*Homicide — Continued*

tion (WHO) passed a resolution declaring violence a worldwide public health problem, urging member states to assess the public health impact of violence, and requesting the Director-General of WHO to initiate a science-based public health approach to violence prevention. This resolution provides a scientific framework for action throughout the world addressing global violence.

*References*

1. Gardner P, Hudson BL. Advance report of final mortality statistics, 1993. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, National Center for Health Statistics, 1996. (Monthly vital statistics report; vol 44, no. 7, suppl).
2. Singh GK, Royer CE. Documentation of the current mortality sample file for 1994 data. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, National Center for Health Statistics, 1996.
3. CDC. Injury mortality: national summary of injury mortality data, 1986–1992. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, CDC, 1995.
4. Hammond WR, Yung BR. Preventing violence in at-risk African-American youth. J Health Care Poor Underserved 1991;2:359–73.
5. Tolan P, Guerra N. What works in reducing adolescent violence: an empirical review of the field. Boulder, Colorado: University of Colorado, Boulder, Institute for Behavioral Sciences, Center for the Study and Prevention of Violence, 1994:29.
6. Zigler E, Taussing C, Black K. Early childhood intervention: a promising preventative for juvenile delinquency. Am Psychol 1992;47:997–1006.
7. Powell KE, Hawkins DH, eds. Youth violence prevention: descriptions and baseline data from 13 evaluation projects. Am J Prev Med 1996;12(suppl) (in press).
8. World Health Organization. 1994 World health statistics annual. Geneva, Switzerland: World Health Organization, 1995.
9. Fingerhut LA, Kleinman JC. International and interstate comparisons of homicide among young males. JAMA 1990;263:3292–5.

## Work-Related Injuries and Illnesses Associated With Child Labor — United States, 1993

During 1993, an estimated 2.1 million persons aged 16–17 years in the United States were employed* (*1*). Although many children aged <16 years work, employment data are neither routinely collected nor reported for this age group, and there are no reliable estimates of the number of children in this age group who work. During summer months, when most children are not in school, employment and hours worked by children aged <18 years increase substantially. To characterize workplace-related health and safety hazards for children, CDC's National Institute for Occupational Safety and Health (NIOSH) analyzed 1993 data for workers aged <18 years from the Survey of Occupational Injuries and Illnesses (SOII), a survey administered by the Bureau of Labor Statistics (BLS), U.S. Department of Labor.† This report summarizes the results of this analysis and indicates that substantial numbers of persons aged <18 years sustain work-related injuries and illnesses each year.

*Wage and salary workers (including domestic and other private household workers), self-employed persons, and unpaid workers who work ≥15 hours a week in family-operated businesses.

†For persons aged <20 years, BLS publication of SOII data used the standard age groups of <14 years, 14–15 years, and 16–19 years.

*Child Labor — Continued*

The SOII is a collaborative federal/state program administered by BLS and is based on employer reports from approximately 250,000 private industries in the United States (*2* ); the sampling frame is representative at the national level and at the state level for most states (data for 1993 were the most recent available).[§] Employers identify injuries and illnesses that meet recordkeeping requirements[¶] of the Occupational Safety and Health Administration (OSHA); based on these data, BLS estimates the national incidence of work-related injuries and illnesses. For those injuries and illnesses resulting in lost work days, employers provide demographic information and data about the nature and circumstances of injuries and illnesses. Because employment data provided by employers were not stratified by age, injury and illness rates could not be calculated for specific age groups.

**National Estimates**

In 1993, persons aged <18 years incurred an estimated 21,620 injuries and illnesses involving lost work days. Of these, 24% involved 1 lost work day; 43%, 2–5 days; 13%, 6–10 days; 13%, 11–30 days; and 8%, ≥31 days (median: 3 days). Most (96%) injuries and illnesses occurred among persons aged 16–17 years, and males accounted for 59% of cases. Sprains/strains were the most commonly reported problem (31%), followed by cuts/lacerations (17%), contusions/abrasions (13%), heat burns (8%), and fractures/dislocations (5%).

Injured and ill persons were employed most frequently by eating and drinking establishments (39%), followed by grocery stores (14%), nursing and personal-care facilities (6%), and department stores (5%). The most common occupations were food preparation and service workers (i.e., waiters and waitresses, cooks, and food counter and kitchen workers) (37%), followed by cashier (10%), stock handler or bagger (9%), health or nursing aide (7%), and janitor and cleaner (5%).

