MMWR™

Morbidity and Mortality Weekly Report

Weekly November 21, 2003 / Vol. 52 / No. 46

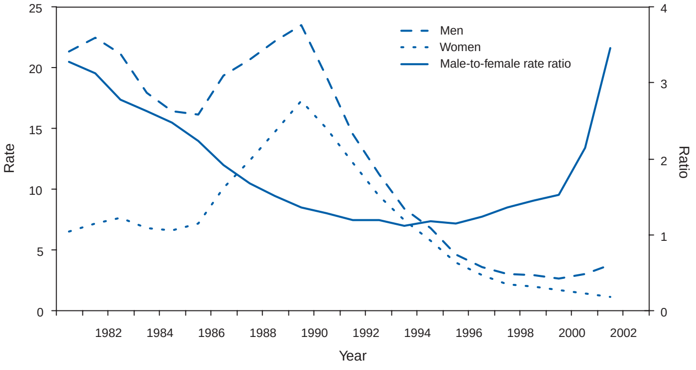
Primary and Secondary Syphilis — United States, 2002

After declining every year during 1990–2000, the rate of primary and secondary (P&S) syphilis in the United States increased in 2001. To characterize the epidemiology of syphilis in the United States, CDC analyzed national surveillance data for 2002*. This report summarizes the results of that analysis, which indicate that the number of reported cases of P&S syphilis increased 12.4% in 2002. As in 2001, this increase occurred only among men, suggesting that this increase occurred particularly among men who have sex with men (MSM). For the 12th consecutive year, the number of P&S syphilis cases declined among women (Figure) and non-Hispanic blacks. These data suggest that although efforts to reduce syphilis among these populations have been effective, additional intervention strategies are needed to prevent syphilis among MSM.

CDC analyzed surveillance data for syphilis cases reported weekly to health departments nationwide in 2002. Data included each patient's county of residence, sex, stage of disease, race/ethnicity, and age. Data on reported cases of P&S syphilis were analyzed because these cases represented incidence (i.e., newly acquired infections within the study period) better than cases of latent infection, which were acquired months or years before diagnosis. P&S syphilis rates were calculated by using population denominators from the U.S. Bureau of the Census (*1*).

During 2001–2002, the rate of P&S syphilis increased 9.1% (from 2.2 cases per 100,000 population in 2001 to 2.4 cases in 2002). In 2002, a total of 6,862 cases of P&S syphilis were reported, an increase of 12.4% over the 6,103 cases reported in 2001, and the rate of P&S syphilis was 3.5 times higher among men than among women (3.8 versus 1.1 cases per 100,000 population) (Table 1). During 2001–2002, the overall male-to-female P&S syphilis rate ratio increased 66.7% (from 2.1 to 3.5) (Figure); the male-to-female rate ratio increased among non-Hispanic whites (from 6.0 to 11.0), non-Hispanic blacks (from 1.6 to 2.1), and Hispanics (from 3.7 to 5.0); the rate ratio declined slightly among Asians/Pacific Islanders (from 10.0 to 8.0) and remained unchanged among American Indians/Alaska Natives (AI/ANs) (1.2). The male-to-female rate ratio increased in 27 states and the District of Columbia.

FIGURE. Reported rates* of primary and secondary syphilis, by year and sex, and male-to-female rate ratios — United States, 1981–2002



* Per 100,000 population.

INSIDE

---

* Data for 2002 are summarized for the reporting year December 30, 2001–December 28, 2002.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION

The *MMWR* series of publications is published by the Epidemiology Program Office, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, GA 30333.

SUGGESTED CITATION
Centers for Disease Control and Prevention. [Article Title]. MMWR 2003;52:[inclusive page numbers].

During 2001–2002, the rate of P&S syphilis decreased 10.9% among non-Hispanic blacks (2.2% among men and 22.6% among women) and 42.9% among AI/ANs (44.7% among men and 42.1% among women) (Table 1). Rates increased 71.4% among non-Hispanic white men (83.3%) and 28.6% among Hispanic men (36.4%); rates were unchanged among women of both populations. The rate increased 80.0% among Asians/Pacific Islanders (60.0% among men and 100% among women). In 2002, the rate of P&S syphilis among non-Hispanic blacks was 8.2 times higher than among non-Hispanic whites, compared with 15.7 times higher in 2001.

