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

Scopolamine Poisoning — Continued

"Sting." During March 16, 1995–May 27, 1996, the New York City Poison Control Center (NYPCC) recorded 121 cases that met a case definition of both historical or clinical evidence of heroin use and clinical manifestations consistent with anticholinergic toxicity. NYPCC continues to receive several reports each week of presumed combined heroin/scopolamine overdoses that respond to physostigmine treatment.

Newark

During a 24-hour period on December 28–29, 1995, a Newark hospital ED treated 22 persons who, approximately 30 minutes after using heroin with the street name "Polo," developed clinical manifestations of anticholinergic toxicity. Naloxone treatment increased agitation and hallucinations, and physostigmine treatment resolved the signs of toxicity.

On December 29, the New Jersey Poison Center (NJPC) informed all EDs in the state about the syndrome of severe anticholinergic toxicity associated with the use of "Polo" heroin. Later that day, after GC–MS testing of a sample of heroin obtained from a patient identified both heroin and scopolamine, the New Jersey Department of Health (NJDOH) held an emergency press conference to alert the public to this drug combination.

NJDOH and NJPC identified a total of 61 persons with 1) recent histories of snorting or ingesting heroin with the street name "Polo" and 2) clinical manifestations of anticholinergic toxicity for which treatment had been provided at 13 EDs in the Newark metropolitan area during December 28–30, 1995. During December 31, 1995–June 1, 1996, NJPC was consulted 2–3 times each week about patients with similar conditions.

Philadelphia

During February 19–21, 1996, a total of 12 patients who had injected or snorted heroin and had clinical manifestations of anticholinergic toxicity were treated in EDs at four hospitals in northeastern Philadelphia and reported to the Delaware Valley Poison Control Center (DVPCC). DVPCC estimated that in the Philadelphia area, during February 19–21, a total of 35 persons were treated for apparent combined scopolamine/ heroin overdose, and during March 15–May 5, six persons were treated.

On May 9, a total of 27 persons presented to one Philadelphia hospital ED between 4:30 p.m. and 11 p.m. because of drug overdoses after taking heroin (mostly by injection). Of these, 16 were admitted to the hospital for observation because of tachycardia, hallucinations, or semi-coma. In addition to these cases, DVPCC was consulted about apparent anticholinergic toxicity among 72 heroin users during May 9–11, and among 12 during May 22–23.

Baltimore

During May 10–12, 1996, a total of 22 persons presented to one hospital ED with clinical manifestations of anticholinergic toxicity. Although these persons reported taking heroin with street names of "Homicide" and "Super Buick," GC–MS testing of a specimen identified scopolamine, quinine, and dextromethorphan but no heroin.

Testing of Heroin by the Drug Enforcement Administration

The Drug Enforcement Administration monitors the purity of and adulterants in heroin through "street" purchases of heroin (i.e., the "Domestic Monitor Program" [DMP]) and testing of heroin obtained during criminal justice operations. From June 1979 through February 1996, DMP did not detect scopolamine in specimens sold as

Scopolamine Poisoning — Continued

heroin. During 1995, DMP made a total of 806 purchases, including 195 from Maryland, New Jersey, New York, and Pennsylvania; none contained scopolamine. During 1996, of the 147 DMP purchases, including 46 from Maryland, New Jersey, New York, and Pennsylvania, only two (made in March 1996 in Elizabeth and Passaic, New Jersey) contained scopolamine. In addition, four of 23,288 non-DMP specimens believed to be heroin and obtained through criminal justice operations contained scopolamine. The earliest was obtained in October 1995 in Bohemia, New York; two in March 1996 in Philadelphia; and one in March 1996 in NYC.

Reported by: J Perrone, MD, R Hamilton, MD, L Nelson, MD, F DeRoos, MD, J Brubacher, MD, WJ Meggs, MD, RS Hoffman, MD, New York City Poison Control Center; P Ravikumar, PhD, S Reimer, PhD, A Ramon, MD, Bur of Laboratories; B Mojica, MD, New York City Dept of Health. RD Shih, MD, SM Marcus, MD, New Jersey Poison Center; E Karkevandian, DO, PM Podrazik, MD, JJ Calabro, DO, Newark Beth Israel Medical Center; JL York, MD, Clara Maass Medical Center, Newark; JW Farrell, JF French, T O'Connor, New Jersey Dept of Health. F Henretig, MD, Delaware Valley Poison Control Center, Philadelphia; W Thompson, Philadelphia Coordinating Office for Drug and Alcohol Abuse Programs; R Kastner, L Trimmer, Lancaster County Drug and Alcohol Commission, Lancaster, Pennsylvania. G Kelen, MD, K Nordenholtz, MD, B Blok, MD, G Green, MD, Dept of Emergency Medicine, Johns Hopkins Univ Hospital, Baltimore; TM Muller, S Soni, PhD, Laboratory Div, Baltimore City Police Dept; P Beilenson, MD, Baltimore City Health Dept; G Benjamin, MD, J Smialek, MD, Maryland State Dept of Health and Mental Hygiene. S Springer, C Heilig, Drug Enforcement Administration, US Dept of Justice. Div of Health Effects and Hazard Evaluation, National Center for Environmental Health; National Center for HIV, STD, and TB Prevention (proposed), CDC.

Editorial Note: Scopolamine is pharmacologically similar to atropine and other belladonna drugs; it occurs naturally in plants, such as henbane, and can be manufactured. Scopolamine and other anticholinergic drugs are components of some over-the-counter and prescription medications used to prevent nausea, vomiting, and motion sickness (e.g. scopolamine transdermal patches) or in combination with other medications.

The cases described in this report underscore one of the multiple risks associated with use of illegal drugs (*2*,*3*). Before the reports of these cases in the Northeast, scopolamine contamination of heroin was usually not considered in the evaluation of persons with drug overdose. In the initial clusters of anticholinergic toxicity, some EMS staff and clinicians did not recognize the manifestations suggesting scopolamine poisoning and treated some patients for drug overdose with the opioid antagonist naloxone, which was associated with increased severity of agitation, hallucinations, and other manifestations of anticholinergic toxicity. Following the identification of scopolamine in the street drugs sold as heroin, notices and publicity from poison-control centers, health departments, drug-treatment programs, syringe-exchange programs, and other community agencies were used to rapidly inform clinicians, drug users, and others in the community about the scopolamine contamination of heroin.

The use of multiple drugs and alcohol complicates assessment of the causes of the acute mental status changes in drug users. Many of the cases described in this report probably were associated with use of at least two drugs—heroin and scopolamine. Overdose of heroin and other opioids usually is characterized by lethargy, respiratory depression, and pinpoint pupils. In comparison, overdose with scopolamine and other anticholinergic medicines is characterized by dilated pupils, flushing, dry skin and mucous membranes, absent bowel sounds, rapid heart rate, and altered mental status (*4*). Interaction between scopolamine and heroin or other drugs (e.g., cocaine) may

Scopolamine Poisoning — Continued

obscure the classical effects and differences. Although some of these patients improve dramatically with intravenous physostigmine therapy, such treatment should be administered only by experienced staff and with appropriate patient monitoring because of the potential for serious side effects, including seizures, bronchospasm, and bradycardia. For many patients, treatment may be restricted to sedation and observation, and manifestations may resolve over a period of hours. Naloxone remains the treatment of choice for coma and severe respiratory distress associated with possible drug overdose. Because of the complexities of both the diagnosis and treatment of patients with mental status changes and possible drug overdose, practitioners caring for such patients should consult their local poison-control center.

Surveillance based on data from the system of poison-control centers in the Northeast was critical in recognizing the cause of this new type of drug overdose among heroin users and alerting health departments. The impact of the effects of these drug overdoses was limited further by timely recognition of the combined heroin and anticholinergic toxicity, use of sedation or physostigmine to treat the patients, and prompt investigation and reporting by state and local health departments. The continued occurrence of drug overdoses associated with use of scopolamine-containing heroin indicates the need for clinicians, public health programs, and organizations working with drug users to be aware of this problem; new cases should be reported promptly to the local poison-control center and health department.

References

1. Hamilton R, Perrone J, Meggs WJ, et al. Epidemic anticholinergic poisoning from scopolamine tainted heroin [Abstract]. J Toxicol Clin Toxicol 1995;33:502.
2. CDC. AIDS associated with injecting-drug use—United States, 1995. MMWR 1996;45:392–8.
3. Kaa E. Impurities, adulterants and diluents of illicit heroin: changes during a 12-year period. Forensic Sci International 1994;64:171–9.
4. CDC. Anticholinergic poisoning associated with an herbal tea—New York City, 1994. MMWR 1995;44:193–5.

