

## Adult Blood Lead Epidemiology and Surveillance — United States, Third Quarter, 1995

CDC's National Institute for Occupational Safety and Health Adult Blood Lead Epidemiology and Surveillance program (ABLES) monitors elevated blood lead levels (BLLs) among adults in the United States (1). This report presents ABLES data for the third quarter of 1995.

During July–September 1995, the 5410 reports of BLLs  $\geq 25$   $\mu\text{g/dL}$  represented a 14% decrease from the 6298 reports for the third quarter of 1994 (2). Compared with the third quarter of 1994, the number of reports for the same period in 1995 decreased 11% at the 25–39  $\mu\text{g/dL}$  level, 29% at the 40–49  $\mu\text{g/dL}$  level, and 11% at the 50–59  $\mu\text{g/dL}$  level; they increased 23% at the  $\geq 60$   $\mu\text{g/dL}$  level. For the first three quarters of 1995, cumulative reports of BLLs  $\geq 25$   $\mu\text{g/dL}$  decreased by 4% from reports for the same period of 1994 (Table 1). The number of reports increased only at the lowest reporting level (25–39  $\mu\text{g/dL}$ ) and decreased at all higher reporting levels (40–49  $\mu\text{g/dL}$ , 50–59  $\mu\text{g/dL}$ , and  $\geq 60$   $\mu\text{g/dL}$ ).

Compared with quarterly data for 1994, the number of reports increased at the highest blood lead level ( $\geq 60$   $\mu\text{g/dL}$ ) by 4% (from 112 to 117) in the second quarter (3) and again by 23% (from 90 to 111) in the third quarter of 1995. Reports at all lower BLLs decreased in both quarters.

*Reported by:* JP Lofgren, MD, Alabama Dept of Public Health. C Fowler, MS, Arizona Dept of Health Svcs. S Payne, MA, Occupational Lead Poisoning Prevention Program, California Dept of Health Svcs. BC Jung, MPH, Connecticut Dept of Public Health and Addiction Svcs. M Lehnher, Occupational Disease Registry, Div of Epidemiologic Studies, Illinois Dept of Public Health. R Gergely, Iowa Dept of Public Health. B Carvette, MPH, Occupational Health Program, Maine Bur of Health. E Keyvan-Larijani, MD, Lead Poisoning Prevention Program, Maryland

**TABLE 1. Number of reports of elevated blood lead levels (BLLs) among adults, number of adults with elevated BLLs, and percentage change in number of reports — 23 states,\* third quarter, 1995**

Reported BLL ( $\mu\text{g/dL}$ )	Third quarter, 1995		Cumulative reports, 1995	Cumulative reports, 1994 <sup>¶</sup>	% Change 1994 to 1995
	No. reports <sup>†</sup>	No. persons <sup>§</sup>			
25–39	4,151	3,318	13,458	13,311	+ 1%
40–49	941	702	3,290	4,077	–19%
50–59	207	141	660	773	–15%
$\geq 60$	111	72	310	319	– 3%
<b>Total</b>	<b>5,410</b>	<b>4,233</b>	<b>17,718</b>	<b>18,480</b>	<b>– 4%</b>

\*Alabama, Arizona, California, Connecticut, Illinois, Iowa, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, Texas, Utah, Vermont, Washington, and Wisconsin.

<sup>†</sup>Data for Alabama, Arizona, and South Carolina were missing; third quarter 1994 data were used as an estimate.

<sup>§</sup>Individual reports are categorized according to the highest reported BLL for the person during the given quarter. Pennsylvania provides the number of reports but not the number of persons; the numbers of persons for Pennsylvania in this table are estimates based on the proportions from the other 22 states combined and the number of reports received from Pennsylvania. Data for Alabama, Arizona, and South Carolina were missing; third quarter 1994 data were used as an estimate.

<sup>¶</sup>Data for the third quarter of 1994 include data for Maine, which were not previously included in the published report (2).

*Adult Blood Lead Epidemiology and Surveillance — Continued*

Dept of the Environment. R Rabin, MSPH, Div of Occupational Hygiene, Massachusetts Dept of Labor and Industries. M Scoblic, MN, Michigan Dept of Public Health. L Thistle-Elliott, MEd, Div of Public Health Svcs, New Hampshire State Dept of Health and Human Svcs. B Gerwel, MD, Occupational Disease Prevention Project, New Jersey State Dept of Health. R Stone, PhD, New York State Dept of Health. S Randolph, MSN, North Carolina Dept of Environment, Health, and Natural Resources. E Rhoades, MD, Oklahoma State Dept of Health. A Sandoval, MS, State Health Div, Oregon Dept of Human Resources. J Gostin, MS, Occupational Health Program, Div of Environmental Health, Pennsylvania Dept of Health. R Marino, MD, Div of Health Hazard Evaluations, South Carolina Dept of Health and Environmental Control. P Schnitzer, PhD, Bur of Epidemiology, Texas Dept of Health. K Blindauer, DVM, Bur of Epidemiology, Utah Dept of Health. L Toof, Div of Epidemiology and Health Promotion, Vermont Dept of Health. J Kaufman, MD, Washington State Dept of Labor and Industries. V Ingram-Stewart, MPH, Wisconsin Dept of Health and Social Svcs. Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, CDC.