By region[†], the South had the highest rate of P&S syphilis (3.1 cases per 100,000 population) in 2002. However, the rate of P&S syphilis in the South declined 8.8% during 2001–2002 (Table 1). The P&S syphilis rate increased 64.3% in the West, 54.5% in the Northeast, and 16.7% in the Midwest. In 2002, P&S syphilis cases from the South accounted for less than half (45.8%) of total syphilis cases, compared with 56.2% in 2001. During 2001–2002, male-to-female rate ratios increased in all regions; the rate ratio increased 56.0% in the Northeast (from 5.0 to 7.8), 40.0% in the West (from 6.0 to 8.4), 35.3% in the South (from 1.7 to 2.3), and 33.3% in the Midwest (from 2.1 to 2.8).

During 2001–2002, the overall rate of P&S syphilis for 63 selected U.S. cities with population of >200,000 increased 20.8% (from 4.8 to 5.8 cases per 100,000 population); the overall male-to-female P&S syphilis rate ratio in these cities increased 57.7% (from 2.6 to 4.1). In 2002, several large cities had high male-to-female rate ratios; among the 19 cities reporting >50 P&S syphilis cases, the median rate ratio was 4.4 (range: 0.8–78.8) (Table 2).

In 2002, among 3,139 counties in the United States, 2,534 (80.7%) reported no cases of P&S syphilis; approximately half of the reported cases occurred in 16 counties and one city, compared with 20 counties and one city in 2001. In 2002, the 63 large cities accounted for 62.7% of P&S syphilis cases, compared with 57.8% in 2001.

Reported by: *State and local health depts. JD Heffelfinger, MD, HS Weinstock, MD, SM Berman, MD, EB Swint, MS, Div of Sexually Transmitted Disease Prevention, National Center for HIV, STD, and TB Prevention; E Samoff, PhD, EIS Officer, CDC.*

[†] *Northeast*=Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; *Midwest*=Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; *South*=Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; *West*=Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

TABLE 1. Number and rate* of cases of primary and secondary syphilis, by race/ethnicity, region, and sex — United States, 2001–2002

	2001						2002					
	Men		Women		Total		Men		Women		Total	
	No.	(Rate)	No.	(Rate)	No.	(Rate)	No.	(Rate)	No.	(Rate)	No.	(Rate)
Race/Ethnicity[†]												
White, non-Hispanic	1,138	(1.2)	249	(0.2)	**1,387**	**(0.7)**	2,108	(2.2)	217	(0.2)	**2,325**	**(1.2)**
Black, non-Hispanic	2,286	(13.8)	1,527	(8.4)	**3,813**	**(11.0)**	2,226	(13.5)	1,195	(6.5)	**3,421**	**(9.8)**
Hispanic	607	(3.3)	146	(0.9)	**754**	**(2.1)**	823	(4.5)	147	(0.9)	**971**	**(2.7)**
Asian/Pacific Islander	51	(1.0)	4	(0.1)	**55**	**(0.5)**	83	(1.6)	11	(0.2)	**94**	**(0.9)**
American Indian/Alaska Native	49	(4.7)	41	(3.8)	**90**	**(4.2)**	27	(2.6)	24	(2.2)	**51**	**(2.4)**
Region[§]												
Northeast	512	(2.0)	101	(0.4)	**613**	**(1.1)**	791	(3.1)	113	(0.4)	**904**	**(1.7)**
Midwest	785	(2.5)	406	(1.2)	**1,191**	**(1.8)**	993	(3.1)	350	(1.1)	**1,343**	**(2.1)**
South	2,085	(4.3)	1,344	(2.6)	**3,429**	**(3.4)**	2,151	(4.4)	988	(1.9)	**3,140**	**(3.1)**
West	752	(2.4)	116	(0.4)	**870**	**(1.4)**	1,332	(4.2)	143	(0.5)	**1,475**	**(2.3)**
Total	**4,134**	**(3.0)**	**1,967**	**(1.4)**	**6,103**	**(2.2)**	**5,267**	**(3.8)**	**1,594**	**(1.1)**	**6,862**	**(2.4)**

