CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

July 14, 1995 / Vol. 44 / No. 27

MMWR™
MORBIDITY AND MORTALITY WEEKLY REPORT

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## Outbreak of Acute Gastroenteritis Attributable to *Escherichia coli* Serotype O104:H21 — Helena, Montana, 1994

During February–March, 1994, four persons in Helena, Montana (1995 population: 24,569), developed bloody diarrhea and severe abdominal cramps. Stool cultures for *Salmonella*, *Shigella*, *Campylobacter,* and *Escherichia coli* O157:H7 were negative; however, sorbitol-negative *E. coli* colonies were identified in stools from all four patients. Isolates from three patients were identified at CDC as a rare serotype—*E. coli* O104:H21 that produced Shiga-like toxin II. This report summarizes the epidemiologic and laboratory investigations of this outbreak by the Lewis and Clark County Department of Health and Environmental Sciences, the Montana Department of Health and Environmental Sciences (MDHES), and CDC.

A confirmed case was defined as acute infection with *E. coli* O104:H21 during February 20–May 25, 1994—based on stool culture or serologic evidence—in a resident of or a visitor to the Helena area. A suspected case was defined onset of bloody diarrhea or abdominal cramps during the same period in a resident of or visitor to the Helena area. MDHES and county health departments contacted clinicians, laboratories, and the public through news media reports and requested that suspected cases be reported.

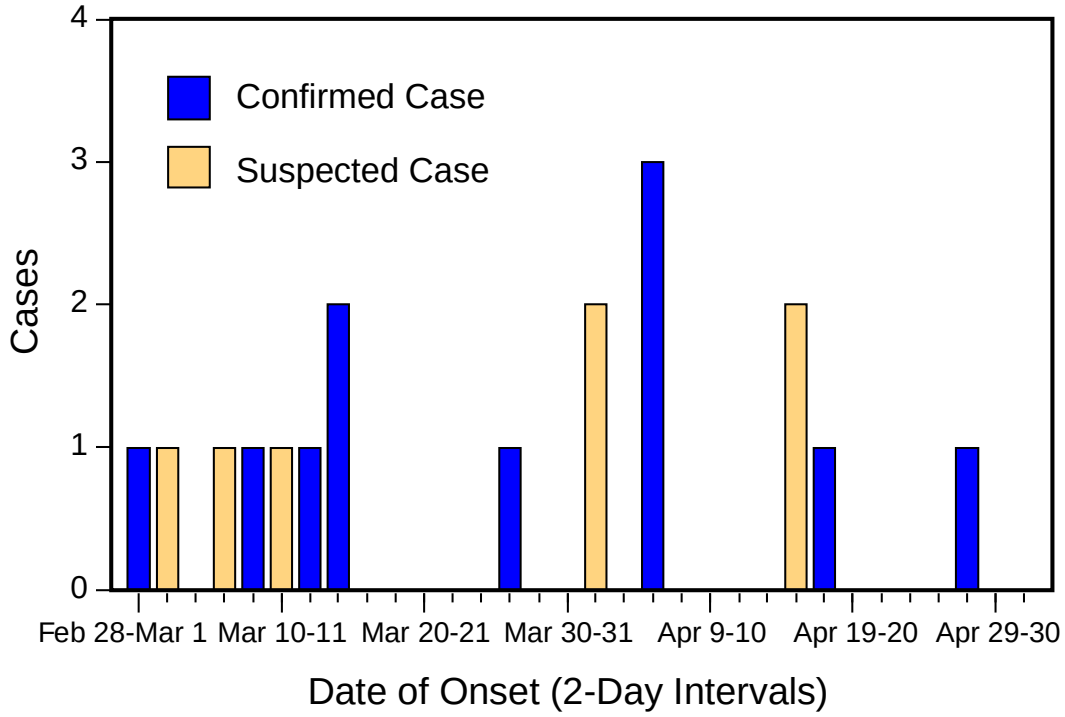
Eleven confirmed and seven suspected case-patients were identified (Figure 1). Manifestations included abdominal cramps (18 [100%]), diarrhea (17 [94%]), bloody stools (16 [89%]), vomiting (10 [56%]), and fever (six of 15 [40%] for whom information was available). The median age was 36 years (range: 8–63 years), and 12 (67%) were female. Four (22%) persons were hospitalized.

Potential sources and risk factors for illness were assessed by a case-control study that included 17 case-patients and three age-, sex-, and neighborhood-matched controls for each case-patient. A history of milk consumption during the 7 days before illness was reported by all 17 case-patients compared with 40 (83%) of 48* controls (matched odds ratio [OR]=undefined). One brand of milk (Brand A) was significantly associated with illness: of those persons who drank milk at home, 11 (92%) of 12 case-patients compared with 17 (47%) of 36 controls reported drinking Brand A (matched OR=16.0; 95% CI=1.3–492.7). Within this brand, no specific type of milk product was

*Persons who responded "Don't know" to any question were excluded from the analysis.

*Gastroenteritis — Continued*

**FIGURE 1. Onset of illness in persons with confirmed and suspected cases of *Escherichia coli* O104:H21 infection, by 2-day intervals — Helena, Montana, February 28–May 2, 1994**




associated with illness. Factors not associated with illness included consumption of other brands of milk, other foods or drinks, and dining in specific restaurants.

On May 16, the local and state health departments, the Food and Drug Administration, and CDC inspected the dairy plant where Brand A milk was produced. Based on review of the plant's records for internal microbiologic quality-control testing, on 12 days during February 1–May 13, 1994, the coliform count exceeded the state regulation limiting maximum coliform levels in milk products to ≤10 coliforms per 100 mL on at least one ready-for-sale milk product. Cultures from selected post-pasteurization piping and equipment surfaces in contact with finished milk products yielded fecal coliforms; however, *E. coli* O104:H21 was not isolated from any culture samples obtained at the dairy. Two farms provided raw milk for this dairy; rectal swabs obtained from a sample of cattle from these farms did not yield *E. coli* O104:H21.

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**Editorial Note:** Shiga-like toxin- producing *E. coli* (SLTEC) are well-recognized causes of gastrointestinal illness, including both bloody and nonbloody diarrhea. *E. coli* O157:H7, the most common SLTEC, was recognized as a human pathogen in 1982 during the investigation of two outbreaks of bloody diarrhea associated with consumption of commercially sold hamburgers (*1*). In addition to causing bloody diarrhea, *E. coli* O157:H7 is the most common cause of hemolytic uremic syndrome

*Gastroenteritis — Continued*

(HUS) in children. Although other SLTECs also have been identified in sporadic cases of diarrhea and HUS, the findings in this report document the first reported outbreak of a non-O157 SLTEC in the United States, and the first documentation of illness attributable to Shiga-like toxin-producing *E. coli* O104:H21.

The clinical manifestations of infection in this outbreak were similar to those reported for patients infected with *E. coli* O157:H7 (*2*). Although HUS is a well-recognized complication of *E. coli* O157:H7 infection, no patients developed HUS in this outbreak, possibly reflecting the limited size of the outbreak and the age distribution of patients.

Although most outbreaks of *E. coli* O157:H7 infection have been associated with consumption of ground beef, raw milk also transmits this pathogen (*3*). Healthy cattle may serve as a reservoir for *E. coli* O157:H7 and other serotypes of SLTEC (*4*). The implication of milk in the outbreak in Montana suggests that cows were the original source of this specific strain of *E. coli* O104:H21. Although the investigation documented post-pasteurization contamination of milk products with fecal coliforms, *E. coli* O104:H21 was not isolated from cultures obtained at the dairy, possibly because not all post-pasteurization equipment surfaces were sampled or because of the absence of the pathogen within the dairy at the time of the inspection.

Because the techniques used to identify non-O157 SLTEC are not available in most laboratories (*3*), infections caused by this pathogen are most likely to be unrecognized. Most clinical laboratories that test for *E. coli* O157:H7 screen stools on a special medium (sorbitol-MacConkey agar [SMAC]) because *E. coli* O157:H7 isolates do not ferment sorbitol after overnight incubation (*5*), and most laboratories routinely discard sorbitol-positive colonies and sorbitol-negative colonies that do not agglutinate in O157 antiserum. Therefore, isolates of *E. coli* O104:H21 and other non-O157 SLTEC are not recognized. The increased availability in clinical laboratories of techniques such as testing for Shiga-like toxin or the genes encoding this protein may enhance the detection of disease attributable to non-O157 SLTEC.

When evaluating clusters of patients with bloody diarrhea and other severe diarrheal illness, health-care providers also should consider the potential roles of *E. coli* O104:H21 or another non-O157 SLTEC. When cultures of stool are negative for specific pathogens, the state health department can be contacted to determine whether specimens should be examined further for SLTEC. When advised, health-care providers should freeze fecal specimens and store isolates from patients with bloody diarrhea; such specimens may assist in a subsequent investigation.

*References*

1. Riley LW, Remis RS, Helgerson SD, et al. Hemorrhagic colitis associated with a rare *Escherichia coli* serotype. N Engl J Med 1983;308:681–5.
2. Griffin PM, Ostroff SM, Tauxe RV, et al. Illnesses associated with *Escherichia coli* O157:H7 infections. Ann Intern Med 1988;109:705–12.
3. Griffin PM. *Escherichia coli* O157:H7 and other enterohemorrhagic *Escherichia coli*. In: Blaser MJ, Smith PD, Ravdin JI, Greenberg HB, Guerrant RL, eds. Infections of the gastrointestinal tract. New York: Raven Press, 1995:739–61.
4. Wells JG, Shipman LD, Greene KE, et al. Isolation of *Escherichia coli* serotype O157:H7 and other Shiga-like toxin-producing *E. coli* from dairy cattle. J Clin Microbiol 1991;29:985–9.
5. March SB, Rutnam S. Sorbitol-MacConkey medium for detection of *Escherichia coli* O157:H7 associated with hemorrhagic colitis. J Clin Microbiol 1986;23:869–72.

## Statewide Surveillance for Antibiotic-Resistant Bacteria — New Jersey, 1992–1994

The increasing occurrence of infection with antibiotic-resistant microorganisms and other emerging infectious diseases has required the development of flexible and timely surveillance systems for monitoring these problems (*1,2*). To determine the extent of antibiotic resistance in New Jersey, in 1991 the New Jersey State Department of Health (NJSDOH) initiated a hospital laboratory isolate-based surveillance system for antimicrobial-resistant bacteria. This report describes the surveillance system and summarizes findings during 1992–1994 for vancomycin-resistant enterococci (VRE)—the most rapidly increasing antibiotic-resistant bacteria reported by New Jersey hospitals.