Common events resulting in injury included falls on the same level (i.e., falls to floors and falls onto or against objects) (21%), overexertion (i.e., from lifting, pulling, pushing, turning, wielding, holding, carrying, or throwing objects) (17%), striking against objects (i.e., bumping into, stepping on, kicking, and being pushed or thrown into or against objects) (10%), contact with hot objects or substances (9%), being struck by falling objects (7%), and being struck by a slipping hand-held object (e.g., knife, razor, or tool) (6%).

**State-Specific Variations**

In general, national patterns were reflected at the state level, although there were state-specific variations. Median number of lost work days ranged from 1 day (Nebraska and Vermont) to 6 days (Alabama, Arkansas, New York, and Wyoming) (Table 1). The most common worksites were eating and drinking establishments and grocery stores. However, in Alaska, laundry, cleaning, and garment services and the manufacture of specific food products each accounted for 16%–17% of cases. In Cali-

[§]The base sample for SOII is designed to produce national estimates. However, each year, approximately 40 states participate in a federal/state cooperative program through which, in these states, the base sample is augmented to generate state-specific estimates that meet the individual needs of participating states. In 1993, 42 states participated in this program.

[¶]OSHA requires employers to record information on every occupational illness and injury that involves one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment (other than first aid). Employers who are selected for the SOII sample but who are not usually required to keep these records are provided with a copy of instructions and recordkeeping forms for the survey.

*Child Labor — Continued*

fornia, worksites providing social and rehabilitation services accounted for 24% of cases. In Florida, Nevada, and South Carolina, 12%–15% of incidents occurred in worksites providing amusement and recreation services. In Hawaii, nearly one fourth (24%) of incidents occurred in construction/special trade worksites (e.g., carpentry and painting). Hotels and motels were the most common site of work-related injuries and illnesses in Vermont (27%) and second most common in Utah (11%).

The types of events and exposures resulting in injuries and illnesses varied from national patterns in some states. Exposures to caustic, noxious, or allergenic substances accounted for 11%–23% of cases in Alaska, Montana, Nebraska, Nevada, New Mexico, and Wyoming. Exposure to sun accounted for 22% of cases in Vermont, and falls through roofs accounted for 28% of injuries in Wyoming.

*Reported by: Div of Safety Research, National Institute for Occupational Safety and Health, CDC.*

**Editorial Note:** The findings in this report are the first to provide comparable state-specific data for work-related injuries and illnesses among persons aged <18 years; however, the inability to calculate state-specific rates limits comparisons between states. Although many state-specific patterns of injuries and illnesses reflected national patterns, the variations identified are important for targeting prevention efforts at the state level. Workers' compensation data can provide supplemental information to assist state-specific intervention efforts (*3–7*).

**TABLE 1. Estimated number of injuries and illnesses and median number of lost work days among persons aged <18 years, by state* — 1993**

| State | No. injuries and illnesses | Median no. lost work days | State | No. injuries and illnesses | Median no. lost work days |
|---|---|---|---|---|---|
| Alabama | 330 | 6 | Missouri | 615 | 5 |
| Alaska | 86 | 3 | Montana | 84 | 4 |
| Arizona | 592 | 2 | Nebraska | 440 | 1 |
| Arkansas | 238 | 6 | Nevada | 159 | 5 |
| California | 1418 | 2 | New Jersey | 248 | 3 |
| Connecticut | 220 | 4 | New Mexico | 231 | 2 |
| Delaware | 39 | 5 | New York | 1060 | 6 |
| Florida | 1527 | 3 | North Carolina | 947 | 3 |
| Georgia | 499 | 3 | Oklahoma | 383 | 4 |
| Hawaii | 141 | 4 | Oregon | 410 | 2 |
| Indiana | 706 | 3 | Pennsylvania | 719 | 3 |
| Iowa | 340 | 3 | Rhode Island | 158 | 2 |
| Kansas | 225 | 3 | South Carolina | 234 | 2 |
| Kentucky | 490 | 3 | Tennessee | 859 | 4 |
| Louisiana | 175 | 4 | Texas | 992 | 3 |
| Maine | 93 | 4 | Utah | 303 | 3 |
| Maryland | 425 | 2 | Vermont | 24 | 1 |
| Massachusetts | 519 | 4 | Virginia | 686 | 3 |
| Michigan | 544 | 4 | Washington | 361 | 2 |
| Minnesota | 336 | 4 | Wisconsin | 435 | 4 |
| Mississippi | 227 | 3 | Wyoming | 43 | 6 |

*Data not available from Colorado, District of Columbia, Idaho, Illinois, New Hampshire, North Dakota, Ohio, South Dakota, and West Virginia because the sample design in these states could not generate state-specific estimates.