[*] Per 100,000 population.
[†] Race/ethnicity data for some records are missing.
[§] *Northeast*=Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; *Midwest*=Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; *South*=Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; *West*=Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

TABLE 2. Number and rate* of primary and secondary (P&S) syphilis cases and male-to-female rate ratios in the 19 cities[†] reporting >50 cases — United States, 2002

City	No. P&S syphilis cases	Rate		Male-to-female rate ratio
		Men	Women	
San Francisco, California	315	78.8	1.0	78.8
New York City, New York	435	11.0	0.4	27.5
Los Angeles, California	359	7.7	0.4	19.2
Columbus, Ohio	96	16.6	1.8	9.2
Chicago, Illinois	353	20.7	2.7	7.7
Miami, Florida	231	18.2	2.8	6.5
Houston, Texas	112	5.7	0.9	6.3
District of Columbia	58	18.2	3.0	6.1
Oklahoma City, Oklahoma	52	20.4	4.6	4.4
Philadelphia, Pennsylvania	67	7.5	1.7	4.4
Atlanta, Georgia	257	49.5	13.8	3.6
Baltimore, Maryland	121	29.0	9.5	3.1
Newark, New Jersey	63	25.9	16.5	1.6
Phoenix, Arizona	155	6.2	3.8	1.6
Dallas, Texas	191	10.4	6.8	1.5
Detroit, Michigan	384	48.2	33.4	1.4
Fort Worth, Texas	106	8.5	6.2	1.4
Louisville, Kentucky	77	11.5	10.8	1.1
Memphis, Tennessee	89	8.9	10.9	0.8

[*] Per 100,000 population.
[†] County-level data are presented for Houston (Harris County), Dallas (Dallas County), and Fort Worth (Tarrant County).

Editorial Note: Although efforts to reduce syphilis among women and non-Hispanic blacks have been effective, the rate of P&S syphilis among men continued to increase in 2002. Increases among men occurred in all regions of the United States and among all racial/ethnic populations except non-Hispanic blacks and AI/ANs. On the basis of male-to-female rate ratios and locally collected risk data, much of the increase in syphilis among men can be attributed to cases occurring among MSM. Increased risk-taking in this population has been documented (*2,3*), and syphilis outbreaks among MSM in large cities have been reported (*4–7*). A high rate of human immunodeficiency virus (HIV) co-infection has been reported among MSM involved in these outbreaks (*4,5,7*), raising concern about HIV transmission. Although the sex of infected persons' sex partners is recorded by certain local health departments, these data are not reported nationally. If the entire increase in the male-to-female rate ratio since 2000 (Figure) is attributed to an increase in cases among MSM, >40% of P&S cases reported in 2002 occurred among MSM.

The declining rate of P&S syphilis among non-Hispanic blacks and the increasing rate of infection among non-Hispanic whites has decreased the disparity in rates of infection between the two populations. The decline among non-Hispanic blacks has occurred predominantly among women; the increase among non-Hispanic whites has occurred exclusively among men.

Although the South continues to have the highest rate of P&S syphilis, the rate of disease has declined in this region every year since 1990; in 2002, for the first time since 1984, this region accounted for <50% of reported cases. However, P&S syphilis rates have increased in the West, Northeast, and Midwest. In 2002, the increased rate of P&S syphilis in large cities reflected an urban concentration of disease.

Efforts are under way to address the increasing rate of P&S syphilis among MSM. To improve national surveillance, CDC is conducting a pilot program to evaluate the national collection of information on behaviors and risk factors for persons infected with syphilis. In 2002, in collaboration with local health departments, CDC conducted an assessment of sex behaviors and sexually transmitted disease occurrence in eight U.S. cities that have reported increases in syphilis cases among MSM. CDC has provided additional funding to support interventions in these cities. In addition, because a substantial number of MSM with syphilis report meeting anonymous partners in venues such as bathhouses and Internet chat rooms (*4,5,7*), CDC is developing and evaluating new strategies for locating and treating sex partners (e.g., using e-mail addresses of contacts) to ensure that they receive adequate treatment.

The findings in this report are subject to at least three limitations. First, the quality of surveillance data varies at local and state levels. Second, national syphilis reporting is incomplete. For example, case finding for syphilis depends on persons having known sex partners and being willing to identify their partners to health department personnel; in the current epidemic, the anonymity of sex partners might have decreased the number of cases detected by contact tracing (*8*). Finally, rates of disease among Asians/Pacific Islanders and AI/ANs should be interpreted with caution because of the limited number of cases of P&S syphilis reported among these populations.