The surveillance system includes the 95 acute-care hospitals licensed by the state of New Jersey. Organisms targeted for surveillance include gram-positive cocci resistant to vancomycin, including VRE; methicillin-resistant *Staphylococcus aureus* (MRSA); gram-negative rod-shaped bacteria (GNRs) resistant to imipenem; GNRs resistant to amikacin; and pneumococcal and other streptococcal isolates resistant to penicillin. Hospitals submit to NJSDOH monthly a surveillance report form, which includes the number of in-patient bloodstream isolates of these organisms and MRSA isolates from any body site. The New Jersey Administrative Code, which addresses communicable diseases, and state hospital licensure standards were modified in 1990 to require hospitals to submit these data to NJSDOH. Hospitals are contacted by the surveillance system coordinator to ensure monthly reporting; since the surveillance system was initiated, all hospitals have submitted monthly reports (*3*).

During 1992–1994, a total of 5916 (81%) bloodstream isolates reported to this system were MRSA. Of the 1398 non-MRSA bloodstream isolates, 663 (47%) were VRE. During this period, both the number of hospitals reporting VRE blood isolates and the number of VRE isolates increased steadily: in 1992, 33 hospitals reported 99 isolates, while in 1994, 54 hospitals reported 278 isolates (Figure 1). Most of the monthly reports (73%) represent only one reported isolate per hospital. In 1992, hospitals in 13 of the 21 counties reported VRE isolates, compared with 20 of 21 counties in 1994.

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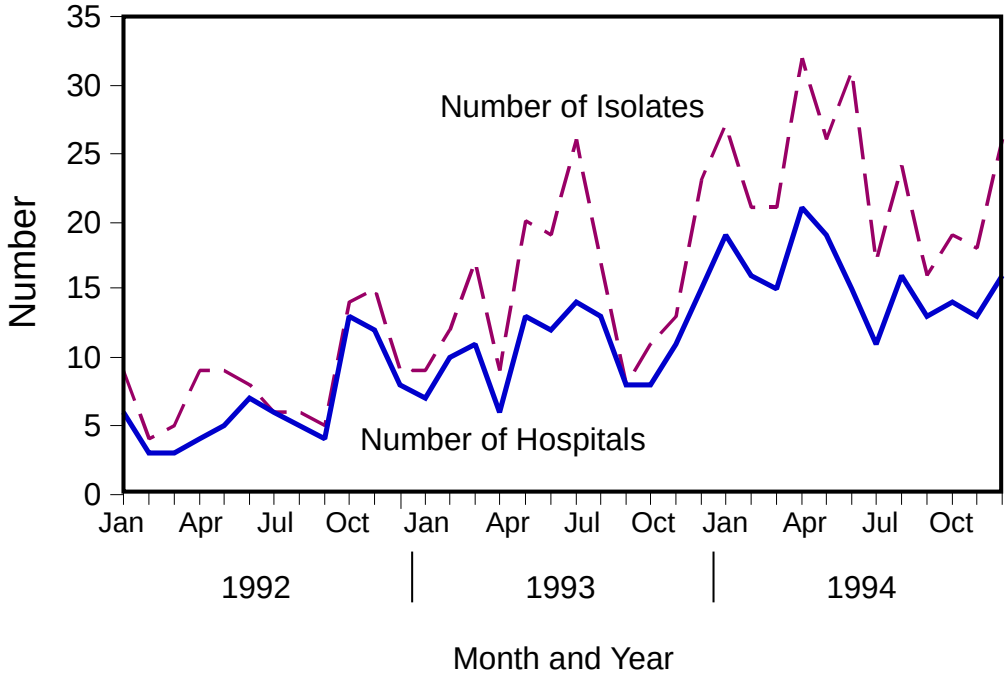
**Editorial Note:** The recent national emphasis on emerging infectious diseases has underscored the problem of antibiotic resistance involving a variety of nosocomial and community-acquired infections and has focused attention on the importance of microbiology laboratories as sources of surveillance information for antibiotic resistance (*1,2*). For example, in New Jersey, the increase in both the number of VRE blood isolates and the number of hospitals reporting VRE blood isolates from 1992 through 1994 suggests the emergence of the problem of VRE in that state. Careful monitoring of such trends in antibiotic resistance in enterococci and other organisms assists clinicians in selecting antibiotics for their patients and public health agencies in the development and implementation of prevention efforts.

In New Jersey, laboratory-based surveillance for VRE and other antibiotic-resistant isolates has been developed through collaboration between the NJSDOH, hospitals, and infectious disease professionals in the state and because of modification of reporting regulations. The New Jersey system uses data that are routinely collected and

*Antibiotic-Resistant Bacteria — Continued*

**FIGURE 1. Number of vancomycin-resistant enterococci (VRE) isolates reported from hospitals and number of hospitals reporting VRE blood isolates — New Jersey, 1992–1994**




collated by hospital laboratories and requires few additional resources. Because this surveillance system is isolate-based, it does not directly measure changes in the rate of infection in persons, and NJSDOH has used this system primarily for sentinel purposes to guide further investigation. For example, early detection and geographic tracking of VRE in New Jersey through this system have facilitated collaborative efforts involving public and private sector and academic organizations to evaluate risk factors for VRE, treatment options, VRE in vitro susceptibility to antimicrobial agents before clinical trials, and the effectiveness of infection-control practices (*4–7*). These efforts have, in turn, enabled the NJSDOH to collaborate with professional organizations (the Infectious Diseases Society of New Jersey and the New Jersey chapters of the Association for Professionals in Infection Control and Epidemiology) to develop recommendations to prevent VRE transmission and have provided a source of bacterial isolates to assist in research efforts to develop effective antimicrobial agents against VRE.

*References*

1. Institute of Medicine. Emerging infections: microbial threats to health in the United States. Washington, DC: National Academy Press, 1992.
2. CDC. Addressing emerging infectious disease threats to health: a prevention strategy for the United States. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, 1994.
3. Paul SM, Finelli L, Crance GL, Spitalny KC. A statewide surveillance system for antimicrobial resistant bacteria—New Jersey. Infect Control Hosp Epidemiol 1995;16 (in press).

*Antibiotic-Resistant Bacteria — Continued*

4. Paul SM, Silber JL, Crane G, Kupersmit A, Spitalny K. Vancomycin-resistant enterococcal (VRE) blood isolates in New Jersey (NJ) hospitals: an 18 month study. In: Proceedings of the fourth annual meeting of the Society for Hospital Epidemiology of America. West Deptford, New Jersey: Society for Hospital Epidemiology of America, 1994.
5. Paul SM, Noveck H, Silber JL, Wartenberg D, Crane G, Spitalny K. A statewide study of patient risk factors for vancomycin-resistant enterococcal bacteremia. In: Proceedings of the fourth annual meeting of the Society for Hospital Epidemiology of America. West Deptford, New Jersey: Society for Hospital Epidemiology of America, 1994.
6. Silber JL, Patel M, Paul SM, Kostman JR. Statewide surveillance of isolates of vancomycin-resistant gram-positive cocci: genotyping of vancomycin resistance and activity of Quinupristin/Dalfopristin (RP59500) and other antimicrobials. In: Proceedings of the 34th Annual Interscience Conference on Antimicrobial Agents and Chemotherapy. Washington, DC: American Society for Microbiology, 1994.
7. Cronan J, Silber J, Schwarz G, Paul SM. Infection control practices and the prevalence of vancomycin-resistant enterococci (VRE) in New Jersey hospitals. In: Proceedings of the 34th Annual Interscience Conference on Antimicrobial Agents and Chemotherapy. Washington, DC: American Society for Microbiology, 1994.

## Influenza and Pneumococcal Vaccination Coverage Levels Among Persons Aged ≥65 Years — United States, 1973–1993

Recommendations to provide annual influenza vaccination and one dose of pneumococcal vaccine to all persons aged ≥65 years (*1,2*) are intended to reduce the high morbidity and mortality associated with influenza and pneumococcal disease. One of the national health objectives for the year 2000 is to increase influenza and pneumococcal vaccination levels to ≥60% for persons at high risk for influenza and pneumococcal disease, including those aged ≥65 years (objective 20.11) (*3*). This report summarizes 1) estimates of influenza vaccination coverage levels among persons aged ≥65 years during 1973–1985 and pneumococcal vaccination coverage levels for 1984–1985 based on data from the United States Immunization Survey (USIS) and 2) influenza and pneumococcal vaccination coverage levels among persons aged ≥65 years and for selected population subgroups during 1989–1993 based on data from the National Health Interview Survey (NHIS).

The USIS was initiated in 1959 and conducted through 1985 (*4*) using a weighted random sample of the U.S. civilian households that was representative of the civilian noninstitutionalized population based on the preceding decennial census. During 1973–1985, approximately 37,500–57,000 households were surveyed; participants were asked whether they had been vaccinated against influenza during the previous year. During 1984–1985, participants were asked whether they had ever received pneumococcal vaccine. Persons aged ≥15 years who were most knowledgeable about the health status of household members were interviewed regarding the vaccination histories of all members. The NHIS, conducted annually since 1957, is a multistage cluster survey of U.S. civilian households that obtains a representative sample of the civilian noninstitutionalized population (*5*). Interviews are conducted with all available family members aged ≥18 years. Respondents are asked whether they were vaccinated against influenza during the previous year and whether they ever received pneumococcal vaccine. Each year, approximately 8000 respondents aged ≥65 years participated in the survey. Responses were analyzed using SUDAAN and weighted to

*P&I Vaccination Coverage — Continued*

reflect the age, sex, and race/ethnicity of the U.S. noninstitutionalized population. To assist in targeting ongoing vaccination efforts, NHIS data sets also were analyzed by age, sex, race/ethnicity, income, and reported number of physician visits during the previous year. Data are presented for white, black, and Hispanic populations; data for other groups were too small for meaningful analysis.