Trends in Rates of Homicide — United States, 1985–1994

During 1993, a total of 26,009 homicides were reported in the United States; 71% were firearm-related, and one third of all homicides occurred among persons aged 15–24 years (*1*). Since 1985, national homicide rates have increased sharply, especially firearm-related homicides and homicides among persons aged 15–24 years. However, based on data from the Supplementary Homicide Report compiled by the Federal Bureau of Investigation and reports from some cities, homicide rates have been stable or declining since 1993. To examine this trend and to assess the relative contributions of firearm- and nonfirearm-related homicide to these recent changes, CDC analyzed national vital statistics data for 1985–1994. This report summarizes this analysis, which indicates that overall rates of homicide increased from 1985 to 1991 and decreased from 1992 to 1994, and that during these two periods, rates for total firearm-related homicides and homicide among persons aged 15–24 years increased then stabilized but remained at record-high levels.

Data for 1985–1993 (the most recent year for which complete data are available) were from final mortality statistics (FMS), and data for 1994 were from the Current

Homicide — Continued

Mortality Sample (CMS). FMS are based on information from death certificates submitted by all 50 states and the District of Columbia, and CMS data provide national estimates based on a 10% systematic sample of death certificates received monthly by the vital statistics offices in the 50 states, the District of Columbia, and New York City. A homicide was defined as death resulting from injury purposefully inflicted by another person (including those caused by law enforcement officers or legal intervention), for which the underlying cause listed on the death certificate was *International Classification of Diseases, Ninth Revision* (ICD-9), codes E960–E978. Population estimates are based on data from the Bureau of the Census (*2*). Trends for both firearm- and nonfirearm-related homicides for all ages and for persons aged 15–24 years were reviewed. To assess the accuracy with which the CMS data reflect final statistics, 1993 CMS and FMS homicide rates were compared. During sequential quarters of 1993, compared with FMS quarterly homicide rates, CMS rates differed by –0.4%, –4.6%, +1.2% and –4.6%, indicating the accuracy of weighted CMS rates for estimating final homicide rates.

Quarterly homicide rates were analyzed using piecewise regression models to account for the observed changes in linear relations over time. Three time periods (1985–1987, 1988–1991, and 1992–1994) were selected for analysis based on a preliminary review of scatter plots of observed rates and their apparent changes in slopes. Statistical testing was conducted to determine whether the slope of the predicted values of the regression line (i.e., predicted rates) changed over each of these time periods. Statistical testing for a discontinuous piecewise regression model also was conducted to determine whether the rate changed significantly at the beginning of each new time period (i.e., "jump point"). No significant jump points were observed, and analyses consistently indicated that the slope of the regression line for 1985–1987 was similar to that for 1988–1991. Therefore, regression lines are presented only for two periods: 1985–1991 and 1992–1994. Overall results and interpretation of the piecewise model using two pieces are no different from those using a model with three pieces.

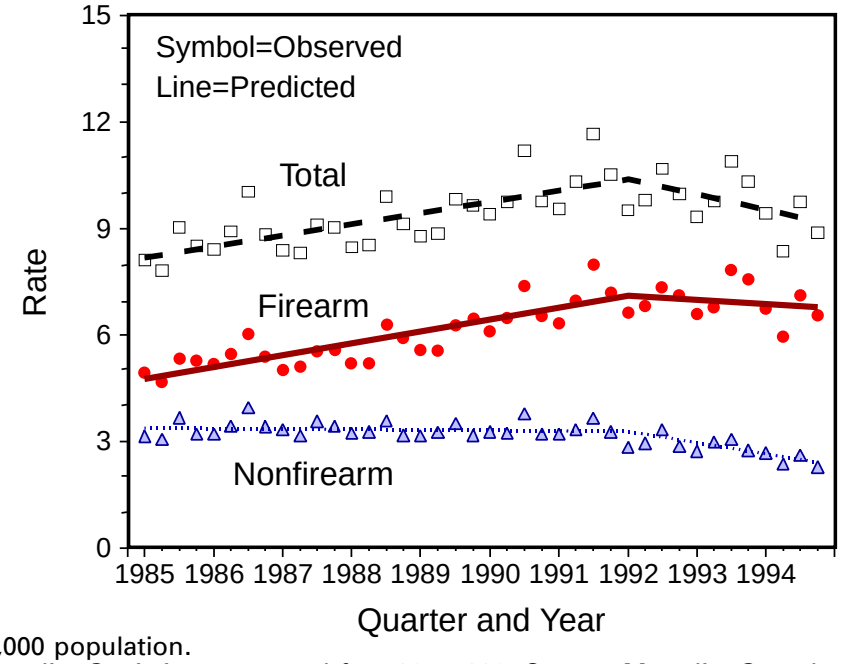
During 1985–1991, the overall rate of homicide in the United States increased significantly ($p<0.01$) (slope=<0.1, 4% annually); during 1992–1994, the rate decreased significantly ($p<0.01$) (slope=–0.1, 1% annually) (Figure 1). During 1985–1991, nonfirearm-related homicide rates remained stable, and firearm-related homicide rates increased significantly ($p<0.01$). During 1992–1994, nonfirearm-related homicide rates declined significantly ($p<0.01$), and firearm-related homicide rates stabilized.

During 1985–1991, the rate of total homicide increased significantly for persons aged 15–24 years ($p<0.01$) (slope=0.4, 16% annually). Firearm-related homicide rates for this age group also increased during 1985–1991 ($p<0.01$) (slope=0.4, 23% annually) (Figure 2), with most of the increase occurring during 1988–1991. During 1992–1994, the rates of total and firearm-related homicide were stable. For all other age groups, the trend in firearm-related homicide rates followed a similar pattern, with significant increases during 1985–1991 ($p<0.01$) and stable rates during 1992–1994 (Figure 2). Nonfirearm-related homicide rates for persons aged 15–24 years and all other ages were lower than firearm-related homicide rates and were stable during 1985–1991 and decreased significantly during 1992–1994 ($p<0.01$).

Analysis of firearm-related homicide rates by sex for persons aged 15–24 years indicates that rates for males and females reflected the overall trend for this age

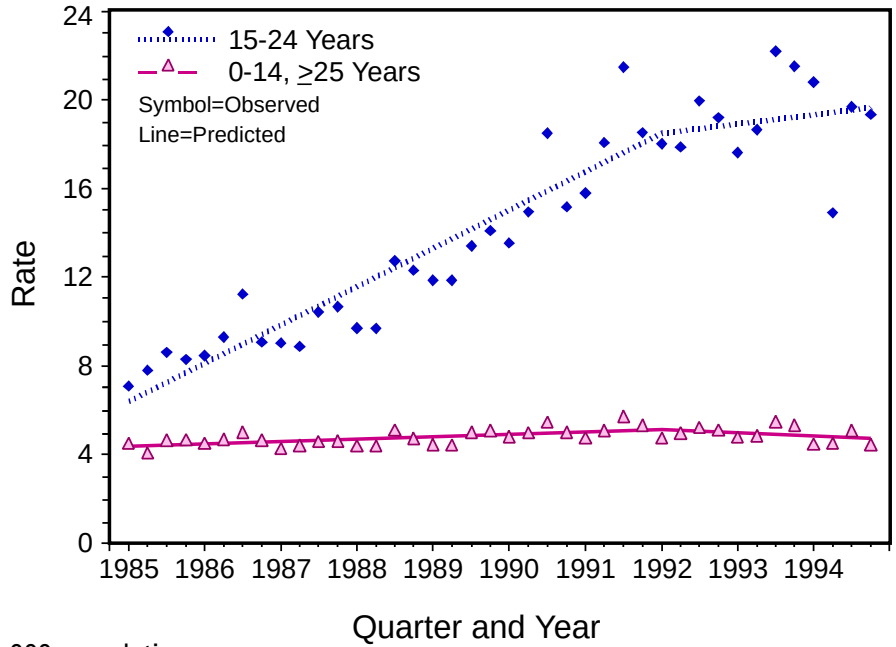
Homicide — Continued

FIGURE 1. Observed and predicted homicide rates*, by method of injury, quarter, and year — United States, 1985–1994†



*Per 100,000 population.
†Final Mortality Statistics were used for 1985–1993. Current Mortality Sample was used for 1994.