In 1999, CDC launched the National Syphilis Elimination Plan (*9*). Initial efforts focused on syphilis in the South and among minority populations and contributed to the decrease in syphilis in the South and among non-Hispanic blacks and women. To eliminate syphilis, prevention efforts must be continued among these populations and modified and expanded to prevent and control syphilis in other populations. The increase in syphilis among MSM raises challenges for the control and eventual elimination of syphilis. CDC is working with state and local public health organizations to develop and evaluate effective intervention strategies directed toward MSM, including education, risk reduction, appropriate screening and treatment, and community mobilization.

References

1. CDC. Sexually Transmitted Disease Surveillance, 2002. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC (in press).
2. Katz MH, Schwarcz SK, Kellogg TA, et al. Impact of highly active antiretroviral treatment on HIV seroincidence among men who have sex with men: San Francisco. Am J Public Health 2002;92:388–94.
3. Rietmeijer CA, Patnaik JL, Judson FN, Douglas JM. Increases in gonorrhea and sexual risk behaviors among men who have sex with men: A 12-year trend analysis at the Denver Metro Health Clinic. Sex Transm Dis 2003;30:562–7.
4. CDC. Resurgent bacterial sexually transmitted disease among men who have sex with men—King County, Washington, 1997–1999. MMWR 1999;48:773–7.
5. CDC. Outbreak of syphilis among men who have sex with men—Southern California, 2000. MMWR 2001;50:117–20.
6. Bronzan R, Echavarria L, Hermida J, Trepka M, Burns T, Fox K. Syphilis among men who have sex with men (MSM) in Miami-Dade County, Florida [Abstract]. In: Program and Abstracts of the 2002 National STD Prevention Conference, San Diego, California, March 4–7, 2002.
7. CDC. Primary and secondary syphilis among men who have sex with men—New York City, 2001. MMWR 2002;51:853–6.
8. Gorbach PM, Aral SO, Celum C, et al. To notify or not to notify: STD patients' perspectives of partner notification in Seattle. Sex Transm Dis 2000;27:193–200.
9. CDC. The National Plan to Eliminate Syphilis from the United States. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC, National Center for HIV, STD, and TB Prevention, 1999. Available at http://www.cdc.gov/stopsyphilis/plan.pdf.

Public Health and Aging

Health-Related Quality of Life Among Low-Income Persons Aged 45–64 Years — United States, 1995–2001

Health-related quality of life (HRQOL) data are used to track population trends, identify health disparities, and monitor progress in achieving national health objectives for 2010 (*1*). Low-income (i.e., annual household income of <$15,000) adults aged ≥55 years have substantially more unhealthy days than low-income adults aged ≥65 years and adults aged 55–64 years with higher incomes (*2*). To verify this finding and determine whether it extends to low-income adults at younger ages, CDC analyzed HRQOL and related factors among a subset of respondents to the 1995–2001 Behavioral Risk Factor Surveillance System (BRFSS) surveys. This report summarizes the results of that analysis, which found that low-income adults aged 45–64 years have worse HRQOL than all other adults. Unemployment, inability to work, and activity limitation partially explain these HRQOL disparities in this age-income group. Targeting these risk factors and improving access to health care and social services (e.g., job training programs) could help increase the quality and years of healthy life and eliminate health disparities for persons in this age group.

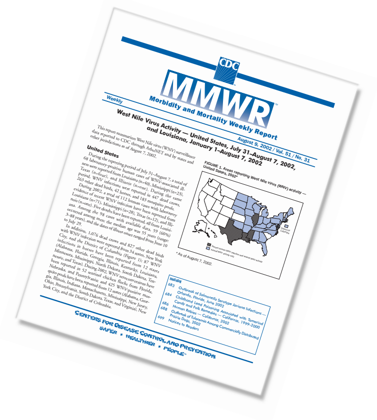
BRFSS is an ongoing, state-based, random-digit–dialed telephone survey of the U.S. noninstitutionalized civilian population aged ≥18 years (*3*). This subset included 248,783 respondents (52% female) from the District of Columbia and the 31 states* that used standard BRFSS HRQOL questions and an expanded BRFSS HRQOL module for ≥1 year during 1995–2001. These HRQOL measures have demonstrated reliability and validity for population health surveillance (*4,5*). The measures include physically unhealthy days (i.e., number of days during the 30 days preceding the survey when physical health was not good because of physical illness or injury)

---

* Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Delaware, Georgia, Indiana, Iowa, Kansas, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, and Virginia.

a•ware: *adj*

(ə-'wâr) 1 : marked by comprehension, cognizance, and perception; see also *MMWR*.