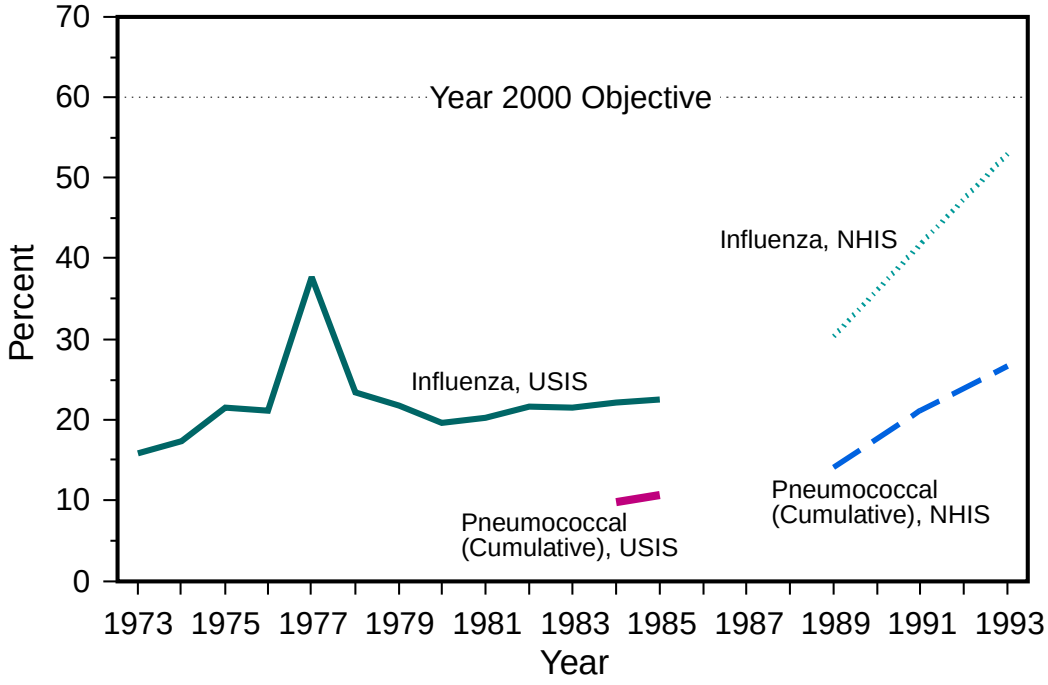
Based on USIS data, during 1973–1985, influenza vaccination levels among persons aged ≥65 years ranged from 22% to 30%, except for an increase (to 38%) during the 1976–1977 "swine flu" National Influenza Immunization Program (Figure 1). Pneumococcal vaccination levels were 9.8% and 10.7% in 1984 and 1985, respectively. Based on NHIS data, from 1989 through 1993, influenza vaccination coverage levels increased by 19.1%, from 32.9% to 52.0%, and the cumulative pneumococcal vaccination coverage level increased by 13.5% from 14.7% to 28.2%.

There was no statistical difference in coverage rates by sex for either vaccine during any year (Table 1, page 513). However, vaccination levels for both vaccines were lower among blacks and Hispanics when compared with whites. In addition, coverage levels were higher among persons at or above the poverty level* and those who had visited a physician during the previous year.

*(Continued on page 513)*

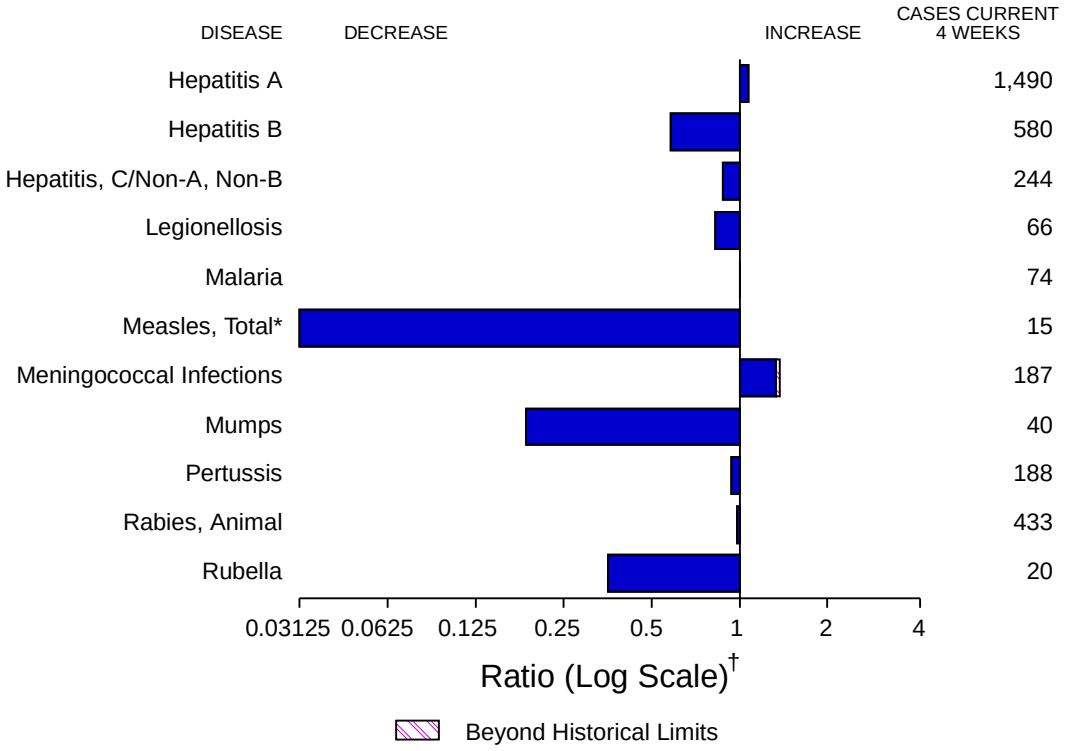
*Poverty statistics are based on a definition originated by the Social Security Administration in 1964, subsequently modified by federal interagency committees in 1969 and 1980, and prescribed by the Office of Management and Budget as the standard to be used by federal agencies for statistical purposes.

**FIGURE 1. Percentage of influenza and pneumococcal vaccine coverage among persons aged ≥65 years, by year, and national health objective for the year 2000 for vaccine coverage — United States, 1973–1993***




*Source: United States Immunization Survey (USIS) for influenza vaccine for 1973–1985 and for pneumococcal vaccine for 1984–1985; National Health Interview Survey (NHIS) for influenza and pneumococcal vaccine for 1989–1993.

**FIGURE I. Notifiable disease reports, comparison of 4-week totals ending July 8, 1995, 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 specified notifiable diseases, United States, cumulative, week ending July 8, 1995 (27th Week)**

| | Cum. 1995 | | Cum. 1995 |
|---|---|---|---|
| Anthrax | - | Psittacosis | 34 |
| Brucellosis | 46 | Rabies, human | 1 |
| Cholera | 8 | Rocky Mountain Spotted Fever | 155 |
| Congenital rubella syndrome | 4 | Syphilis, congenital, age < 1 year§ | 132 |
| Diphtheria* | - | Tetanus | 12 |
| *Haemophilus influenzae*† | 656 | Toxic shock syndrome | 103 |
| Hansen Disease | 71 | Trichinosis | 22 |
| Plague | 5 | Typhoid fever | 154 |
| Poliomyelitis, Paralytic | - | | |

*The case previously reported in 1995 had onset of illness in October 1994. It will now be included in 1994 data.
†Of 642 cases of known age, 160 (25%) were reported among children less than 5 years of age.
§Updated quarterly from reports to the Division of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Services. This total through first quarter 1995.
-: no reported cases

## TABLE II. Cases of selected notifiable diseases, United States, weeks ending July 8, 1995, and July 9, 1994 (27th Week)