FIGURE 2. Observed and predicted firearm-related homicide rates* in persons aged 15–24 years and all others, by age group, quarter, and year — United States, 1985–1994†



*Per 100,000 population.
†Final Mortality Statistics were used for 1985–1993. Current Mortality Sample was used for 1994.

Homicide — Continued

group. Rates for females were substantially lower than those for males. For both sexes, rates increased significantly during 1985–1991 ($p<0.01$) and stabilized during 1992–1994.

Reported by: Div of Violence Prevention, Office of Statistics and Programming, National Center for Injury Prevention and Control; Div of Vital Statistics, National Center for Health Statistics, CDC.

Editorial Note: The findings in this report confirm that the overall homicide rate increased rapidly during the late 1980s and began to decline in 1992; in addition, nonfirearm-related homicide rates decreased, and the percentage of firearm-related homicides increased. During 1985–1994, the percentage of firearm-related homicides among all homicides in the total population increased from 60% to 72% and among persons aged 15–24 years, from 67% to 87% (*3*). These increases illustrate that changes in overall homicide rates primarily reflect changes in firearm-related homicides. The stabilization of firearm-related homicide rates during 1992–1994—particularly among those aged 15–24 years—reflects a change from the increasing rates in previous years, even though rates remain at record-high levels. The findings in this report also indicate the usefulness of CMS data as a source of information for monitoring homicide in the United States. Because of the timely availability of CMS data and their accuracy in reflecting final mortality-based homicide rates, these data enable more timely analyses of temporal trends, objective policy formulation, and measurement of progress toward public health goals.

The findings in this report are subject to at least two limitations. First, because of the small numbers based on CMS data, rates were not examined among age-, race-, and sex-specific subgroups. Second, estimates for some causes of death may be incomplete or skewed because reporting of the underlying cause of death data may not have been complete when the monthly sample was obtained (the data for this potential undercount are adjusted in the annual summary [*2*]).

Strategies for preventing homicide and violence require integration of approaches from multiple disciplines, including criminal justice, education, social services, community advocacy, and public health. For example, public health approaches to prevent violence have focused on 1) changing individual knowledge, skills, and/or attitudes; 2) changing the social and physical environments; and 3) increasing community awareness of the causes and prevention of violence. The public health community also has recognized the influence of social class and poverty on violence. Communities increasingly are adopting programs emphasizing strategies to enhance the skills of youth and parents to reduce violence. These strategies include, for example, 1) school-based curricula that teach coping, communication, and mediation skills (*4*); 2) family-intervention programs that focus on parental training to positively alter parental practices and family cohesion (*5*); and 3) preschool efforts to develop intellectual and social skills (*6*). Because evaluation of prevention strategies is a critical component of public health interventions, CDC is evaluating the effectiveness of selected programs in reducing violent behavior and injury (*7*).

Homicide and assaultive violence now are recognized as global public health problems. Although the U.S. homicide rate ranks higher overall and higher for males aged 15–24 years than those of other highly industrialized countries (*8,9*), in many less-industrialized countries homicide rates exceed those in the United States (*8*). To address this global problem, in May 1996 the 190 nations of the World Health Organiza-

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.

Occupational Exposure to HIV — Continued

in maternal blood (*5*). PEP also prevented or ameliorated retroviral infection in some studies in animals (*6,7*).

The average risk for HIV infection from all types of reported percutaneous exposures to HIV-infected blood is 0.3% (*3*). In the case-control study (*2*), risk was increased for exposures involving 1) a deep injury to the health-care worker, 2) visible blood on the device causing the injury, 3) a device previously placed in the source-patient's vein or artery (e.g., a needle used for phlebotomy), or 4) a source-patient who died as a result of acquired immunodeficiency syndrome (AIDS) within 60 days postexposure (and therefore was presumed to have a high titer of HIV) (*2*). Identification of these risk factors in the case-control study suggests that the risk for HIV infection exceeds 0.3% for percutaneous exposures involving a larger blood volume and/or higher HIV titer in blood. The risks after mucous membrane and skin exposures to HIV-infected blood (on average, approximately 0.1% and <0.1%, respectively [*7*]) probably also depend on volume of blood and titer of HIV. The risk is probably higher for skin contact that is prolonged, involves an area that is extensive or in which skin integrity is visibly compromised, and/or involves a higher HIV titer.

Although information about the potency and toxicity of antiretroviral drugs is available from studies of HIV-infected patients, it is uncertain to what extent this information can be applied to uninfected persons receiving PEP. In HIV-infected patients, combination therapy with the nucleosides ZDV and lamivudine (3TC) has greater antiretroviral activity than ZDV alone and is active against many ZDV-resistant HIV strains without significantly increased toxicity (*8*). Adding a protease inhibitor provides even greater increases in antiretroviral activity; among protease inhibitors, indinavir (IDV) is more potent than saquinavir at currently recommended doses and appears to have fewer drug interactions and short-term adverse effects than ritonavir (*8*). Few data exist to assess possible long-term (i.e., delayed) toxicity resulting from use of these drugs in persons not infected with HIV.

In currently recommended doses, ZDV PEP usually is tolerated well by health-care workers; short-term toxicity associated with higher doses primarily includes gastrointestinal symptoms, fatigue, and headache (*3,7*). The toxicity of other antiretroviral drugs in persons not infected with HIV has not been well characterized. In HIV-infected adults, 3TC can cause gastrointestinal symptoms and, in rare instances, pancreatitis. IDV toxicity includes gastrointestinal symptoms and, usually after prolonged use, mild hyperbilirubinemia (10%) and kidney stones (4%); the latter may be limited by drinking at least 48 oz (1.5 L) of fluid per 24-hour period (*8*). During the first 4 weeks of IDV therapy, the reported incidence of kidney stones was 0.8% (Merck Research Laboratories, unpublished data, 1996). As stated in the package insert, the concurrent use of IDV and certain other drugs, including some nonsedating antihistamines, is contraindicated. Based on limited data, ZDV use in the second and third trimesters of pregnancy and early infancy was not associated with serious adverse effects in mothers or infants (*4,9*); data are limited regarding the safety of ZDV during the first trimester of pregnancy or of other antiretroviral agents during pregnancy. Although 3TC has been associated with pancreatitis in HIV-infected children (*8*), whether 3TC causes fetal toxicity is unknown.

Occupational Exposure to HIV — Continued

Recommendations

The following recommendations are provisional because they are based on limited data regarding efficacy and toxicity of PEP and risk for HIV infection after different types of exposure. Because most occupational exposures to HIV do not result in infection transmission, potential toxicity must be carefully considered when prescribing PEP. When possible, these recommendations should be implemented in consultation with persons having expertise in antiretroviral therapy and HIV transmission. Changes in drug regimens may be appropriate, based on factors such as the probable antiretroviral drug resistance profile of HIV from the source patient; local availability of drugs; and medical conditions, concurrent drug therapy, and drug toxicity in the exposed worker. These recommendations were not developed to address nonoccupational (e.g., sexual) exposures.

1. Chemoprophylaxis should be recommended to exposed workers after occupational exposures associated with the highest risk for HIV transmission. For exposures with a lower, but nonnegligible risk, PEP should be offered, balancing the lower risk against the use of drugs having uncertain efficacy and toxicity. For exposures with negligible risk, PEP is not justified (Table 1). Exposed workers should be informed that a) knowledge about the efficacy and toxicity of PEP is limited; b) for agents other than ZDV, data are limited regarding toxicity in persons without HIV infection or who are pregnant; and c) any or all drugs for PEP may be declined by the exposed worker.
2. At present, ZDV should be considered for all PEP regimens because ZDV is the only agent for which data support the efficacy of PEP in the clinical setting. 3TC should usually be added to ZDV for increased antiretroviral activity and activity against many ZDV-resistant strains. A protease inhibitor (preferably IDV because of the characteristics summarized in this report) should be added for exposures with the highest risk for HIV transmission (Table 1). Adding a protease inhibitor also may be considered for lower risk exposures if ZDV-resistant strains are likely, although it is uncertain whether the potential additional toxicity of a third drug is justified for lower risk exposures. For HIV strains resistant to both ZDV and 3TC or resistant to a protease inhibitor, or if these drugs are contraindicated or poorly tolerated, the optimal PEP regimen is uncertain; expert consultation is advised¶.
3. PEP should be initiated promptly, preferably within 1–2 hours postexposure. Although animal studies suggest that PEP probably is not effective when started later than 24–36 hours postexposure (*6,7*), the interval after which there is no benefit from PEP for humans is undefined. Initiating therapy after a longer interval (e.g., 1–2 weeks) may be considered for the highest risk exposures; even if infection is not prevented, early treatment of acute HIV infection may be beneficial (*10*). The optimal duration of PEP is unknown; because 4 weeks of ZDV appeared protective (*2*), PEP should probably be administered for 4 weeks, if tolerated.
4. If the source patient or the patient's HIV status is unknown, initiating PEP should be decided on a case-by-case basis, based on the exposure risk and likelihood of HIV infection in known or possible source patients. If additional information becomes available, decisions about PEP can be modified.