CDC

MMWR™

Weekly

Morbidity and Mortality Weekly Report

August 9, 2002 / Vol. 51 / No. 31

West Nile Virus Activity — United States, July 31–August 7, 2002, and Louisiana, January 1–August 7, 2002

This report summarizes West Nile virus (WNV) surveillance data reported to CDC through ArboNET and by states and other jurisdictions as of August 7, 2002.

United States

During the reporting period of July 31–August 7, a total of 68 laboratory-positive human cases of WNV-associated illness were reported from Louisiana (n=40), Mississippi (n=23), Texas (n=four), and Illinois (n=one). During the same period, WNV infections were reported in 447 dead crows, 263 other dead birds, 42 horses, and 183 mosquito pools.

During 2002, a total of 112 human cases with laboratory evidence of recent WNV infection have been reported from Louisiana (n=71), Mississippi (n=28), Texas (n=12), and Illinois (n=one). Five deaths have been reported, all from Louisiana. Among the 98 cases with available data, 59 (60%) occurred among men; the median age was 55 years (range: 3–88 years), and the dates of illness onset ranged from June 10 to July 29.

In addition, 1,076 dead crows and 827 other dead birds with WNV infection were reported from 34 states, New York City, and the District of Columbia (Figure 1); 87 WNV infections in horses have been reported from 12 states (Alabama, Florida, Georgia, Illinois, Kentucky, Louisiana, Minnesota, Mississippi, North Dakota, South Dakota, Tennessee, and Texas). During 2002, WNV seroconversions have been reported in 52 sentinel chicken flocks from Florida, Nebraska, and Pennsylvania; and 425 WNV-positive mosquito pools have been reported from 12 states (Alabama, Georgia, Illinois, Indiana, Massachusetts, Mississippi, New Jersey, Ohio, Pennsylvania, South Dakota, Texas, and Virginia), New York City, and the District of Columbia.

FIGURE 1. Areas reporting West Nile virus (WNV) activity — United States, 2002*

* As of August 7, 2002.

INSIDE

683 Outbreak of Salmonella Serotype Javiana Infections — Orlando, Florida, June 2002

684 Childhood Lead Poisoning Associated with Tamarind Candy and Folk Remedies — California, 1999–2000

686 Human Rabies — California, 2002

688 Outbreak of Tularemia Among Commercially Distributed Prairie Dogs, 2002

699 Notices to Readers

CENTERS FOR DISEASE CONTROL AND PREVENTION

SAFER • HEALTHIER • PEOPLE™

know what matters.