| Reporting Area | AIDS* | Gonorrhea | | Hepatitis (Viral), by type | | | | | | Legionellosis | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | A | | B | | C/NA,NB | | | |
| | Cum. 1995 | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 |
| UNITED STATES | 35,614 | 180,875 | 200,500 | 12,967 | 11,553 | 4,963 | 5,925 | 2,181 | 2,141 | 651 | 735 |
| NEW ENGLAND | 1,797 | 2,400 | 4,113 | 126 | 166 | 92 | 208 | 54 | 79 | 15 | 13 |
| Maine | 71 | 40 | 49 | 16 | 16 | 6 | 9 | - | - | 4 | - |
| N.H. | 56 | 64 | 43 | 6 | 9 | 12 | 16 | 7 | 7 | 1 | - |
| Vt. | 15 | 26 | 14 | 4 | 2 | 1 | 6 | 1 | 6 | - | - |
| Mass. | 812 | 1,413 | 1,514 | 48 | 70 | 39 | 127 | 45 | 54 | 9 | 7 |
| R.I. | 137 | 257 | 238 | 16 | 14 | 8 | 4 | 1 | 12 | 1 | 6 |
| Conn. | 706 | 600 | 2,255 | 36 | 55 | 26 | 46 | - | - | N | N |
| MID. ATLANTIC | 9,135 | 17,840 | 22,460 | 760 | 815 | 597 | 775 | 199 | 260 | 72 | 105 |
| Upstate N.Y. | 1,133 | 2,612 | 5,147 | 196 | 304 | 187 | 211 | 105 | 115 | 23 | 21 |
| N.Y. City | 4,481 | 6,128 | 8,503 | 373 | 268 | 173 | 159 | 1 | 1 | 1 | - |
| N.J. | 2,225 | 2,077 | 2,759 | 105 | 161 | 142 | 208 | 76 | 118 | 14 | 17 |
| Pa. | 1,296 | 7,023 | 6,051 | 86 | 82 | 95 | 197 | 17 | 26 | 34 | 67 |
| E.N. CENTRAL | 2,897 | 38,467 | 40,341 | 1,570 | 1,127 | 498 | 628 | 147 | 191 | 180 | 209 |
| Ohio | 607 | 12,247 | 11,770 | 982 | 368 | 66 | 96 | 5 | 13 | 87 | 96 |
| Ind. | 261 | 3,667 | 4,336 | 77 | 199 | 115 | 115 | - | 5 | 41 | 24 |
| Ill. | 1,284 | 10,459 | 11,826 | 217 | 304 | 94 | 171 | 33 | 51 | 13 | 21 |
| Mich. | 572 | 9,298 | 8,760 | 200 | 139 | 200 | 205 | 109 | 122 | 21 | 40 |
| Wis. | 173 | 2,796 | 3,649 | 94 | 117 | 23 | 41 | - | - | 18 | 28 |
| W.N. CENTRAL | 867 | 9,378 | 11,067 | 843 | 559 | 315 | 331 | 54 | 44 | 64 | 51 |
| Minn. | 204 | 1,435 | 1,621 | 88 | 112 | 26 | 39 | 2 | 10 | - | 1 |
| Iowa | 44 | 716 | 698 | 41 | 28 | 23 | 16 | 5 | 7 | 14 | 22 |
| Mo. | 346 | 5,728 | 6,052 | 590 | 244 | 228 | 239 | 35 | 8 | 36 | 15 |
| N. Dak. | 5 | 13 | 21 | 14 | 2 | 3 | - | 3 | 1 | 3 | 4 |
| S. Dak. | 9 | 92 | 101 | 21 | 17 | 2 | - | 1 | - | - | - |
| Nebr. | 71 | - | 701 | 25 | 85 | 16 | 18 | 5 | 8 | 7 | 7 |
| Kans. | 188 | 1,394 | 1,873 | 64 | 71 | 17 | 19 | 3 | 10 | 4 | 2 |
| S. ATLANTIC | 9,055 | 52,936 | 52,979 | 611 | 599 | 706 | 1,195 | 157 | 270 | 111 | 182 |
| Del. | 165 | 1,047 | 950 | 7 | 14 | 2 | 8 | 1 | 1 | 1 | - |
| Md. | 1,313 | 6,232 | 9,853 | 101 | 92 | 119 | 184 | 5 | 16 | 20 | 48 |
| D.C. | 579 | 2,372 | 3,779 | 9 | 13 | 12 | 26 | - | - | 4 | 5 |
| Va. | 645 | 5,375 | 6,432 | 98 | 74 | 47 | 62 | 5 | 18 | 7 | 5 |
| W. Va. | 44 | 430 | 364 | 11 | 7 | 29 | 18 | 26 | 20 | 3 | 1 |
| N.C. | 490 | 12,306 | 13,192 | 61 | 64 | 153 | 150 | 27 | 35 | 20 | 12 |
| S.C. | 449 | 6,148 | 6,399 | 20 | 25 | 28 | 22 | 12 | 3 | 22 | 9 |
| Ga. | 1,090 | 8,376 | U | 50 | 23 | 62 | 493 | 15 | 148 | 14 | 78 |
| Fla. | 4,280 | 10,650 | 12,010 | 254 | 287 | 254 | 232 | 66 | 29 | 20 | 24 |
| E.S. CENTRAL | 1,109 | 22,541 | 22,935 | 782 | 258 | 478 | 581 | 593 | 456 | 17 | 61 |
| Ky. | 155 | 2,441 | 2,329 | 24 | 98 | 38 | 55 | 11 | 17 | 2 | 6 |
| Tenn. | 437 | 6,954 | 7,393 | 676 | 96 | 374 | 488 | 580 | 431 | 10 | 31 |
| Ala. | 298 | 9,410 | 7,928 | 49 | 40 | 66 | 38 | 2 | 8 | 4 | 9 |
| Miss. | 219 | 3,736 | 5,285 | 33 | 24 | - | - | - | - | 1 | 15 |
| W.S. CENTRAL | 3,137 | 19,079 | 23,852 | 1,575 | 1,429 | 724 | 545 | 315 | 144 | 8 | 21 |
| Ark. | 137 | 1,968 | 3,530 | 160 | 32 | 26 | 13 | 3 | 4 | 1 | 4 |
| La. | 502 | 6,217 | 6,321 | 46 | 76 | 98 | 94 | 88 | 73 | 2 | 4 |
| Okla. | 154 | 1,303 | 2,365 | 346 | 128 | 234 | 63 | 204 | 33 | 3 | 9 |
| Tex. | 2,344 | 9,591 | 11,636 | 1,023 | 1,193 | 366 | 375 | 20 | 34 | 2 | 4 |
| MOUNTAIN | 1,119 | 4,313 | 4,909 | 2,106 | 2,217 | 440 | 320 | 252 | 226 | 109 | 54 |
| Mont. | 9 | 38 | 44 | 51 | 15 | 14 | 11 | 9 | 4 | 4 | 14 |
| Idaho | 26 | 68 | 44 | 194 | 169 | 46 | 48 | 30 | 48 | 2 | 1 |
| Wyo. | 6 | 26 | 38 | 75 | 13 | 14 | 13 | 111 | 69 | 5 | 3 |
| Colo. | 372 | 1,540 | 1,686 | 274 | 271 | 65 | 54 | 34 | 39 | 31 | 11 |
| N. Mex. | 107 | 443 | 513 | 384 | 567 | 159 | 106 | 30 | 34 | 3 | 1 |
| Ariz. | 299 | 1,437 | 1,550 | 615 | 824 | 77 | 28 | 24 | 12 | 44 | 3 |
| Utah | 69 | 83 | 159 | 457 | 218 | 50 | 31 | 6 | 10 | 7 | 5 |
| Nev. | 231 | 678 | 875 | 56 | 140 | 15 | 29 | 8 | 10 | 13 | 16 |
| PACIFIC | 6,498 | 13,921 | 17,844 | 4,594 | 4,383 | 1,113 | 1,342 | 410 | 471 | 75 | 39 |
| Wash. | 495 | 1,299 | 1,530 | 384 | 601 | 92 | 123 | 116 | 134 | 7 | 8 |
| Oreg. | 223 | 202 | 476 | 897 | 469 | 46 | 79 | 25 | 21 | - | - |
| Calif. | 5,594 | 11,772 | 14,989 | 3,192 | 3,162 | 959 | 1,110 | 259 | 312 | 63 | 29 |
| Alaska | 46 | 381 | 460 | 24 | 120 | 5 | 7 | 1 | - | - | - |
| Hawaii | 140 | 267 | 389 | 97 | 31 | 11 | 23 | 9 | 4 | 5 | 2 |
| Guam | - | 42 | 72 | 2 | 12 | - | 4 | - | - | - | 1 |
| P.R. | 1,514 | 291 | 283 | 59 | 34 | 369 | 184 | 208 | 92 | - | - |
| V.I. | 21 | 6 | 11 | - | 2 | 2 | 4 | - | 1 | - | - |
| Amer. Samoa | - | 13 | 18 | 5 | 5 | - | - | - | - | - | - |
| C.N.M.I. | - | 13 | 25 | 15 | 3 | 7 | - | - | - | - | - |

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 Prevention Services, last update June 29, 1995.

## TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending July 8, 1995, and July 9, 1994 (27th Week)

| Reporting Area | Lyme Disease | | Malaria | | Measles (Rubeola) | | | | | | Meningococcal Infections | | Mumps | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Indigenous | | Imported* | | Total | | | | | |
| | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 | 1995 | Cum. 1995 | 1995 | Cum. 1995 | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 |
| UNITED STATES | 2,406 | 3,515 | 504 | 487 | - | 198 | 1 | 8 | 206 | 764 | 1,780 | 1,646 | 461 | 761 |
| NEW ENGLAND | 439 | 661 | 22 | 30 | - | 4 | - | - | 4 | 23 | 91 | 69 | 8 | 14 |
| Maine | 3 | 2 | 2 | 2 | - | - | - | - | - | 4 | 6 | 13 | 4 | 3 |
| N.H. | 14 | 11 | 1 | 3 | - | - | - | - | - | 1 | 17 | 7 | 1 | 4 |
| Vt. | 5 | 5 | - | 1 | - | - | - | - | - | 2 | 6 | 2 | - | - |
| Mass. | 55 | 50 | 7 | 12 | - | 2 | - | - | 2 | 7 | 32 | 28 | 1 | - |
| R.I. | 91 | 77 | 2 | 5 | - | 2 | - | - | 2 | 6 | - | - | - | 1 |
| Conn. | 271 | 516 | 10 | 7 | - | - | - | - | - | 3 | 30 | 19 | 2 | 6 |
| MID. ATLANTIC | 1,551 | 2,113 | 114 | 78 | - | 3 | - | 2 | 5 | 206 | 213 | 167 | 66 | 72 |
| Upstate N.Y. | 876 | 1,529 | 24 | 24 | U | - | U | - | - | 15 | 70 | 56 | 16 | 20 |
| N.Y. City | 55 | 5 | 53 | 25 | - | 1 | - | 2 | 3 | 13 | 23 | 23 | 5 | 1 |
| N.J. | 204 | 365 | 25 | 17 | - | 2 | - | - | 2 | 171 | 62 | 37 | 6 | 13 |
| Pa. | 416 | 214 | 12 | 12 | - | - | - | - | - | 7 | 58 | 51 | 39 | 38 |
| E.N. CENTRAL | 34 | 272 | 64 | 54 | - | 7 | 1 | 2 | 9 | 100 | 244 | 238 | 78 | 141 |
| Ohio | 25 | 16 | 5 | 7 | - | 1 | - | - | 1 | 16 | 79 | 67 | 26 | 41 |
| Ind. | 5 | 8 | 9 | 9 | U | - | U | - | - | 1 | 35 | 35 | 1 | 6 |
| Ill. | 3 | 13 | 32 | 24 | - | - | 1 | 1 | 1 | 56 | 71 | 82 | 23 | 59 |
| Mich. | 1 | 5 | 12 | 12 | - | 4 | - | 1 | 5 | 24 | 50 | 29 | 28 | 30 |
| Wis. | - | 230 | 6 | 2 | - | 2 | - | - | 2 | 3 | 9 | 25 | - | 5 |
| W.N. CENTRAL | 37 | 56 | 11 | 24 | - | 1 | - | - | 1 | 169 | 109 | 109 | 31 | 41 |
| Minn. | - | 1 | 3 | 7 | - | - | - | - | - | - | 16 | 9 | 2 | 3 |
| Iowa | 5 | 1 | 1 | 4 | - | - | - | - | - | 7 | 20 | 13 | 8 | 10 |
| Mo. | 15 | 49 | 4 | 9 | - | 1 | - | - | 1 | 159 | 43 | 53 | 17 | 25 |
| N. Dak. | - | - | - | 1 | - | - | - | - | - | - | 1 | 1 | - | 2 |
| S. Dak. | - | - | 1 | - | - | - | - | - | - | - | 5 | 7 | - | - |
| Nebr. | 1 | 2 | 2 | 2 | U | - | U | - | - | 2 | 9 | 8 | 4 | 1 |
| Kans. | 16 | 3 | - | 1 | - | - | - | - | - | 1 | 15 | 18 | - | - |
| S. ATLANTIC | 234 | 299 | 106 | 97 | - | 5 | - | - | 5 | 12 | 299 | 241 | 49 | 116 |
| Del. | 7 | 35 | 1 | 3 | - | - | - | - | - | - | 3 | 2 | - | - |
| Md. | 158 | 96 | 27 | 42 | - | - | - | - | - | 2 | 24 | 18 | - | 34 |
| D.C. | - | 2 | 9 | 8 | - | - | - | - | - | - | 1 | 2 | - | - |
| Va. | 18 | 33 | 22 | 10 | - | - | - | - | - | 2 | 34 | 45 | 14 | 26 |
| W. Va. | 13 | 9 | 1 | - | - | - | - | - | - | 1 | 5 | 10 | - | 3 |
| N.C. | 22 | 40 | 8 | 2 | - | - | - | - | - | - | 49 | 40 | 16 | 24 |
| S.C. | 8 | 5 | - | 2 | - | - | - | - | - | - | 39 | 11 | 7 | 6 |
| Ga. | 6 | 73 | 13 | 17 | - | 2 | - | - | 2 | 2 | 62 | 54 | 2 | 7 |
| Fla. | 2 | 6 | 25 | 13 | - | 3 | - | - | 3 | 5 | 82 | 59 | 10 | 16 |
| E.S. CENTRAL | 17 | 24 | 10 | 13 | - | - | - | - | - | 28 | 110 | 129 | 13 | 15 |
| Ky. | 3 | 15 | 1 | 4 | - | - | - | - | - | - | 33 | 28 | - | - |
| Tenn. | 11 | 6 | 3 | 6 | - | - | - | - | - | 28 | 34 | 24 | - | 5 |
| Ala. | 1 | 3 | 5 | 2 | - | - | - | - | - | - | 26 | 50 | 4 | 3 |
| Miss. | 2 | - | 1 | 1 | - | - | - | - | - | - | 17 | 27 | 9 | 7 |
| W.S. CENTRAL | 49 | 49 | 14 | 21 | - | 19 | - | - | 19 | 16 | 225 | 193 | 32 | 162 |
| Ark. | 3 | 3 | 3 | 2 | - | 2 | - | - | 2 | 1 | 19 | 33 | 2 | 5 |
| La. | 1 | - | 1 | 4 | - | 17 | - | - | 17 | 1 | 32 | 24 | 8 | 18 |
| Okla. | 19 | 24 | - | 2 | - | - | - | - | - | - | 22 | 19 | - | 23 |
| Tex. | 26 | 22 | 10 | 13 | - | - | - | - | - | 14 | 152 | 117 | 22 | 116 |
| MOUNTAIN | 5 | 2 | 33 | 21 | - | 48 | - | - | 48 | 154 | 133 | 119 | 27 | 25 |
| Mont. | - | - | 2 | - | - | - | - | - | - | - | 2 | 3 | 1 | - |
| Idaho | - | 1 | 1 | 2 | - | - | - | - | - | - | 5 | 15 | 2 | 5 |
| Wyo. | 3 | 1 | - | 1 | - | - | - | - | - | - | 5 | 5 | - | 1 |
| Colo. | 1 | - | 16 | 9 | - | 8 | - | - | 8 | 19 | 35 | 23 | 1 | 2 |
| N. Mex. | - | - | 3 | 3 | - | 29 | - | - | 29 | - | 27 | 11 | N | N |
| Ariz. | - | - | 6 | 1 | - | 10 | - | - | 10 | - | 43 | 40 | 6 | 2 |
| Utah | - | - | 4 | 4 | - | - | - | - | - | 126 | 9 | 15 | 10 | 8 |
| Nev. | 1 | - | 1 | 1 | - | 1 | - | - | 1 | 9 | 7 | 7 | 6 | 7 |
| PACIFIC | 40 | 39 | 130 | 149 | - | 111 | - | 4 | 115 | 56 | 356 | 381 | 157 | 175 |
| Wash. | 4 | - | 11 | 14 | - | 13 | - | 2 | 15 | 3 | 59 | 60 | 10 | 12 |
| Oreg. | 3 | 5 | 4 | 11 | - | 1 | - | - | 1 | - | 60 | 84 | N | N |
| Calif. | 33 | 34 | 106 | 116 | - | 97 | - | 1 | 98 | 47 | 229 | 231 | 134 | 152 |
| Alaska | - | - | 1 | - | - | - | - | - | - | 4 | 6 | 2 | 9 | 2 |
| Hawaii | - | - | 8 | 8 | - | - | - | 1 | 1 | 2 | 2 | 4 | 4 | 9 |
| Guam | - | - | - | - | U | - | U | - | - | 227 | 3 | - | 3 | 4 |
| P.R. | - | - | 1 | 2 | - | 10 | - | - | 10 | 11 | 12 | 5 | - | 2 |
| V.I. | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 3 |
| Amer. Samoa | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 |
| C.N.M.I. | - | - | 1 | 1 | U | - | U | - | - | 29 | - | - | - | 2 |