¶An HIV strain is more likely to be resistant to a specific antiretroviral agent if it is derived from a patient who has been exposed to the agent for a prolonged period of time (e.g., 6–12 months or longer). In general, resistance develops more readily in persons with more advanced HIV infection (e.g., CD4+ T-lymphocyte count of <200 cells/mm^3), reflecting the increasing rate of viral replication during later stages of the illness.

Occupational Exposure to HIV — Continued

5. Workers with occupational exposures to HIV should receive follow-up counseling and medical evaluation, including HIV-antibody tests at baseline and periodically for at least 6 months postexposure (e.g., 6 weeks, 12 weeks, and 6 months), and should observe precautions to prevent possible secondary transmission (*1*). If PEP is used, drug-toxicity monitoring should include a complete blood count and renal and hepatic chemical function tests at baseline and 2 weeks after starting PEP. If subjective or objective toxicity is noted, dose reduction or drug substitution should be considered with expert consultation, and further diagnostic studies may be indi-

TABLE 1. Provisional Public Health Service recommendations for chemoprophylaxis after occupational exposure to HIV, by type of exposure and source material — 1996

Type of exposure	Source material*	Antiretroviral prophylaxis†	Antiretroviral regimen§
Percutaneous	Blood¶		
	Highest risk	Recommend	ZDV plus 3TC plus IDV
	Increased risk	Recommend	ZDV plus 3TC, ± IDV**
	No increased risk	Offer	ZDV plus 3TC
	Fluid containing visible blood, other potentially infectious fluid††, or tissue	Offer	ZDV plus 3TC
	Other body fluid (e.g., urine)	Not offer	
Mucous membrane	Blood	Offer	ZDV plus 3TC, ± IDV**
	Fluid containing visible blood, other potentially infectious fluid††, or tissue	Offer	ZDV, ± 3TC
	Other body fluid (e.g., urine)	Not offer	
Skin, increased risk§§	Blood	Offer	ZDV plus 3TC, ± IDV**
	Fluid containing visible blood, other potentially infectious fluid††, or tissue	Offer	ZDV, ± 3TC
	Other body fluid (e.g., urine)	Not offer	

* Any exposure to concentrated HIV (e.g., in a research laboratory or production facility) is treated as percutaneous exposure to blood with highest risk.

† *Recommend*—Postexposure prophylaxis (PEP) should be recommended to the exposed worker with counseling (see text). *Offer*—PEP should be offered to the exposed worker with counseling (see text). *Not offer*—PEP should not be offered because these are not occupational exposures to HIV (*1*).

§ Regimens: zidovudine (ZDV), 200 mg three times a day; lamivudine (3TC), 150 mg two times a day; indinavir (IDV), 800 mg three times a day (if IDV is not available, saquinavir may be used, 600 mg three times a day). Prophylaxis is given for 4 weeks. For full prescribing information, see package inserts.

¶ *Highest risk*—BOTH larger volume of blood (e.g., deep injury with large diameter hollow needle previously in source patient's vein or artery, especially involving an injection of source-patient's blood) AND blood containing a high titer of HIV (e.g., source with acute retroviral illness or end-stage AIDS; viral load measurement may be considered, but its use in relation to PEP has not been evaluated). *Increased risk*—EITHER exposure to larger volume of blood OR blood with a high titer of HIV. *No increased risk*—NEITHER exposure to larger volume of blood NOR blood with a high titer of HIV (e.g., solid suture needle injury from source patient with asymptomatic HIV infection).

** Possible toxicity of additional drug may not be warranted (see text).

†† Includes semen; vaginal secretions; cerebrospinal, synovial, pleural, peritoneal, pericardial, and amniotic fluids.

§§ For skin, risk is increased for exposures involving a high titer of HIV, prolonged contact, an extensive area, or an area in which skin integrity is visibly compromised. For skin exposures without increased risk, the risk for drug toxicity outweighs the benefit of PEP.

Occupational Exposure to HIV — Continued

cated. Health-care workers who become infected with HIV should receive appropriate medical care.

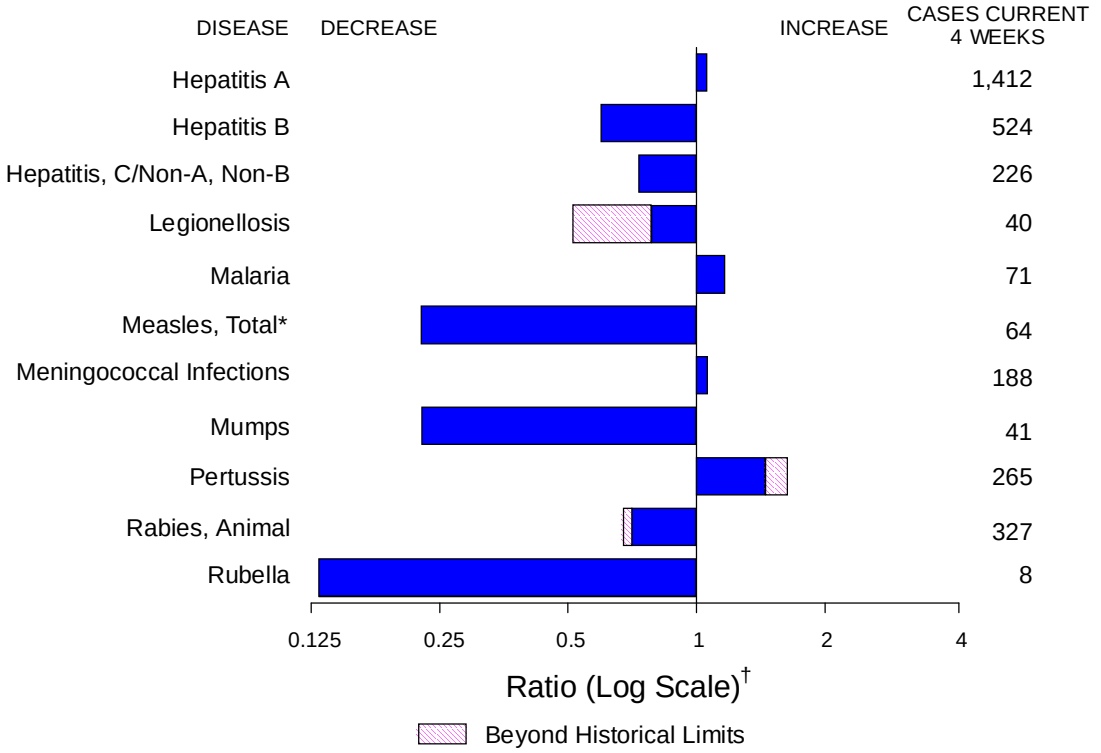
6. Beginning July 15, 1996, health-care providers in the United States are encouraged to enroll all workers who receive PEP in an anonymous registry being developed by CDC, Glaxo Wellcome Inc., and Merck & Co., Inc., to assess toxicity (telephone [888] 737-4448 [(888) PEP-4HIV]). Unusual or severe toxicity from antiretroviral drugs should be reported to the manufacturer and/or the Food and Drug Administration (telephone [800] 332-1088). Updated information about HIV PEP will be available beginning in early 1997 from the Internet at CDC's home page (http://www.cdc.gov); CDC's fax information service, telephone (404) 332-4565 (Hospital Infections Program directory); the National AIDS Clearinghouse, telephone (800) 458-5231; and the HIV/AIDS Treatment Information Service, telephone (800) 448-0440.

Reported by: Center for Drug Evaluation and Research, Food and Drug Administration. AIDS Program Office, Health Resources and Svcs Administration. National Institute of Allergy and Infectious Diseases, Warren H. Magnuson Clinical Center, National Institutes of Health. National Center for HIV, STD, and TB Prevention (proposed); National Institute for Occupational Safety and Health; and National Center for Infectious Diseases, CDC.