MMWR™

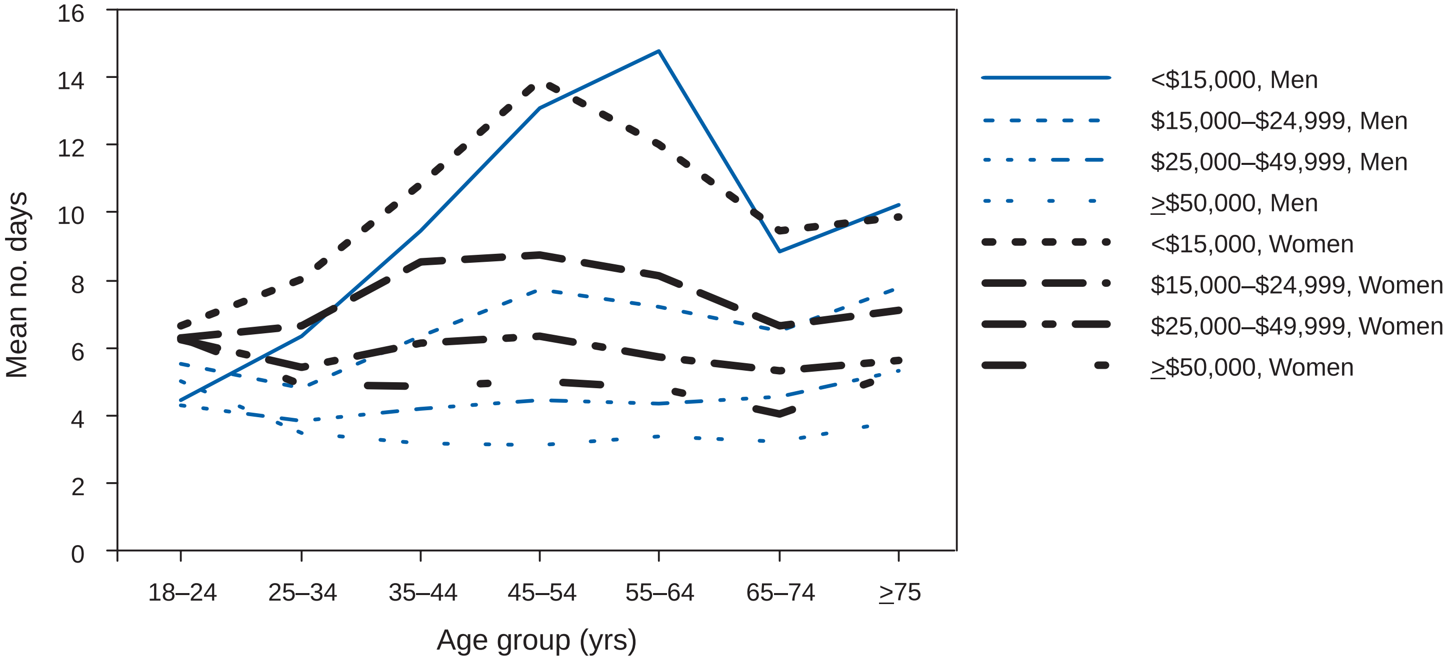
Weekly

and mentally unhealthy days (i.e., number of days during the 30 days preceding the survey when mental health was not good because of stress, depression, or emotional problems). Unhealthy days represent the estimated overall number of days during the preceding 30 days when respondents believed their physical or mental health was not good, up to a maximum of 30 days. Data were weighted to estimate the population parameters. Unadjusted and adjusted means, proportions, linear regression coefficients, and standard errors were calculated by using SUDAAN to account for the complex BRFSS survey design. The <$15,000 annual household income group was selected to include the majority of adults at the poverty level and to permit adequate sample size for subset analysis.

During 1995–2001, women in this population reported a mean of 6.4 unhealthy days, compared with 4.7 unhealthy days for men. In the higher income groups (i.e., annual household income of ≥$15,000) (Figure), women consistently reported more unhealthy days than men. However, this difference was not observed among adults aged 45–64 years in the lowest income group (Table). Persons aged 45–64 years with low income reported 7.1 more physically unhealthy days, 4.2 more mentally unhealthy days, and 8.2 more overall unhealthy days than those in the same age group with higher income. Among persons with the lowest incomes, men aged 55–64 years had the highest mean number of unhealthy days (14.8), followed by women aged 45–54 years (13.9). Men and women aged ≥25 years consistently reported more unhealthy days at progressively lower income levels within each age group; differences in unhealthy days within sex-income groups were largest for men aged 55–64 years (11.4 days). Most sex-income groups reported only modest variation with age (Figure), but the lowest income group showed an anomalous pattern of unhealthy days with older age, rising to substantially higher levels for persons aged 45–54 years and those aged 55–64 years and declining sharply at ages 65–74 years. Among persons with annual household income of <$15,000, adults aged 45–54 years had the highest mean number of mentally unhealthy days (8.3), whereas similarly aged adults with annual household income of ≥$15,000 had a mean of 2.9 mentally unhealthy days.