*For imported measles, cases include only those resulting from importation from other countries.
N: Not notifiable U: Unavailable -: no reported cases

## TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending July 8, 1995, and July 9, 1994 (27th Week)

| Reporting Area | Pertussis | | | Rubella | | | Syphilis (Primary & Secondary) | | Tuberculosis | | Rabies, Animal | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1995 | Cum. 1995 | Cum. 1994 | 1995 | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 | Cum. 1995 | Cum. 1994 |
| UNITED STATES | 52 | 1,498 | 1,811 | 7 | 73 | 189 | 7,891 | 11,135 | 9,343 | 10,927 | 3,304 | 3,713 |
| NEW ENGLAND | 1 | 190 | 191 | - | 15 | 124 | 94 | 119 | 205 | 211 | 841 | 960 |
| Maine | - | 20 | 2 | - | 1 | - | 2 | 4 | - | - | - | - |
| N.H. | 1 | 21 | 39 | - | 1 | - | 1 | 1 | 8 | 10 | 96 | 101 |
| Vt. | - | 6 | 27 | - | - | - | - | - | 2 | 3 | 111 | 83 |
| Mass. | - | 133 | 102 | - | 3 | 122 | 34 | 47 | 104 | 106 | 297 | 369 |
| R.I. | - | - | 4 | - | - | 1 | 1 | 9 | 22 | 18 | 152 | 5 |
| Conn. | - | 10 | 17 | - | 10 | 1 | 56 | 58 | 69 | 74 | 185 | 402 |
| MID. ATLANTIC | 4 | 128 | 311 | - | 6 | 6 | 453 | 689 | 1,848 | 2,094 | 715 | 877 |
| Upstate N.Y. | U | 65 | 121 | U | 3 | 5 | 24 | 94 | 185 | 277 | 261 | 626 |
| N.Y. City | - | 22 | 66 | - | 3 | - | 217 | 324 | 990 | 1,276 | - | - |
| N.J. | - | 5 | 9 | - | - | 1 | 99 | 111 | 362 | 376 | 203 | 153 |
| Pa. | 4 | 36 | 115 | - | - | - | 113 | 160 | 311 | 165 | 251 | 98 |
| E.N. CENTRAL | 2 | 144 | 285 | 1 | 2 | 9 | 1,322 | 1,609 | 946 | 1,041 | 20 | 21 |
| Ohio | 1 | 52 | 76 | - | - | - | 461 | 611 | 154 | 168 | 2 | - |
| Ind. | U | 13 | 36 | U | - | - | 118 | 122 | 21 | 88 | 3 | 4 |
| Ill. | 1 | 26 | 59 | - | - | 1 | 502 | 541 | 539 | 521 | 3 | 4 |
| Mich. | - | 41 | 23 | 1 | 2 | 8 | 155 | 162 | 202 | 229 | 11 | 7 |
| Wis. | - | 12 | 91 | - | - | - | 86 | 173 | 30 | 35 | 1 | 6 |
| W.N. CENTRAL | 1 | 77 | 79 | - | - | 2 | 413 | 653 | 294 | 268 | 165 | 113 |
| Minn. | - | 28 | 39 | - | - | - | 28 | 25 | 64 | 56 | 6 | 13 |
| Iowa | 1 | 3 | 6 | - | - | - | 28 | 29 | 38 | 20 | 60 | 47 |
| Mo. | - | 18 | 18 | - | - | 2 | 348 | 559 | 114 | 124 | 18 | 10 |
| N. Dak. | - | 6 | 4 | - | - | - | - | 1 | 1 | 4 | 19 | 6 |
| S. Dak. | - | 7 | - | - | - | - | - | 1 | 13 | 16 | 35 | 15 |
| Nebr. | U | 4 | 5 | U | - | - | - | 8 | 10 | 8 | - | - |
| Kans. | - | 11 | 7 | - | - | - | 9 | 30 | 54 | 40 | 27 | 22 |
| S. ATLANTIC | 5 | 135 | 179 | 5 | 21 | 12 | 1,898 | 2,871 | 1,797 | 2,044 | 1,126 | 1,050 |
| Del. | - | 6 | - | - | - | - | 8 | 16 | 12 | 20 | 33 | 21 |
| Md. | - | 15 | 55 | - | - | - | 104 | 119 | 216 | 161 | 228 | 313 |
| D.C. | - | 3 | 4 | - | - | - | 62 | 134 | 56 | 55 | 10 | 2 |
| Va. | - | 8 | 17 | - | - | - | 311 | 396 | 136 | 185 | 217 | 207 |
| W. Va. | - | - | 2 | - | - | - | 8 | 8 | 49 | 45 | 56 | 42 |
| N.C. | - | 55 | 44 | - | - | - | 599 | 916 | 192 | 245 | 240 | 91 |
| S.C. | - | 13 | 10 | - | - | - | 329 | 388 | 174 | 202 | 74 | 90 |
| Ga. | - | 5 | 14 | - | - | - | 272 | 459 | 280 | 389 | 158 | 198 |
| Fla. | 5 | 30 | 33 | 5 | 21 | 12 | 205 | 435 | 682 | 742 | 110 | 86 |
| E.S. CENTRAL | 2 | 34 | 94 | - | - | - | 2,042 | 1,943 | 541 | 771 | 86 | 107 |
| Ky. | - | - | 53 | - | - | - | 108 | 111 | 53 | 167 | 11 | 8 |
| Tenn. | - | 7 | 17 | - | - | - | 435 | 515 | 162 | 265 | - | 34 |
| Ala. | 2 | 27 | 15 | - | - | - | 320 | 363 | 200 | 213 | 72 | 63 |
| Miss. | - | - | 9 | - | - | - | 1,179 | 954 | 126 | 126 | 3 | 2 |
| W.S. CENTRAL | 5 | 80 | 53 | - | 3 | 12 | 1,232 | 2,538 | 1,281 | 1,339 | 128 | 365 |
| Ark. | - | - | 11 | - | - | - | 160 | 269 | 92 | 121 | 18 | 15 |
| La. | - | 7 | 6 | - | - | - | 563 | 931 | 6 | 7 | 23 | 43 |
| Okla. | 5 | 20 | 20 | - | - | 4 | 42 | 89 | 105 | 129 | 22 | 21 |
| Tex. | - | 53 | 16 | - | 3 | 8 | 467 | 1,249 | 1,078 | 1,082 | 65 | 286 |
| MOUNTAIN | 5 | 460 | 215 | - | 5 | 3 | 127 | 159 | 344 | 265 | 74 | 72 |
| Mont. | - | 3 | 3 | - | - | - | 3 | 2 | 3 | 9 | 25 | 10 |
| Idaho | - | 74 | 23 | - | - | - | - | 1 | 7 | 6 | - | 1 |
| Wyo. | - | 1 | - | - | - | - | 2 | - | 1 | 2 | 18 | 12 |
| Colo. | - | 21 | 122 | - | - | - | 71 | 77 | 22 | 26 | - | 6 |
| N. Mex. | 5 | 38 | 9 | - | - | - | 8 | 9 | 86 | 37 | 3 | 2 |
| Ariz. | - | 305 | 44 | - | 4 | - | 19 | 36 | 148 | 102 | 22 | 34 |
| Utah | - | 13 | 12 | - | 1 | 2 | 3 | 8 | 19 | 23 | 5 | 5 |
| Nev. | - | 5 | 2 | - | - | 1 | 21 | 26 | 58 | 60 | 1 | 2 |
| PACIFIC | 27 | 250 | 404 | 1 | 21 | 21 | 310 | 554 | 2,087 | 2,894 | 149 | 148 |
| Wash. | - | 44 | 53 | - | 1 | - | 9 | 23 | 133 | 140 | 2 | 4 |
| Oreg. | - | 9 | 50 | - | 1 | 1 | 6 | 20 | 23 | 81 | - | - |
| Calif. | 22 | 172 | 293 | 1 | 17 | 18 | 294 | 508 | 1,802 | 2,500 | 143 | 113 |
| Alaska | - | - | - | - | - | - | 1 | 2 | 44 | 34 | 4 | 31 |
| Hawaii | 5 | 25 | 8 | - | 2 | 2 | - | 1 | 85 | 139 | - | - |
| Guam | U | - | 2 | U | - | 1 | 1 | 3 | 5 | 38 | - | - |
| P.R. | - | 6 | 2 | - | - | - | 145 | 174 | 89 | 62 | 23 | 48 |
| V.I. | - | - | - | - | - | - | 2 | 22 | - | - | - | - |
| Amer. Samoa | - | - | - | - | - | - | - | 1 | 3 | 3 | - | - |
| C.N.M.I. | U | - | - | U | - | - | 3 | - | 13 | 16 | - | - |

