

### NO CHANGE IN OBJECTIVE

**20-11. (Developmental) Reduce new cases of work-related, noise-induced hearing loss.**

**Potential data source:** Survey of Occupational Injuries and Illnesses (SOI), DOL, BLS.

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## **Related Objectives From Other Focus Areas**

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### **14. Immunization and Infectious Diseases**

- 14-3. Hepatitis B in adults and high-risk populations
- 14-28. Hepatitis B vaccination among high-risk groups

### **27. Tobacco Use**

- 27-12. Worksite smoking policies
- 27-13. Smoke-free indoor air laws

### **28. Vision and Hearing**

- 28-8. Occupational eye injury
- 28-16. Hearing protection