References

1. CDC. Public Health Service statement on management of occupational exposure to human immunodeficiency virus, including considerations regarding zidovudine postexposure use. MMWR 1990;39(no. RR-1).
2. CDC. Case-control study of HIV seroconversion in health-care workers after percutaneous exposure to HIV-infected blood—France, United Kingdom, and United States, January 1988–August 1994. MMWR 1995;44:929–33.
3. Tokars JI, Marcus R, Culver DH, et al. Surveillance of HIV infection and zidovudine use among health care workers after occupational exposure to HIV-infected blood. Ann Intern Med 1993;118:913–9.
4. Connor EM, Sperling RS, Gelber R, et al. Reduction of maternal-infant transmission of human immunodeficiency virus type 1 with zidovudine treatment. N Engl J Med 1994;331:1173–80.
5. Sperling RS, Shapiro DE, Coombs R, et al. Maternal plasma HIV-1 RNA and the success of zidovudine in the prevention of mother-child transmission [Abstract no. LB1]. In: Program and abstracts of the 3rd conference on retroviruses and opportunistic infections. Alexandria, Virginia: Infectious Diseases Society of America, 1996.
6. Niu MT, Stein DS, Schnittmann SM. Primary human immunodeficiency virus type 1 infection: review of pathogenesis and early treatment interventions in humans and animal retrovirus infections. J Infect Dis 1993;168:1490–501.
7. Gerberding JL. Management of occupational exposures to blood-borne viruses. N Engl J Med 1995;332:444–51.
8. Anonymous. New drugs for HIV infection. The Medical Letter on Drugs and Therapeutics 1996;38:35–7.
9. Connor E, Sperling R, Shapiro D, et al. Long term effect of zidovudine exposure among uninfected infants born to HIV-infected mothers in pediatric AIDS Clinical Trials Group protocol 076. In: Abstracts of the 35th Interscience Conference on Antimicrobial Agents and Chemotherapy. Washington, DC: American Society for Microbiology, 1995;205.
10. Kinloch-de Loës S, Hirschel BJ, Hoen B, et al. A controlled trial of zidovudine in primary human immunodeficiency virus infection. N Engl J Med 1995;333:408–13

FIGURE I. Selected notifiable disease reports, comparison of 4-week totals ending June 1, 1996, with historical data — United States



*The large apparent decrease in the number of reported cases of measles (total) reflects dramatic fluctuations in the historical baseline.

†Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of selected notifiable diseases, United States, cumulative, week ending June 1, 1996 (22nd Week)

	Cum. 1996		Cum. 1996
Anthrax	-	HIV infection, pediatric*§	122
Brucellosis	34	Plague	-
Cholera	1	Poliomyelitis, paralytic¶	-
Congenital rubella syndrome	1	Psittacosis	13
Cryptosporidiosis*	620	Rabies, human	-
Diphtheria	1	Rocky Mountain spotted fever (RMSF)	86
Encephalitis: California*	-	Streptococcal toxic-shock syndrome*	10
eastern equine*	1	Syphilis, congenital**	-
St. Louis*	-	Tetanus	5
western equine*	-	Toxic-shock syndrome	60
Hansen Disease	37	Trichinosis	11
Hantavirus pulmonary syndrome*†	5	Typhoid fever	133

*Not notifiable in all states.
†Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention (NCHSTP) (proposed), last update May 28, 1996.
¶One suspected case of polio with onset in 1996 has been reported to date.
**Updated quarterly from reports to the Division of STD Prevention, NCHSTP. First quarter 1996 is not yet available.
-: no reported cases

TABLE II. Cases of selected notifiable diseases, United States, weeks ending June 1, 1996, and June 3, 1995 (22nd Week)

Reporting Area	AIDS*		Chlamydia	*Escherichia coli* O157:H7		Gonorrhea		Hepatitis C/NA,NB		Legionellosis	
				NETSS†	PHLIS§						
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1996	Cum. 1996	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	28,480	30,156	107,756	373	163	108,585	161,929	1,502	1,689	293	508
NEW ENGLAND	1,123	1,600	3,921	32	17	3,092	2,138	50	55	17	8
Maine	16	26	-	3	-	18	32	-	-	1	3
N.H.	31	47	315	1	2	63	44	3	8	-	-
Vt.	9	13	-	5	5	26	17	20	5	2	-
Mass.	550	792	2,729	12	10	901	1,251	24	41	8	4
R.I.	73	120	877	4	-	219	221	3	1	6	1
Conn.	444	602	-	7	-	1,865	573	-	-	N	N
MID. ATLANTIC	7,891	7,703	17,023	43	23	12,937	18,196	146	154	60	66
Upstate N.Y.	1,000	966	N	28	12	2,492	4,164	121	73	14	19
N.Y. City	4,489	3,955	7,225	-	-	3,955	6,715	1	1	-	1
N.J.	1,511	1,763	2,047	15	5	2,231	1,701	-	69	7	14
Pa.	891	1,019	7,751	N	6	4,259	5,616	24	11	39	32
E.N. CENTRAL	2,298	2,482	15,314	92	44	16,504	32,888	185	138	90	169
Ohio	521	537	3,636	34	8	2,094	10,514	4	5	41	78
Ind.	347	197	4,390	17	9	3,021	3,423	6	-	23	38
Ill.	974	1,101	-	21	12	6,970	8,485	22	47	2	17
Mich.	323	493	4,101	20	15	2,911	7,715	153	86	20	18
Wis.	133	154	3,187	N	-	1,508	2,751	-	-	4	18
W.N. CENTRAL	691	685	10,498	68	30	5,031	8,541	99	30	20	34
Minn.	126	149	-	17	13	U	1,230	-	2	1	-
Iowa	51	40	1,732	12	8	462	599	77	3	4	12
Mo.	327	277	5,592	11	-	3,381	4,985	14	10	4	9
N. Dak.	6	1	2	1	1	1	12	-	3	-	2
S. Dak.	7	7	578	3	-	81	89	-	1	2	-
Nebr.	49	62	762	7	2	153	437	2	8	7	9
Kans.	125	149	1,832	17	6	953	1,189	6	3	2	2
S. ATLANTIC	7,305	7,926	20,785	21	4	40,334	45,861	103	117	43	79
Del.	142	153	-	-	-	614	862	1	-	-	-
Md.	853	1,123	2,602	N	1	5,298	5,303	1	3	6	14
D.C.	452	506	N	-	-	1,832	1,996	-	-	2	3
Va.	396	550	4,954	N	1	4,092	4,411	7	5	11	5
W. Va.	49	35	-	N	-	192	293	7	23	1	3
N.C.	355	405	-	6	2	8,095	10,229	19	27	3	15
S.C.	387	402	-	1	-	4,669	4,954	14	8	3	14
Ga.	1,096	1,092	4,735	4	-	8,850	8,924	-	11	-	10
Fla.	3,575	3,660	8,494	10	-	6,692	8,889	54	40	17	15
E.S. CENTRAL	953	982	11,745	10	5	11,753	17,593	308	557	23	16
Ky.	153	118	2,832	-	1	1,731	1,915	12	15	3	5
Tenn.	352	402	5,378	5	4	4,632	5,547	262	540	10	7
Ala.	278	261	3,535	2	-	5,390	6,884	2	2	1	3
Miss.	170	201	U	3	-	U	3,247	32	-	9	1
W.S. CENTRAL	2,656	2,489	5,467	12	4	7,913	19,736	171	97	2	10
Ark.	121	108	-	6	2	1,198	2,060	1	2	-	4
La.	656	360	2,926	4	2	3,284	4,972	73	59	-	2
Okla.	96	130	2,541	1	-	1,603	10	59	22	2	3
Tex.	1,783	1,891	-	1	-	1,828	12,694	38	14	-	1
MOUNTAIN	811	976	4,020	37	16	2,993	3,875	268	203	16	58
Mont.	10	8	-	4	-	13	38	9	8	1	4
Idaho	19	24	654	11	4	38	55	70	26	-	1
Wyo.	2	5	291	-	-	12	20	87	80	2	4
Colo.	248	340	-	13	5	709	1,241	23	32	6	24
N. Mex.	45	81	-	2	-	366	436	34	28	-	4
Ariz.	240	267	2,005	N	7	1,583	1,400	28	14	4	5
Utah	90	58	254	5	-	49	98	11	7	1	3
Nev.	157	193	816	2	-	223	587	6	8	2	13
PACIFIC	4,752	5,313	18,983	58	20	8,028	13,101	172	338	22	68
Wash.	366	457	4,284	12	5	965	1,050	26	85	1	5
Oreg.	223	184	-	17	10	201	202	3	24	-	-
Calif.	4,074	4,506	13,829	28	-	6,523	11,261	60	219	21	58
Alaska	11	45	379	1	-	204	318	2	1	-	-
Hawaii	78	121	491	N	5	135	270	81	9	-	5
Guam	3	-	102	N	-	24	52	1	3	-	1
P.R.	426	1,332	N	5	U	136	252	25	63	-	-
V.I.	9	19	N	-	U	-	17	-	-	-	-
Amer. Samoa	-	-	-	-	U	-	8	-	-	-	-
C.N.M.I.	-	-	N	-	U	11	12	-	-	-	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention (proposed), last update May 28, 1996.