**Editorial Note:** In contrast to previous reports, which documented a pattern of an increasing number of BLLs at lower levels and a decreasing number at higher levels, the findings in this report indicate a decrease at lower levels and an increase at higher levels. Variation in national quarterly reporting totals may result from 1) changes in the number of participating states; 2) timing of receipt of laboratory BLL reports by state-based surveillance programs; 3) changes in staffing and funding in state-based surveillance programs; and 4) interstate differences in worker BLL testing by lead-using industries. Variation from these sources reduces the capability to confidently identify trends in the actual data reported.

The findings in this report document the continuing hazard of work-related lead exposures as an occupational health problem in the United States. ABLES enhances surveillance for this preventable condition by expanding the number of participating states, reducing variability in reporting, and distinguishing between new and recurring elevated BLLs in adults.

*References*

1. CDC. Surveillance of elevated blood lead levels among adults—United States, 1992. *MMWR* 1992;41:285–8.
2. CDC. Adult blood lead epidemiology and surveillance—United States, third quarter, 1994. *MMWR* 1994;44:36–7.
3. CDC. Adult blood lead epidemiology and surveillance—United States, second quarter, 1995. *MMWR* 1995;44:801–2.

*Notice to Readers*

**Availability of Case Definitions  
for Public Health Surveillance on Internet**

In response to high demand from state and local health departments, the 1990 *MMWR Recommendations and Reports* entitled *Case Definitions for Public Health Surveillance* (1) is now available electronically on the Internet. This document provides case definitions for use by health-care providers, laboratories, and other public health personnel who report the occurrences of notifiable diseases to state and local health departments. The reported numbers of cases of selected notifiable diseases are printed each week in Tables I–III of *MMWR*.

# MNWR™

MORBIDITY AND MORTALITY WEEKLY REPORT

- 161 Mortality Patterns — United States, 1993
- 164 Animal Rabies — South Dakota, 1995
- 166 Outbreak of Primary and Secondary Syphilis — Baltimore City, Maryland, 1995
- 170 Adult Blood Lead Epidemiology and Surveillance — United States, Third Quarter, 1995
- 171 Notice to Readers

## Mortality Patterns — United States, 1993

In 1993, a total of 2,268,553 deaths were registered in the United States—92,940 more than in 1992 and the highest number ever recorded (1). In addition, life expectancy at birth declined for the first time since 1980. This report characterizes mortality patterns in 1993 (the most recent year for which complete data were available) (1) and compares these with patterns in 1992.

National mortality statistics are based on information from death certificates filed in state vital statistics offices as required by state law and are compiled by CDC into a national database. Cause-of-death statistics are based on the underlying cause of death\*, which is recorded on the death certificate by the attending physician, medical examiner, or coroner in a manner specified by the World Health Organization (WHO) and endorsed by CDC. Data are presented only for blacks and whites because of inconsistent reporting of other racial/ethnic groups on death certificates.

From 1992 to 1993, the crude death rate increased 3.2% (from 852.9 to 880.0 deaths per 100,000 population); the age-adjusted death rate<sup>†</sup> increased 1.7% (from 504.5 to 513.3 per 100,000 population). The 10 leading causes of death and their rankings were unchanged during this period; mortality decreased only for cancer (−0.4%) (Table 1)<sup>§</sup>. The largest increase in age-adjusted death rate (9.5%) was for human immunodeficiency virus (HIV) infection (*International Classification of Diseases, Ninth Revision* [ICD-9], codes 042–044<sup>¶</sup>); this rate (13.8) was the highest ever recorded for HIV infection (1).

From 1992 to 1993, age-adjusted death rates increased 1.6% for whites\*\* (from 477.5 to 485.1) and 2.3% for blacks (from 767.5 to 785.2). Rates were higher for blacks

\* Defined by the World Health Organization's *International Classification of Diseases, Ninth Revision*, as "(a) the disease or injury which initiated the train of morbid events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury."

<sup>†</sup> Age-adjusted to the 1940 U.S. population. Age-adjusted death rates indicate the risk for death relative to a standard population and are more effective than crude death rates for comparing mortality of population groups with different age structures.

<sup>§</sup> "Motor-vehicle accidents" and "all other accidents and adverse effects" are not included as causes of death for which the rate has decreased because these causes are subcategories of the leading cause "accidents and adverse effects." When a death occurs under "accidental" circumstances, the preferred term within the public health community is "unintentional injury."

<sup>¶</sup> These codes are from addenda to the ICD-9 (2).

\*\* Hispanics and non-Hispanics are included in totals for both whites and blacks.