Source: Survey of Occupational Injuries and Illnesses, Bureau of Labor Statistics, U.S. Department of Labor.

*Child Labor — Continued*

The approximately 22,000 injuries and illnesses involving lost work days among children aged <18 years in 1993 is probably an underestimate because SOII excludes some categories (e.g., self-employed workers, farms with <11 employees, private households, and government employees) (*2*); employment data suggest that at least 11% of working children aged <18 years are not represented by the SOII (*1*). These estimates exclude injuries and illnesses that did not result in lost work days or in death. During 1992, an estimated 64,000 children aged <18 years were treated in emergency departments for work-related injuries; approximately 70 die from work-related injuries each year (*8*).

Safety and health regulations, such as those promulgated and enforced by OSHA, apply to workers of all ages. In addition, children aged <18 years are protected by provisions of child labor laws. For example, federal child labor laws specifically prohibit cooking and baking by persons aged 14–15 years (*9*); however, in this analysis, one third of cases among children aged 14–15 years occurred among persons identified as cooks. During 1983–1990, 1475 serious injuries among persons aged <18 years were associated with violations of federal child labor laws (*10*), and studies during the 1980s suggest that 38%–86% of work-related deaths among children were associated with activities prohibited by federal child labor laws (*8*).

The risks for work-related injuries and illnesses among workers of all ages can be reduced through adherence to routine precautions such as prescribed housekeeping practices; training and safe work procedures; use of proper shoes, gloves, and protective clothing; and maintenance and use of equipment with safety features. In addition, workers aged <18 years should not be required to lift objects weighing >15 pounds more often than once per minute or ever to lift objects >30 pounds; tasks involving continuous lifting should never last more than 2 hours (*8*). Children aged <18 years should not participate in work requiring routine use of respirators (a means of protecting workers from inhaling hazardous substances) (*8*). Employers should be knowledgeable about and comply with child labor laws, and school guidance counselors and physicians who sign work permits for children also should be familiar with child labor laws and ensure that the work they approve does not involve prohibited activities.

Most persons aged <18 years enter the workplace with minimal prior experience for a job. During the summer of 1992, more than half (54%) of persons aged 14–16 years treated in emergency departments for work injuries reported that they had received no training in prevention of the injury they sustained and that a supervisor was present at the time of injury in only approximately 20% of the cases (*8*). Differences in maturity and developmental level regarding learning styles, judgement, and behavior should be considered when providing training for youth in occupational safety and health.

Additional state-specific data and information about prevention of work-related injuries can be obtained from NIOSH, telephone (800) 356-4674 or (513) 533-8328.

*References*

1. Bureau of Labor Statistics. Employment and earnings, vol 41, no. 1. Washington, DC: US Department of Labor, January, 1994.
2. Bureau of Labor Statistics. Occupational injuries and illnesses: counts, rates, and characteristics, 1992. Washington, DC: US Department of Labor, April, 1995; bulletin 2455.
3. Brooks DR, Davis LK. Work-related injuries to Massachusetts teens, 1987–1990. Am J Ind Med 1996;29:153–60.

*Child Labor — Continued*

4. Miller M. Occupational injuries among adolescents in Washington state, 1988–1991: a review of workers' compensation data. Olympia, Washington: Safety and Health Assessment and Research for Prevention, Washington Department of Labor and Industries, 1995; technical report no. 35-1-1995.
5. Parker DI, Carl WR, French LR, Martin F. Characteristics of adolescent work injuries reported to the Minnesota Department of Labor and Industry. Am J Public Health 1994;84:606–11.
6. Belville R, Pollack S, Godbold JH, Landrigan PJ. Occupational injuries among working adolescents in New York state. JAMA 1993;269:2754–9.
7. Banco L, Lapidus G, Braddock M. Work-related injury among Connecticut minors. Pediatrics 1992;89:957–60.
8. NIOSH. Request for assistance in preventing deaths and injuries of adolescent workers. Cincinnati, Ohio: U.S. Department of Health and Human Services, Public Health Service, CDC, 1995; DHHS publication no. (NIOSH)95-125.
9. Wage and Hour Division, Employment Standards Administration. Child labor requirements in nonagricultural occupations under the Fair Labor Standards Act. Washington DC: US Department of Labor, Employment Standards Administration, August 1990 (WH-1330).
10. General Accounting Office. Child labor: characteristics of working children. Washington, DC: General Accounting Office, 1990;(GAO)/HRD-90-116.