†National Electronic Telecommunications System for Surveillance.

§Public Health Laboratory Information System.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending June 1, 1996, and June 3, 1995 (22nd Week)

Reporting Area	Lyme Disease		Malaria		Meningococcal Disease		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	1,454	2,120	426	431	1,600	1,557	4,239	7,139	6,534	7,025	2,139	3,074
NEW ENGLAND	59	191	14	18	56	71	69	90	148	173	256	736
Maine	2	2	3	1	9	5	-	2	4	-	-	-
N.H.	2	12	1	1	1	14	1	1	5	5	35	87
Vt.	-	2	2	-	3	6	-	-	-	1	73	102
Mass.	29	18	5	5	21	23	32	35	61	97	45	267
R.I.	21	36	3	2	-	-	1	1	20	18	21	113
Conn.	5	121	-	9	22	23	35	51	58	52	82	167
MID. ATLANTIC	1,215	1,581	98	106	130	195	189	403	1,190	1,466	350	895
Upstate N.Y.	645	884	27	21	39	58	25	38	127	165	205	511
N.Y. City	157	146	42	52	21	24	63	208	642	789	-	-
N.J.	85	163	24	23	35	52	55	81	282	280	64	158
Pa.	328	388	5	10	35	61	46	76	139	232	81	226
E.N. CENTRAL	19	73	38	60	207	233	662	1,137	751	607	18	10
Ohio	15	5	6	2	80	61	228	396	112	114	4	1
Ind.	4	7	7	4	32	33	102	104	82	58	1	-
Ill.	-	4	8	40	46	66	224	425	482	411	1	2
Mich.	-	1	11	9	27	43	41	130	39	-	7	6
Wis.	U	56	6	5	22	30	67	82	36	24	5	1
W.N. CENTRAL	43	31	12	10	129	88	180	342	182	253	198	146
Minn.	1	-	3	3	15	16	27	18	35	57	12	8
Iowa	16	1	2	1	28	16	10	27	25	35	104	46
Mo.	7	14	5	4	58	33	134	281	81	94	12	16
N. Dak.	-	-	-	-	2	-	-	-	2	1	21	15
S. Dak.	-	-	-	-	3	4	-	-	13	10	37	37
Nebr.	-	1	-	2	10	8	5	7	7	13	3	-
Kans.	19	15	2	-	13	11	4	9	19	43	9	24
S. ATLANTIC	58	160	102	86	345	250	1,638	1,808	1,068	1,148	1,042	913
Del.	1	19	2	1	2	3	16	7	20	42	30	48
Md.	25	94	21	21	31	17	262	176	115	179	250	176
D.C.	1	1	4	8	6	2	75	56	58	43	2	8
Va.	-	12	11	16	30	29	205	281	82	105	227	169
W. Va.	4	12	1	1	8	4	1	1	24	44	38	41
N.C.	16	11	10	6	40	45	471	506	159	121	278	180
S.C.	2	5	3	-	34	32	203	291	40	132	24	54
Ga.	-	4	8	10	85	55	263	316	266	10	125	133
Fla.	9	2	42	23	109	63	142	174	304	472	68	104
E.S. CENTRAL	20	13	11	9	96	92	741	1,683	460	581	74	116
Ky.	4	3	1	-	18	22	62	89	105	126	17	8
Tenn.	6	7	5	4	10	29	444	350	74	191	30	46
Ala.	1	1	2	5	34	24	235	257	186	165	27	60
Miss.	9	2	3	-	34	17	U	987	95	99	-	2
W.S. CENTRAL	11	34	11	8	190	188	519	1,257	765	794	25	49
Ark.	6	2	-	1	26	21	134	194	30	90	3	22
La.	-	-	1	1	36	27	245	457	-	12	12	9
Okla.	2	14	-	-	16	21	66	-	34	-	10	18
Tex.	3	18	10	6	112	119	74	606	701	692	-	-
MOUNTAIN	-	2	27	26	94	120	56	112	214	238	39	54
Mont.	-	-	2	2	3	2	-	3	7	3	5	19
Idaho	-	-	-	1	11	5	1	-	4	6	-	-
Wyo.	-	1	2	-	3	5	1	-	3	1	13	17
Colo.	-	-	14	15	15	27	16	65	32	5	3	-
N. Mex.	-	-	1	3	19	25	-	4	38	40	1	3
Ariz.	-	-	3	2	26	42	35	17	88	126	15	13
Utah	-	-	3	2	9	7	-	4	10	10	-	1
Nev.	-	1	2	1	8	7	3	19	32	47	2	1
PACIFIC	29	35	113	108	353	320	185	307	1,756	1,765	137	155
Wash.	1	1	8	10	48	54	3	7	108	111	-	-
Oreg.	7	2	8	6	65	59	4	6	43	23	-	-
Calif.	20	32	92	84	234	200	178	293	1,512	1,522	129	148
Alaska	-	-	1	1	4	5	-	1	25	34	8	7
Hawaii	1	-	4	7	2	2	-	-	68	75	-	-
Guam	-	-	-	-	1	2	2	1	35	50	-	-
P.R.	-	-	-	-	3	13	63	146	58	86	19	28
V.I.	-	-	-	-	-	-	-	1	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	3	-	-
C.N.M.I.	-	-	-	-	-	-	1	3	-	13	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE III. Cases of selected notifiable diseases preventable by vaccination, United States, weeks ending June 1, 1996, and June 3, 1995 (22nd Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (viral), by type				Measles (Rubeola)			
			A		B		Indigenous		Imported†	
	Cum. 1996*	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	1996	Cum. 1996	1996	Cum. 1996
UNITED STATES	546	582	10,663	10,896	3,656	4,153	20	156	-	17
NEW ENGLAND	13	30	131	97	61	96	-	5	-	1
Maine	2	2	11	14	2	6	-	-	-	-
N.H.	7	7	4	5	5	12	-	-	-	-
Vt.	-	1	3	3	3	1	-	1	-	-
Mass.	4	7	64	41	19	31	-	3	-	1
R.I.	-	-	5	11	5	8	-	-	-	-
Conn.	-	13	44	23	27	38	-	1	-	-
MID. ATLANTIC	78	65	658	697	546	570	-	4	-	4
Upstate N.Y.	25	19	169	159	139	141	-	-	-	-
N.Y. City	10	14	279	335	257	189	-	4	-	3
N.J.	26	9	133	93	98	143	-	-	-	-
Pa.	17	23	77	110	52	97	-	-	-	1
E.N. CENTRAL	75	107	908	1,458	391	488	-	4	-	3
Ohio	49	50	412	838	53	51	-	2	-	-
Ind.	4	15	143	61	68	99	-	-	-	-
Ill.	14	26	137	282	61	133	-	1	-	1
Mich.	3	14	154	169	183	173	-	-	-	2
Wis.	5	2	62	108	26	32	-	1	-	-
W.N. CENTRAL	23	33	838	666	211	272	-	15	-	1
Minn.	10	14	37	66	13	21	-	13	-	1
Iowa	6	2	195	36	69	18	-	-	-	-
Mo.	5	13	380	475	100	199	-	2	-	-
N. Dak.	-	-	22	13	-	3	-	-	-	-
S. Dak.	1	-	35	15	-	1	-	-	-	-
Nebr.	1	2	103	17	8	14	-	-	-	-
Kans.	-	2	66	44	21	16	-	-	-	-
S. ATLANTIC	136	147	452	486	544	554	-	3	-	2
Del.	1	-	5	7	1	4	-	1	-	-
Md.	32	41	91	88	132	117	-	2	-	-
D.C.	5	-	15	4	15	10	-	-	-	-
Va.	4	16	66	83	62	38	-	-	-	2
W. Va.	4	6	10	11	14	29	-	-	-	-
N.C.	14	20	51	54	129	120	-	-	-	-
S.C.	3	-	29	15	39	21	-	-	-	-
Ga.	64	31	15	43	7	50	-	-	-	-
Fla.	9	33	170	181	145	165	-	-	-	-
E.S. CENTRAL	9	4	776	532	352	439	-	-	-	-
Ky.	2	1	17	29	31	43	-	-	-	-
Tenn.	1	-	544	423	219	342	-	-	-	-
Ala.	5	3	95	47	24	54	-	-	-	-
Miss.	1	-	120	33	78	-	-	-	-	-
W.S. CENTRAL	21	30	1,820	1,170	364	435	-	-	-	2
Ark.	-	4	227	101	31	18	-	-	-	-
La.	1	1	60	42	52	76	-	-	-	-
Okla.	19	16	793	254	44	58	-	-	-	-
Tex.	1	9	740	773	237	283	-	-	-	2
MOUNTAIN	62	58	1,660	1,778	457	345	1	15	-	1
Mont.	-	-	53	27	4	9	U	-	U	-
Idaho	1	2	126	178	56	41	-	1	-	-
Wyo.	32	3	18	63	14	9	-	-	-	-
Colo.	5	8	161	217	58	56	1	4	-	1
N. Mex.	7	9	220	357	152	142	-	-	-	-
Ariz.	9	17	617	501	104	44	-	3	-	-
Utah	6	5	381	378	54	28	-	3	-	-
Nev.	2	14	84	57	15	16	-	4	-	-
PACIFIC	129	108	3,420	4,012	730	954	19	110	-	3
Wash.	1	5	237	247	47	72	19	45	-	-
Oreg.	18	14	479	847	34	52	-	1	-	-
Calif.	107	87	2,635	2,817	644	815	-	1	-	2
Alaska	1	-	29	15	3	6	-	63	-	-
Hawaii	2	2	40	86	2	9	-	-	-	1
Guam	-	-	2	2	-	-	U	-	U	-
P.R.	1	3	52	28	170	142	-	1	-	-
V.I.	-	-	-	-	-	2	U	-	U	-
Amer. Samoa	-	-	-	5	-	-	U	-	U	-
C.N.M.I.	10	5	1	15	5	7	U	-	U	-