U: Unavailable -: no reported cases

# TABLE III. Deaths in 121 U.S. cities,* week ending July 8, 1995 (27th Week)

| Reporting Area | All Causes, By Age (Years) | | | | | | P&I† Total |
|---|---|---|---|---|---|---|---|
| | All Ages | ≥65 | 45-64 | 25-44 | 1-24 | <1 | |
| NEW ENGLAND | 553 | 369 | 97 | 44 | 16 | 25 | 32 |
| Boston, Mass. | 151 | 87 | 29 | 17 | 9 | 9 | 9 |
| Bridgeport, Conn. | 33 | 26 | 3 | 3 | 1 | - | - |
| Cambridge, Mass. | 18 | 14 | 2 | 2 | - | - | 1 |
| Fall River, Mass. | 24 | 18 | 6 | - | - | - | - |
| Hartford, Conn. | 48 | 20 | 8 | 6 | - | 14 | - |
| Lowell, Mass. | 22 | 19 | 1 | 2 | - | - | - |
| Lynn, Mass. | 4 | 4 | - | - | - | - | - |
| New Bedford, Mass. | 18 | 14 | 3 | 1 | - | - | - |
| New Haven, Conn. | 50 | 36 | 9 | 3 | 1 | 1 | 6 |
| Providence, R.I. | 45 | 35 | 5 | 3 | 1 | 1 | 3 |
| Somerville, Mass. | 5 | 3 | - | - | - | - | - |
| Springfield, Mass. | 42 | 29 | 10 | 2 | 1 | - | 2 |
| Waterbury, Conn. | 37 | 25 | 10 | 1 | 1 | - | 2 |
| Worcester, Mass. | 56 | 39 | 11 | 4 | 2 | - | 9 |
| MID. ATLANTIC | 1,820 | 1,143 | 383 | 209 | 45 | 40 | 61 |
| Albany, N.Y. | 50 | 35 | 10 | 2 | 2 | 1 | 5 |
| Allentown, Pa. | 22 | 16 | 5 | 1 | - | - | - |
| Buffalo, N.Y. | 97 | 66 | 12 | 10 | 6 | 3 | - |
| Camden, N.J. | 30 | 16 | 8 | 2 | 2 | 2 | 1 |
| Elizabeth, N.J. | 14 | 11 | 1 | 2 | - | - | - |
| Erie, Pa.§ | 43 | 29 | 10 | 2 | 2 | - | 2 |
| Jersey City, N.J. | 30 | 21 | 6 | 3 | - | - | - |
| New York City, N.Y. | 1,122 | 679 | 248 | 144 | 26 | 25 | 26 |
| Newark, N.J. | 60 | 18 | 25 | 16 | 1 | - | 3 |
| Paterson, N.J. | 21 | 13 | 4 | 3 | - | 1 | - |
| Philadelphia, Pa. | U | U | U | U | U | U | U |
| Pittsburgh, Pa.§ | 37 | 26 | 8 | 1 | - | 2 | 1 |
| Reading, Pa. | 13 | 10 | 2 | - | 1 | - | 1 |
| Rochester, N.Y. | 99 | 73 | 9 | 12 | 4 | 1 | 11 |
| Schenectady, N.Y. | 23 | 16 | 5 | 2 | - | - | - |
| Scranton, Pa.§ | 48 | 36 | 8 | 2 | 1 | 1 | 3 |
| Syracuse, N.Y. | 63 | 42 | 14 | 3 | - | 4 | 4 |
| Trenton, N.J. | 25 | 18 | 4 | 3 | - | - | 3 |
| Utica, N.Y. | U | U | U | U | U | U | U |
| Yonkers, N.Y. | 23 | 18 | 4 | 1 | - | - | 1 |
| E.N. CENTRAL | 1,821 | 1,235 | 335 | 140 | 67 | 44 | 112 |
| Akron, Ohio | 17 | 11 | 3 | - | - | 3 | - |
| Canton, Ohio | 43 | 34 | 5 | 2 | - | 2 | 1 |
| Chicago, Ill. | 403 | 248 | 85 | 45 | 18 | 7 | 35 |
| Cincinnati, Ohio | 119 | 73 | 22 | 13 | 9 | 2 | 6 |
| Cleveland, Ohio | 113 | 77 | 23 | 6 | 4 | 3 | 3 |
| Columbus, Ohio | 129 | 90 | 18 | 6 | 6 | 9 | 9 |
| Dayton, Ohio | 100 | 63 | 25 | 7 | 3 | 2 | 9 |
| Detroit, Mich. | 178 | 103 | 38 | 23 | 9 | 5 | 5 |
| Evansville, Ind. | 33 | 22 | 6 | 2 | 1 | 2 | 3 |
| Fort Wayne, Ind. | 39 | 27 | 2 | 4 | 4 | 2 | 2 |
| Gary, Ind. | 12 | 11 | 1 | - | - | - | - |
| Grand Rapids, Mich. | 71 | 56 | 10 | 3 | 1 | 1 | 9 |
| Indianapolis, Ind. | 147 | 102 | 29 | 10 | 5 | 1 | 8 |
| Madison, Wis. | 51 | 43 | 6 | - | 1 | 1 | 1 |
| Milwaukee, Wis. | 95 | 75 | 13 | 7 | - | - | 5 |
| Peoria, Ill. | 28 | 20 | 8 | - | - | - | 4 |
| Rockford, Ill. | 46 | 30 | 12 | 2 | 2 | - | 2 |
| South Bend, Ind. | 41 | 35 | 3 | 1 | 1 | 1 | 1 |
| Toledo, Ohio | 104 | 74 | 19 | 6 | 2 | 3 | 8 |
| Youngstown, Ohio | 52 | 41 | 7 | 3 | 1 | - | 1 |
| W.N. CENTRAL | 573 | 379 | 96 | 63 | 8 | 15 | 44 |
| Des Moines, Iowa | 68 | 54 | 9 | 1 | 1 | 3 | 7 |
| Duluth, Minn. | 36 | 22 | 6 | 8 | - | - | - |
| Kansas City, Kans. | U | U | U | U | U | U | U |
| Kansas City, Mo. | 92 | 53 | 18 | 5 | 2 | 2 | 4 |
| Lincoln, Nebr. | 11 | 9 | 1 | 1 | - | - | 2 |
| Minneapolis, Minn. | 155 | 100 | 27 | 22 | 1 | 5 | 15 |
| Omaha, Nebr. | 58 | 38 | 7 | 10 | 3 | - | 3 |
| St. Louis, Mo. | 116 | 79 | 21 | 10 | 1 | 5 | 9 |
| St. Paul, Minn. | 37 | 24 | 7 | 6 | - | - | 4 |
| Wichita, Kans. | U | U | U | U | U | U | U |