## *Notice to Readers*

### Update: Provisional Public Health Service Recommendations For Chemoprophylaxis After Occupational Exposure to HIV

Although preventing blood exposures is the primary means of preventing occupationally acquired human immunodeficiency virus (HIV) infection, appropriate postexposure management is an important element of workplace safety (*1*). Information suggesting that zidovudine (ZDV) postexposure prophylaxis (PEP) may reduce the risk for HIV transmission after occupational exposure to HIV-infected blood (*2*) prompted a Public Health Service (PHS) interagency working group*, with expert consultation†, to update a previous PHS statement on management of occupational exposure to HIV with the following findings and recommendations on PEP (*1*).§

**Background**

Although failures of ZDV PEP have occurred (*3*), ZDV PEP was associated with a decrease of approximately 79% in the risk for HIV seroconversion after percutaneous exposure to HIV-infected blood in a case-control study among health-care workers (*2*). In a prospective trial in which ZDV was administered to HIV-infected pregnant women and their infants, a direct effect of ZDV prophylaxis on the fetus and/or infant may have contributed to the observed 67% reduction in perinatal HIV transmission (*4*); the protective effect of ZDV was only partly explained by reduction of the HIV titer

*The interagency working group comprised representatives of CDC, the Food and Drug Administration (FDA), the Health Resources and Services Administration, and the National Institutes of Health. Information included in these recommendations may not represent FDA approval or approved labeling for the particular products or indications in question. Specifically, the terms "safe" and "effective" may not be synonymous with the FDA-defined legal standards for product approval.

†CDC and the National Foundation for Infectious Diseases cosponsored a workshop, HIV Post-Exposure Management for Health Care Workers, on March 4–5, 1996; proceedings of the workshop will be published in the *American Journal of Medicine*.

§Single copies of this report will be available free until June 7, 1997, from the CDC National AIDS Clearinghouse, P.O. Box 6003, Rockville, MD 20849-6003; telephone (800) 458-5231 or (301) 217-0023.

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

June 7, 1996 / Vol. 45 / No. 22

MMWR™
MORBIDITY AND MORTALITY WEEKLY REPORT



## Scopolamine Poisoning among Heroin Users — New York City, Newark, Philadelphia, and Baltimore, 1995 and 1996

Heroin is mixed ("cut") frequently with other substances primarily to increase its weight for retail sale (e.g., mannitol and starch) and to add pharmacologic effects (e.g., dextromethorphan and lidocaine). During 1995 and 1996, health departments and poison-control centers in New York City (NYC); Newark, New Jersey; Philadelphia; and Baltimore reported at least 325 cases of drug overdoses requiring medical treatment in persons who had used "street drugs" sold as heroin that probably also contained scopolamine, an anticholinergic drug. This report summarizes the clinical and epidemiologic features of these cases, which represent a new type of drug overdose.

### New York City

On March 16, 1995, eight persons were treated in the emergency department (ED) of a Bronx hospital for acute onset of agitation and hallucinations approximately 1 hour after "snorting" heroin. On physical examination, all these persons had clinical manifestations of anticholinergic toxicity (i.e., tachycardia, mild hypertension, dilated pupils, dry skin and mucous membranes, and diminished or absent bowel sounds); five had urinary retention. All were initially lethargic and became agitated and combative after emergency medical service (EMS) personnel treated them with parenteral naloxone, which is routinely used for suspected heroin overdose to reverse the toxic effects of opioids (e.g., coma and respiratory depression). All patients received diazepam or lorazepam for sedation, and signs and symptoms resolved during the next 12–24 hours.

During March 17–April 5, 1995, a total of 10 persons who reported using heroin presented with similar clinical findings to hospital EDs in the Bronx and Manhattan. Seven patients reported having used heroin with the street names "Point on Point" or "Sting." Specimens of "Sting" heroin obtained from two patients on April 5 and analyzed by gas chromatography-mass spectrophotometry (GC–MS) by the Bureau of Laboratories, New York City Department of Health (NYCDOH), contained heroin and scopolamine. The GC–MS patterns of the scopolamine suggested it was synthetic rather than derived from a plant source. As a result of this finding, these patients were treated for suspected scopolamine poisoning with physostigmine (an antidote for anticholinergic toxicity). While receiving physostigmine intravenously for 5–10 minutes, their paranoia, hallucinations, and agitation resolved (*1*).

During March 17–April 10, 1995, NYCDOH issued press releases warning of scopolamine-adulterated heroin sold under the street names "Point on Point" and