*Of 117 cases among children aged <5 years, serotype was reported for 28 and of those, 5 were type b.
†For imported measles, cases include only those resulting from importation from other countries.
N: Not notifiable U: Unavailable -: no reported cases

TABLE III. (Cont'd.) Cases of selected notifiable diseases preventable by vaccination, United States, weeks ending June 1, 1996, and June 3, 1995 (22nd Week)

Reporting Area	Measles (Rubeola), cont'd. Total		Mumps			Pertussis			Rubella		
	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995
UNITED STATES	173	204	11	275	417	37	1,206	1,126	-	71	47
NEW ENGLAND	6	4	-	-	5	12	197	179	-	8	6
Maine	-	-	-	-	2	-	8	18	-	-	-
N.H.	-	-	-	-	-	1	18	13	-	-	1
Vt.	1	-	-	-	-	-	7	5	-	2	-
Mass.	4	2	-	-	2	11	161	136	-	4	2
R.I.	-	2	-	-	-	-	-	-	-	-	-
Conn.	1	-	-	-	1	-	3	7	-	2	3
MID. ATLANTIC	8	3	3	39	62	5	97	104	-	4	6
Upstate N.Y.	-	-	-	10	15	2	55	60	-	3	-
N.Y. City	7	-	-	9	8	-	14	15	-	1	5
N.J.	-	3	-	-	8	-	-	6	-	-	1
Pa.	1	-	3	20	31	3	28	23	-	-	-
E.N. CENTRAL	7	8	2	67	69	4	150	123	-	3	-
Ohio	2	1	1	27	20	3	69	41	-	-	-
Ind.	-	-	-	5	5	-	12	11	-	-	-
Ill.	2	-	1	16	23	-	51	27	-	1	-
Mich.	2	5	-	19	21	1	13	32	-	2	-
Wis.	1	2	-	-	-	-	5	12	-	-	-
W.N. CENTRAL	16	1	-	3	27	2	58	73	-	1	-
Minn.	14	-	-	1	2	2	40	27	-	-	-
Iowa	-	-	-	-	8	-	2	2	-	1	-
Mo.	2	1	-	-	14	-	10	17	-	-	-
N. Dak.	-	-	-	2	-	-	-	6	-	-	-
S. Dak.	-	-	-	-	-	-	1	7	-	-	-
Nebr.	-	-	-	-	3	-	1	4	-	-	-
Kans.	-	-	-	-	-	-	4	10	-	-	-
S. ATLANTIC	5	1	-	31	60	-	123	102	-	12	10
Del.	1	-	-	-	-	-	8	5	-	-	-
Md.	2	-	-	12	17	-	50	13	-	-	-
D.C.	-	-	-	-	-	-	-	2	-	1	-
Va.	2	-	-	3	13	-	5	8	-	-	-
W. Va.	-	-	-	-	-	-	2	-	-	-	-
N.C.	-	-	-	-	16	-	25	50	-	-	-
S.C.	-	-	-	5	6	-	5	10	-	1	-
Ga.	-	-	-	2	-	-	7	-	-	-	-
Fla.	-	1	-	9	8	-	21	14	-	10	10
E.S. CENTRAL	-	-	-	13	12	1	43	29	-	-	-
Ky.	-	-	-	-	-	-	23	5	-	-	-
Tenn.	-	-	-	2	-	-	13	4	-	-	-
Ala.	-	-	-	4	4	1	4	20	-	-	-
Miss.	-	-	-	7	8	-	3	-	N	N	N
W.S. CENTRAL	2	9	1	13	27	1	25	61	-	2	2
Ark.	-	2	-	-	5	-	2	7	-	-	-
La.	-	7	1	10	7	-	4	4	-	1	-
Okla.	-	-	-	-	-	-	4	9	-	-	-
Tex.	2	-	-	3	15	1	15	41	-	1	2
MOUNTAIN	16	61	-	19	15	2	151	262	-	3	4
Mont.	-	-	U	-	1	U	4	3	U	-	-
Idaho	1	-	-	-	2	-	65	71	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-
Colo.	5	21	-	1	-	-	19	38	-	1	-
N. Mex.	-	29	N	N	N	2	29	31	-	-	-
Ariz.	3	10	-	1	2	-	11	106	-	1	3
Utah	3	-	-	2	3	-	6	10	-	-	1
Nev.	4	1	-	15	7	-	17	3	-	1	-
PACIFIC	113	117	5	90	140	10	362	193	-	38	19
Wash.	45	16	1	9	10	10	146	33	-	1	-
Oreg.	1	1	N	N	N	-	27	14	-	1	1
Calif.	3	98	3	64	114	-	179	131	-	34	16
Alaska	63	-	-	2	12	-	1	-	-	-	-
Hawaii	1	2	1	15	4	-	9	15	-	2	2
Guam	-	-	U	3	3	U	-	2	U	-	1
P.R.	1	9	-	1	1	1	1	8	-	-	-
V.I.	-	-	U	-	2	U	-	-	U	-	-
Amer. Samoa	-	-	U	-	-	U	-	-	U	-	-
C.N.M.I.	-	-	U	-	-	U	-	-	U	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE IV. Deaths in 121 U.S. cities,* week ending June 1, 1996 (22nd Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	555	402	93	36	14	10	44
Boston, Mass.	137	93	26	11	5	2	16
Bridgeport, Conn.	37	29	3	4	-	1	3
Cambridge, Mass.	22	16	5	1	-	-	1
Fall River, Mass.	39	38	-	1	-	-	-
Hartford, Conn.	45	30	8	2	2	3	-
Lowell, Mass.	29	23	5	1	-	-	1
Lynn, Mass.	11	9	2	-	-	-	-
New Bedford, Mass.	15	13	1	1	-	-	1
New Haven, Conn.	32	20	8	3	1	-	2
Providence, R.I.	62	41	12	5	3	1	1
Somerville, Mass.	8	7	-	-	1	-	2
Springfield, Mass.	37	25	8	3	1	-	6
Waterbury, Conn.	26	21	4	1	-	-	1
Worcester, Mass.	55	37	11	3	1	3	10
MID. ATLANTIC	2,274	1,524	421	228	55	46	109
Albany, N.Y.	34	22	6	5	1	-	2
Allentown, Pa.	13	12	-	1	-	-	-
Buffalo, N.Y.	74	56	12	1	2	3	2
Camden, N.J.	20	13	5	1	-	1	3
Elizabeth, N.J.	16	11	3	1	-	1	-
Erie, Pa.§	35	28	5	2	-	-	-
Jersey City, N.J.	49	31	11	5	2	-	2
New York City, N.Y.	1,203	775	236	138	32	22	41
Newark, N.J.	U	U	U	U	U	U	U
Paterson, N.J.	28	19	7	2	-	-	5
Philadelphia, Pa.	399	271	64	42	12	10	21
Pittsburgh, Pa.§	51	33	7	7	1	3	4
Reading, Pa.	10	7	2	1	-	-	2
Rochester, N.Y.	122	83	24	11	2	2	7
Schenectady, N.Y.	21	12	6	2	1	-	1
Scranton, Pa.§	36	28	8	-	-	-	1
Syracuse, N.Y.	89	68	14	3	1	3	12
Trenton, N.J.	24	14	5	4	-	1	4
Utica, N.Y.	19	17	2	-	-	-	2
Yonkers, N.Y.	31	24	4	2	1	-	-
E.N. CENTRAL	1,944	1,293	399	165	37	48	119
Akron, Ohio	40	27	11	1	-	1	-
Canton, Ohio	33	25	6	1	-	1	4
Chicago, Ill.	450	268	105	48	14	13	43
Cincinnati, Ohio	150	101	29	13	2	5	13
Cleveland, Ohio	115	69	27	14	2	3	-
Columbus, Ohio	154	105	27	14	2	6	9
Dayton, Ohio	99	72	18	7	2	-	5