| Reporting Area | All Causes, By Age (Years) | | | | | | P&I† Total |
|---|---|---|---|---|---|---|---|
| | All Ages | ≥65 | 45-64 | 25-44 | 1-24 | <1 | |
| S. ATLANTIC | 1,012 | 584 | 211 | 134 | 56 | 27 | 57 |
| Atlanta, Ga. | 128 | 68 | 33 | 19 | 4 | 4 | - |
| Baltimore, Md. | 153 | 83 | 35 | 18 | 16 | 1 | 15 |
| Charlotte, N.C. | 68 | 51 | 10 | 4 | 2 | 1 | 9 |
| Jacksonville, Fla. | 108 | 65 | 21 | 16 | 4 | 2 | 4 |
| Miami, Fla. | 119 | 64 | 23 | 17 | 10 | 5 | 2 |
| Norfolk, Va. | 52 | 32 | 6 | 6 | 4 | 4 | 5 |
| Richmond, Va. | 50 | 36 | 8 | 4 | 1 | 1 | - |
| Savannah, Ga. | 45 | 29 | 10 | 4 | 1 | 1 | 6 |
| St. Petersburg, Fla. | U | U | U | U | U | U | U |
| Tampa, Fla. | 134 | 82 | 26 | 16 | 5 | 5 | 12 |
| Washington, D.C. | 140 | 63 | 38 | 27 | 9 | 3 | 2 |
| Wilmington, Del. | 15 | 11 | 1 | 3 | - | - | 2 |
| E.S. CENTRAL | 548 | 360 | 109 | 50 | 23 | 6 | 40 |
| Birmingham, Ala. | U | U | U | U | U | U | U |
| Chattanooga, Tenn. | 62 | 42 | 13 | 4 | 3 | - | 7 |
| Knoxville, Tenn. | 81 | 55 | 14 | 7 | 3 | 2 | 7 |
| Lexington, Ky. | 30 | 24 | 3 | 2 | 1 | - | 1 |
| Memphis, Tenn. | 172 | 111 | 40 | 13 | 7 | 1 | 14 |
| Mobile, Ala. | 48 | 34 | 6 | 6 | 1 | 1 | 1 |
| Montgomery, Ala. | 38 | 23 | 12 | 1 | 2 | - | 1 |
| Nashville, Tenn. | 117 | 71 | 21 | 17 | 6 | 2 | 9 |
| W.S. CENTRAL | 1,208 | 747 | 242 | 145 | 48 | 25 | 64 |
| Austin, Tex. | 54 | 31 | 15 | 6 | 2 | - | 6 |
| Baton Rouge, La. | 53 | 33 | 12 | 7 | - | 1 | - |
| Corpus Christi, Tex. | 30 | 21 | 3 | 6 | - | - | - |
| Dallas, Tex. | 148 | 83 | 34 | 26 | 2 | 3 | 1 |
| El Paso, Tex. | 56 | 31 | 15 | 8 | 2 | - | 5 |
| Ft. Worth, Tex. | 74 | 41 | 16 | 8 | 6 | 3 | 3 |
| Houston, Tex. | 332 | 193 | 74 | 44 | 14 | 6 | 28 |
| Little Rock, Ark. | 61 | 40 | 11 | 8 | 1 | 1 | 4 |
| New Orleans, La. | 140 | 83 | 27 | 15 | 11 | 4 | - |
| San Antonio, Tex. | 121 | 93 | 13 | 6 | 4 | 5 | 7 |
| Shreveport, La. | 54 | 39 | 12 | 2 | 1 | - | 2 |
| Tulsa, Okla. | 85 | 59 | 10 | 9 | 5 | 2 | 8 |
| MOUNTAIN | 701 | 447 | 136 | 70 | 30 | 18 | 42 |
| Albuquerque, N.M. | 90 | 52 | 18 | 14 | 5 | 1 | 1 |
| Colo. Springs, Colo. | U | U | U | U | U | U | U |
| Denver, Colo. | 89 | 50 | 23 | 8 | 2 | 6 | 5 |
| Las Vegas, Nev. | 176 | 111 | 43 | 16 | 3 | 3 | 10 |
| Ogden, Utah | 21 | 18 | 2 | 1 | - | - | 1 |
| Phoenix, Ariz. | 112 | 66 | 17 | 14 | 13 | 2 | 8 |
| Pueblo, Colo. | 27 | 21 | 4 | 2 | - | - | 3 |
| Salt Lake City, Utah | 92 | 56 | 20 | 6 | 5 | 5 | 12 |
| Tucson, Ariz. | 94 | 73 | 9 | 9 | 2 | 1 | 2 |
| PACIFIC | 1,576 | 1,033 | 275 | 171 | 51 | 34 | 127 |
| Berkeley, Calif. | 22 | 14 | 3 | 1 | 1 | 3 | 1 |
| Fresno, Calif. | 79 | 49 | 14 | 11 | 3 | 2 | 3 |
| Glendale, Calif. | 20 | 15 | 3 | 1 | 1 | - | 2 |
| Honolulu, Hawaii | 73 | 49 | 11 | 8 | 3 | 2 | 5 |
| Long Beach, Calif. | 61 | 43 | 10 | 4 | 2 | 2 | 10 |
| Los Angeles, Calif. | 427 | 261 | 79 | 56 | 21 | 5 | 18 |
| Pasadena, Calif. | 28 | 15 | 6 | 6 | - | 1 | 1 |
| Portland, Oreg. | 83 | 60 | 12 | 5 | 4 | 2 | 2 |
| Sacramento, Calif. | 129 | 93 | 21 | 11 | 2 | 2 | 15 |
| San Diego, Calif. | 113 | 78 | 23 | 8 | 1 | 3 | 16 |
| San Francisco, Calif. | 112 | 64 | 22 | 17 | - | 2 | 20 |
| San Jose, Calif. | 168 | 120 | 26 | 11 | 5 | 6 | 23 |
| Santa Cruz, Calif. | 25 | 20 | 2 | 2 | - | 1 | 2 |
| Seattle, Wash. | 107 | 67 | 17 | 20 | 1 | 2 | 1 |
| Spokane, Wash. | 50 | 39 | 9 | 1 | 1 | - | 5 |
| Tacoma, Wash. | 79 | 46 | 17 | 9 | 6 | 1 | 3 |
| TOTAL | 9,812¶ | 6,297 | 1,884 | 1,026 | 344 | 234 | 579 |

*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

*P&I Vaccination Coverage — Continued*

*Reported by: Adult Vaccine Preventable Disease Br, Epidemiology and Surveillance Div, National Immunization Program; Div of Health Interview Statistics, National Center for Health Statistics, CDC.*

**Editorial Note:** Although the USIS and NHIS employed different methods, both provided national estimates of vaccination rates based on the weighted response of household-based surveys of the noninstitutionalized U.S. population. Analysis of data

**TABLE 1. Vaccination coverage levels with influenza and pneumococcal vaccines among persons aged ≥65 years, by selected characteristics — United States, selected years 1989–1993**

| | 1989 | | 1991 | | 1993 | |
|---|---|---|---|---|---|---|
| **Vaccine/Characteristic** | **%** | **(95% CI*)** | **%** | **(95% CI)** | **%** | **(95% CI)** |
| **INFLUENZA** | | | | | | |
| **Sex** | | | | | | |
| Male | 34.4% | (31.5%–37.3%) | 41.9% | (39.8%–44.0%) | 54.1% | (51.5%–56.7%) |
| Female | 31.9% | (29.9%–33.9%) | 41.5% | (39.6%–43.4%) | 50.4% | (48.3%–52.5%) |
| **Race/Ethnicity†** | | | | | | |
| White, non-Hispanic | 34.5% | (32.6%–36.4%) | 43.5% | (41.8%–45.2%) | 54.0% | (52.3%–55.7%) |
| Black, non-Hispanic | 19.6% | (14.7%–24.5%) | 27.3% | (23.2%–31.5%) | 32.2% | (27.3%–37.2%) |
| Hispanic | 27.7% | (19.6%–35.7%) | 34.9% | (26.6%–43.1%) | 46.8% | (35.0%–58.6%) |
| **Socioeconomic status** | | | | | | |
| At or above poverty level§ | 34.6% | (32.7%–36.6%) | 42.7% | (40.9%–44.5%) | 54.0% | (52.1%–55.9%) |
| Below poverty level | 26.2% | (22.3%–30.1%) | 36.1% | (31.9%–40.3%) | 40.9% | (35.4%–46.4%) |
| **No. physician visits** | | | | | | |
| ≥1 Physician visit during previous year | 36.7% | (34.7%–38.6%) | 45.4% | (43.7%–47.1%) | 55.8% | (54.0%–57.6%) |
| 0 Physician visits during previous year | 11.9% | ( 8.9%–14.9%) | 17.5% | (14.6%–20.3%) | 22.0% | (17.9%–26.1%) |
| **Total** | **32.9%** | **(31.2%–34.7%)** | **41.7%** | **(40.1%–43.2%)** | **52.0%** | **(50.4%–53.6%)** |
| **PNEUMOCOCCAL** | | | | | | |
| **Sex** | | | | | | |
| Male | 14.0% | (12.1%–15.9%) | 21.4% | (19.6%–23.1%) | 30.3% | (27.7%–32.8%) |
| Female | 15.2% | (13.5%–17.0%) | 21.0% | (19.4%–22.6%) | 26.7% | (24.4%–28.9%) |
| **Race/Ethnicity** | | | | | | |
| White, non-Hispanic | 15.7% | (14.3%–17.2%) | 22.2% | (20.8%–23.6%) | 30.4% | (28.6%–32.2%) |
| Black, non-Hispanic | 6.3% | ( 3.5%– 9.1%) | 14.1% | (10.8%–17.4%) | 14.3% | (10.4%–18.2%) |
| Hispanic | 11.1% | ( 6.0%–16.1%) | 13.7% | ( 8.6%–18.8%) | 11.5% | ( 5.4%–17.6%) |
| **Socioeconomic status** | | | | | | |
| At or above poverty level | 15.4% | (13.9%–16.9%) | 22.1% | (20.6%–23.5%) | 29.7% | (27.8%–31.6%) |
| Below poverty level | 10.2% | ( 7.1%–13.2%) | 16.8% | (12.3%–21.2%) | 17.5% | (13.4%–21.7%) |
| **No. physician visits** | | | | | | |
| ≥1 Physician visit during previous year | 16.6% | (15.0%–18.1%) | 23.2% | (21.7%–24.6%) | 30.0% | (28.1%–31.9%) |
| 0 Physician visits during previous year | 4.3% | ( 2.4%– 6.2%) | 8.9% | ( 6.8%–10.9%) | 14.4% | (10.8%–18.0%) |
| **Total** | **14.7%** | **(13.4%–16.0%)** | **21.2%** | **(19.9%–22.4%)** | **28.2%** | **(26.4%–29.9%)** |

*Confidence interval.
†Data for other racial/ethnic groups were too small for meaningful analysis.
§Poverty statistics are based on a definition originated by the Social Security Administration in 1964, subsequently modified by federal interagency committees in 1969 and 1980, and prescribed by the Office of Management and Budget as the standard to be used by federal agencies for statistical purposes.

Source: National Health Interview Survey, 1989–1993.

*P&I Vaccination Coverage — Continued*

from these surveys indicate that, during 1973–1993, vaccination coverage levels for influenza and pneumococcal vaccines increased among persons aged ≥65 years. These findings suggest a substantial impact on coverage levels as the result of efforts by public- and private-sector health providers and advocates; however, among some groups levels remain low and are substantially less than the national health objective for the year 2000, particularly for pneumococcal vaccination.

Increases in influenza vaccination levels may reflect 1) greater acceptance of preventive medical services by practitioners and 2) increased delivery and administration of vaccine by health-care providers and sources other than physicians (e.g., visiting-nurse and home-health agencies). In addition, the initiation of Medicare reimbursement for influenza vaccination in 1993 also may have contributed to increased rates (*6*).

Although pneumococcal vaccine is ≥57% effective against invasive pneumococcal disease (*7*), some physicians have expressed persistent uncertainty regarding the effectiveness of this vaccine against pneumococcal pneumonia (*8*). In addition, while campaigns for influenza vaccine occur annually before the influenza season, many providers and patients may not be routinely reminded about the need for pneumococcal vaccination among persons aged ≥65 years, underscoring the need to educate providers and patients about the benefits of pneumococcal vaccination and current recommendations.