Detroit, Mich.	178	102	48	20	5	3	6
Evansville, Ind.	28	25	3	-	-	-	-
Fort Wayne, Ind.	56	47	7	2	-	-	3
Gary, Ind.	9	3	2	1	1	2	-
Grand Rapids, Mich.	39	29	7	1	1	1	1
Indianapolis, Ind.	123	85	25	8	3	2	7
Madison, Wis.	53	45	3	4	-	1	7
Milwaukee, Wis.	105	76	20	5	1	3	7
Peoria, Ill.	43	24	10	5	-	4	2
Rockford, Ill.	51	31	10	7	1	2	6
South Bend, Ind.	45	37	6	-	2	-	-
Toledo, Ohio	105	77	21	7	-	-	4
Youngstown, Ohio	68	45	14	7	1	1	2
W.N. CENTRAL	655	461	111	42	19	14	42
Des Moines, Iowa	37	25	7	3	1	1	2
Duluth, Minn.	19	13	3	3	-	-	2
Kansas City, Kans.	26	20	4	1	1	-	-
Kansas City, Mo.	106	54	27	9	5	3	2
Lincoln, Nebr.	39	30	7	1	1	-	3
Minneapolis, Minn.	144	111	14	9	5	5	12
Omaha, Nebr.	68	45	12	7	1	3	7
St. Louis, Mo.	102	76	16	6	3	1	7
St. Paul, Minn.	51	42	7	1	1	-	6
Wichita, Kans.	63	45	14	2	1	1	1
S. ATLANTIC	1,193	711	263	148	42	28	69
Atlanta, Ga.	157	97	35	21	3	1	4
Baltimore, Md.	205	118	43	26	9	8	15
Charlotte, N.C.	67	40	14	8	2	3	4
Jacksonville, Fla.	110	74	25	3	7	1	5
Miami, Fla.	128	82	27	10	4	5	-
Norfolk, Va.	44	18	14	7	-	5	4
Richmond, Va.	65	39	16	9	-	1	5
Savannah, Ga.	55	36	11	6	1	1	14
St. Petersburg, Fla.	54	44	6	2	2	-	1
Tampa, Fla.	159	82	36	32	7	2	14
Washington, D.C.	137	74	36	19	7	1	3
Wilmington, Del.	12	7	-	5	-	-	-
E.S. CENTRAL	628	402	133	68	13	10	43
Birmingham, Ala.	76	48	14	8	4	-	1
Chattanooga, Tenn.	74	44	11	14	3	2	6
Knoxville, Tenn.	69	49	16	3	1	-	6
Lexington, Ky.	46	23	15	6	-	2	2
Memphis, Tenn.	167	97	45	19	5	1	15
Mobile, Ala.	49	42	3	1	-	3	5
Montgomery, Ala.	47	37	8	1	-	1	2
Nashville, Tenn.	100	62	21	16	-	1	6
W.S. CENTRAL	1,098	667	259	111	38	23	63
Austin, Tex.	58	32	19	4	2	1	5
Baton Rouge, La.	13	7	3	1	2	-	-
Corpus Christi, Tex.	U	U	U	U	U	U	U
Dallas, Tex.	165	96	35	25	8	1	3
El Paso, Tex.	43	30	8	3	1	1	5
Ft. Worth, Tex.	78	52	17	4	5	-	2
Houston, Tex.	296	173	71	40	5	7	28
Little Rock, Ark.	66	39	20	3	1	3	5
New Orleans, La.	87	55	22	5	3	2	-
San Antonio, Tex.	168	105	35	17	7	4	12
Shreveport, La.	35	21	4	4	3	3	1
Tulsa, Okla.	89	57	25	5	1	1	2
MOUNTAIN	794	535	130	81	32	16	46
Albuquerque, N.M.	82	51	12	12	4	3	4
Colo. Springs, Colo.	58	42	9	5	2	-	-
Denver, Colo.	85	56	11	12	3	3	9
Las Vegas, Nev.	184	119	35	22	6	2	10
Ogden, Utah	15	14	1	-	-	-	1
Phoenix, Ariz.	145	87	28	16	11	3	10
Pueblo, Colo.	15	13	2	-	-	-	2
Salt Lake City, Utah	102	70	15	10	5	2	3
Tucson, Ariz.	108	83	17	4	1	3	7
PACIFIC	1,517	1,039	247	156	38	36	96
Berkeley, Calif.	15	13	-	1	-	1	2
Fresno, Calif.	97	58	17	10	7	5	7
Glendale, Calif.	26	24	2	-	-	-	3
Honolulu, Hawaii	75	51	12	9	2	1	2
Long Beach, Calif.	70	49	14	2	3	1	6
Los Angeles, Calif.	437	292	89	39	13	4	21
Pasadena, Calif.	31	28	1	1	1	-	4
Portland, Oreg.	80	53	15	10	-	2	4
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	110	71	13	17	4	5	14
San Francisco, Calif.	146	87	26	29	-	4	11
San Jose, Calif.	126	85	18	12	4	7	7
Santa Cruz, Calif.	34	29	3	2	-	-	1
Seattle, Wash.	127	90	18	11	3	5	3
Spokane, Wash.	51	39	7	3	1	1	2
Tacoma, Wash.	92	70	12	10	-	-	9
TOTAL	10,658¶	7,034	2,056	1,035	288	231	631

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.
†Pneumonia and influenza.
§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.
¶Total includes unknown ages.
U: Unavailable -: no reported cases

Contributors to the Production of the *MMWR* (Weekly)

Weekly Notifiable Disease Morbidity Data and 121 Cities Mortality Data

Denise Koo, M.D., M.P.H.
Deborah A. Adams
Timothy M. Copeland
Patsy A. Hall
Carol M. Knowles
Sarah H. Landis
Myra A. Montalbano

Graphics Support

Sandra L. Ford
Beverly J. Holland

Desktop Publishing

Jolene W. Altman
Morie M. Higgins
Peter M. Jenkins

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format and on a paid subscription basis for paper copy. To receive an electronic copy on Friday of each week, send an e-mail message to *lists@list.cdc.gov*. The body content should read *subscribe mmwr-toc*. Electronic copy also is available from CDC's World-Wide Web server at *http://www.cdc.gov/* or from CDC's file transfer protocol server at *ftp.cdc.gov*. To subscribe for paper copy, contact Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 512-1800.

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to: Editor, *MMWR* Series, Mailstop C-08, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone (404) 332-4555.

☆**U.S. Government Printing Office: 1996-733-175/47008 Region IV**