The findings in this report are consistent with previous surveys that have documented lower vaccination coverage levels among blacks than whites (*9*). These variations may reflect differences in factors such as socioeconomic status, access to medical care, and prevalence of specific risks. However, preliminary analysis indicates that differences by race/ethnicity persisted when the data were adjusted for socioeconomic status.

Achievement of national health objectives for the year 2000 will require the continued collaboration of public and private organizations to improve awareness and vaccine delivery; changes in clinical practice; delivery mechanisms that limit cost and remove accessibility constraints; and surveillance data, such as those provided by NHIS, to assess the progress of current and future programs. The report of the National Vaccine Advisory Committee regarding adult vaccination (*10*) has described these strategies, which include improvements in education of health-care providers and the public; major changes in clinical practice; increased financial support by public and private health insurers; improvements in surveillance for vaccine-preventable diseases and vaccine production and delivery; development of new and improved vaccines; research on and improvements in vaccination practices; and collaboration on international programs for adult vaccination.

*References*

1. ACIP. Pneumococcal polysaccharide vaccine. MMWR 1989;38:64–8,73–6.
2. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1995;44(no. RR-3).
3. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives. Washington, DC: US Department of Health and Human Services, Public Health Service, 1991:122; DHHS publication no. (PHS)91-50213.
4. CDC. US immunization survey: 1977, 1978. Washington, DC: US Department of Health, Education, and Welfare, 1979:59–67; HEW publication no. (CDC)79-8221.

*P&I Vaccination Coverage — Continued*

5. Massey JT, Moore TF, Parsons VL, Tadros W. Design and estimation for the National Health Interview Survey, 1985–1994. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, 1989. (Vital and health statistics; series 2, no. 110).
6. CDC. Implementation of the Medicare influenza vaccination benefit. MMWR 1994;43:771–3.
7. Butler JC, Breiman RF, Campbell JF, Lipman HB, Broome CV, Facklam RR. Pneumococcal polysaccharide vaccine efficacy: an evaluation of current recommendations. JAMA 1993; 270:1826–31.
8. Hirschmann JV, Lipsky BA. The pneumococcal vaccine after 15 years of use. Arch Intern Med 1994;154:373–7.
9. CDC. Race-specific differences in influenza vaccination levels among Medicare beneficiaries—United States, 1993. MMWR 1995;44:24–7,33.
10. Fedson DS, National Vaccine Advisory Committee. Adult immunization: summary of the National Vaccine Advisory Committee report. JAMA 1994;272:1133–7.

## Adult Blood Lead Epidemiology and Surveillance — United States, 1994 and First Quarter 1995

CDC's National Institute for Occupational Safety and Health (NIOSH) Adult Blood Lead Epidemiology and Surveillance program (ABLES) monitors elevated blood lead levels (BLLs) among adults in the United States (*1*). Twenty-three states currently report surveillance results to ABLES. Maine is the 23rd state, and its data (beginning in 1994) are included for the first time in this report. This report presents ABLES data for the first quarter of 1995 compared with the first quarter of 1994 and annual data for 1994 compared with 1993.

**First Quarter Reports 1995.** During January–March 1995, the number of reports of elevated BLLs increased by 10% over those reported for the same period in 1994 (Table 1). The number of reports increased at the lowest reporting level (25–39 μg/dL), but decreased at all higher reporting levels (40–49 μg/dL, 50–59 μg/dL, and ≥60 μg/dL). The trend of increasing reports at the lower levels and decreasing reports at the higher levels is consistent with the 1994 fourth quarter report (*2*).

**Annual Reports 1994.** The reported number of adults with elevated BLLs increased from 11,240 in 1993 to 12,137 in 1994 (Table 2); this increase resulted, in part, from the addition of three reporting states in 1994. A total of 5619 new cases accounted for 46% of the cases reported in 1994, compared with 59% new cases in 1993 (Table 2). Compared with 1993, the proportion of new cases declined in the 25–39 μg/dL, 40–49 μg/dL, and 50–59 μg/dL categories and increased in the ≥60 μg/dL category. Even with additional states reporting, the number of new cases decreased 15% from 1993 through 1994 (Table 2). This decrease may be explained in part by the definition of a new case, which is an elevated BLL (≥25 μg/dL) in an adult reported in state surveillance data in the current year but which was not recorded in the immediately preceding year. By this definition, all persons reported represent new cases in the year a state begins surveillance.

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*Blood Lead Epidemiology — Continued*

**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,* first quarter, 1994–1995**

| Reported BLL (μg/dL) | First quarter, 1995 | | No. reports, first quarter, 1994† | % Change first quarter, 1994 to 1995 |
|---|---|---|---|---|
| | No. reports | No. persons§ | | |
| 25–39 | 4914 | 3635 | 4102 | +20% |
| 40–49 | 1197 | 878 | 1371 | –13% |
| 50–59 | 245 | 204 | 278 | –12% |
| ≥60 | 82 | 58 | 117 | –30% |
| **Total** | **6438** | **4775** | **5868** | **+10%** |

*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.

†Data for Maine are included. These data only recently became available for 1994 and were not included in previous reports.

§Individual reports for persons are categorized according to the highest reported BLL for the person during the given quarter. Pennsylvania provides the number of reports but not number of persons; the number 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 South Carolina were missing; first quarter 1994 data were used as an estimate.

**TABLE 2. Number of reports of elevated blood lead levels (BLLS) among adults, number of adults with elevated BLLS, and new cases of elevated BLLs — United States, 1993 and 1994**

| Reported BLL (μg/dL) | 1994 (23 states)* | | | | 1993 (20 states)† | | | |
|---|---|---|---|---|---|---|---|---|
| | No. reports | No. persons§ | New cases¶ | | No. reports | No. persons | New cases** | |
| | | | No. | (%) | | | No. | (%) |
| 25–39 | 19,420 | 8,651 | 4,254 | (49) | 18,529 | 8,041 | 4,693 | (58) |
| 40–49 | 5,821 | 2,562 | 887 | (35) | 5,398 | 2,293 | 1,288 | (56) |
| 50–59 | 1,132 | 644 | 269 | (42) | 1,311 | 627 | 419 | (67) |
| ≥60§ | 459 | 280 | 209 | (75) | 633 | 279 | 184 | (66) |
| **Total** | **26,832** | **12,137** | **5,619** | **(46)** | **25,871** | **11,240** | **6,584** | **(59)** |

*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. Data for Maine were not included in previous reports. Data for South Carolina were missing for fourth quarter 1994; fourth quarter 1993 data were used as an estimate.

†Same states as 1994 except Maine, North Carolina, and Oklahoma.

§Individual reports are categorized according to the highest reported BLL for the person during the given year. Pennsylvania provides the number of reports but not number of persons; the number 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 South Carolina were missing for the fourth quarter 1994; fourth quarter 1993 data were used as an estimate.

¶Illinois, Michigan, Pennsylvania and South Carolina did not report new cases for 1994. New cases for those four states are estimates based on the proportions from the other 19 states combined and the number of reports, persons, or unassigned new cases reported from these four states.

**New cases for 1993 were not reported from Michigan, New Hampshire, and Pennsylvania. No estimates are included in the 1993 data.

*Blood Lead Epidemiology — Continued*

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**Editorial Note:** Approximately 54% of the persons reported to ABLES in 1993 were reported again to the system in 1994. Reasons for these repeat reports include 1) recurring exposure resulting from inadequate control measures and worker-protection practices; 2) routine tracking of elevated employee BLLs that remain below levels requiring medical removal; and 3) increased employer monitoring during medical removal. Increased testing of workers in construction trades—as new workplace medical monitoring programs are established to comply with new OSHA regulations (*3*)—also has contributed to the increases.

Reporting of adults with elevated BLLs reflects monitoring practices by employers. Variation in national quarterly reporting totals, especially first quarter 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, and 3) interstate differences in worker BLL testing by lead-using industries.

The data in this report underscore that work-related lead exposures are an ongoing occupational health problem in the United States. ABLES can further enhance 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. The Council of State and Territorial Epidemiologists, at its annual meeting in May 1995, designated elevated BLLs among adults as a condition reportable to the National Public Health Surveillance System (formerly the National Notifiable Diseases Surveillance System) (*4*).

*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, fourth quarter, 1994. MMWR 1995;44:286–7.
3. Office of the Federal Register. Code of federal regulations: occupational safety and health standards. Subpart Z: toxic and hazardous substances—lead. Washington, DC: National Archives and Records Administration, Office of the Federal Register, 1993 (29 CFR § 1926, Part II).
4. CDC. Summary of notifiable diseases, United States, 1993. MMWR 1993;42(53):iii–v.

## Erratum: Vol. 44, No. 17

In the article, "Prevalence and Impact of Arthritis Among Women—United States, 1989–1991," a programming error led to incorrect estimates for nonarthritis conditions listed in Table 2. The corrected table follows.

The error does not change statements in the text on the relative ranking of arthritis compared with other chronic conditions but does change the following: 1) under the

*Erratum — Continued*

subheading "Comparison With Other Chronic Conditions Affecting Women" on page 332, the first sentence of the second paragraph should read "Arthritis was the most common self-reported chronic condition affecting women (Table 2), ranking ahead of self-reported hypertension (15.7 million), ischemic heart disease (2.4 million), and other chronic conditions ..."; and 2) the second sentence of the same paragraph should read "Among the conditions reported responsible for activity limitations, women most frequently mentioned arthritis (4.6 million), followed by orthopedic deformity (3.7 million) and hypertension (1.9 million)."

**TABLE 2. Estimated average annual prevalence of self-reported chronic conditions and activity limitations among women aged ≥15 years, by condition — National Health Interview Survey (NHIS), United States, 1989–1991**

| Condition | Overall no.* | No. with activity limitation* |
|---|---|---|
| Arthritis | 22,755 | 4,597 |
| Chronic sinusitis | 17,511 | 80 |
| Hypertension | 15,720 | 1,875 |
| Orthopedic deformity | 14,536 | 3,689 |
| "Hay fever," rhinitis | 10,700 | 127 |
| Hearing impairment | 9,199 | 479 |
| Ischemic heart disease | 2,421 | 874 |
| Other selected conditions† | 11,825 | 2,356 |

*In thousands. To generate national estimates, NHIS rates were applied to the U.S. civilian, noninstitutionalized population.

†Diabetes, thyroid disorder, bladder disorder, cerebrovascular disease, breast neoplasm, and female reproductive malignancy.

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