To determine which demographic and personal characteristics among persons aged 45–64 years with annual household income of <$15,000 were associated with unhealthy days most strongly, multiple linear regression was used to predict unhealthy days with these characteristics as independent variables. Employment status and activity limitation accounted for the most variability in unhealthy days (34.8% among men and 32.1% among women). Including race/ethnicity, education, health-care coverage, and marital status in an expanded linear regression model accounted for only slightly more

FIGURE. Mean number of unhealthy days among adults, by age group, sex, and annual household income — Behavioral Risk Factor Surveillance System, 31 states* and the District of Columbia, 1995–2001



* Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Delaware, Georgia, Indiana, Iowa, Kansas, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, and Virginia.

TABLE. Number of unhealthy days reported by low-income[*] adults and percentage reporting current activity limitation and negative employment status, by age group and sex — Behavioral Risk Factor Surveillance System, 31 states[†] and the District of Columbia, 1995–2001[§]

Sex/Age group (yrs)	No. unhealthy days (overall)[¶] Mean	(±SE[¶¶] x 1.96)[***]	No. physically unhealthy days[**] Mean	(±SE x 1.96)	No. mentally unhealthy days[††] Mean	(±SE x 1.96)	% reporting current activity limitation[§§] %	(±SE x 1.96)	% reporting negative employment status: Unemployed %	(±SE x 1.96)	% reporting negative employment status: Unable to work %	(±SE x 1.96)
Men												
18–24	4.5	(±0.6)	1.4	(±0.3)	3.2	(±0.5)	8.0	(±2.6)	8.3	(±2.5)	1.8	(±1.0)
25–34	6.4	(±1.1)	3.3	(±0.8)	4.4	(±0.9)	14.7	(±3.3)	13.6	(±3.2)	9.1	(±2.8)
35–44	9.5	(±1.2)	5.9	(±0.9)	6.1	(±1.0)	30.6	(±4.4)	20.5	(±4.3)	22.2	(±3.8)
45–54	13.1	(±1.5)	10.0	(±1.4)	7.5	(±1.2)	50.8	(±5.4)	15.1	(±3.3)	39.0	(±5.2)
55–64	14.8	(±1.5)	12.7	(±1.4)	5.6	(±0.9)	52.6	(±5.3)	9.9	(±3.0)	38.7	(±5.0)
65–74	8.8	(±1.2)	7.9	(±1.1)	2.6	(±0.7)	35.9	(±4.6)	1.1	(±0.6)	11.2	(±3.2)
≥75	10.2	(±1.4)	9.1	(±1.3)	3.0	(±0.7)	37.1	(±5.0)	0.1	(±0.1)	2.0	(±1.1)
Women												
18–24	6.6	(±0.6)	2.2	(±0.3)	4.8	(±0.5)	6.5	(±1.5)	8.1	(±1.7)	2.4	(±1.0)
25–34	8.0	(±0.7)	3.7	(±0.6)	5.6	(±0.6)	15.4	(±2.3)	17.1	(±2.8)	7.5	(±1.7)
35–44	10.8	(±0.8)	6.2	(±0.7)	7.0	(±0.7)	27.0	(±2.7)	15.9	(±2.3)	14.8	(±2.1)
45–54	13.9	(±1.1)	9.5	(±1.0)	8.8	(±0.9)	46.0	(±3.9)	14.9	(±2.6)	31.5	(±3.6)
55–64	12.0	(±1.1)	9.6	(±1.0)	5.7	(±0.7)	47.8	(±3.9)	6.5	(±1.5)	32.1	(±3.5)
65–74	9.5	(±0.7)	7.8	(±0.6)	3.4	(±0.4)	32.1	(±2.5)	1.3	(±0.5)	9.4	(±1.5)
≥75	9.9	(±0.7)	8.8	(±0.7)	2.9	(±0.4)	39.8	(±2.7)	0.9	(±0.7)	5.9	(±1.7)

[*] Annual household income <$15,000.

[†] Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Delaware, Georgia, Indiana, Iowa, Kansas, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, and Virginia.

[§] Calculations based on weighted self-reported data.

[¶] Estimate of the overall number of days during the preceding 30 days when the respondent felt that physical or mental health was not good, up to a maximum of 30 days per respondent.

[**] Number of days during the preceding 30 days when physical health, including physical illness or injury, was not good.

[††] Number of days during the preceding 30 days when mental health, including stress, depression, or emotional problems, was not good.

[§§] Current activity limitation attributed to any impairment or health problem.

[¶¶] Standard error.

[***] Means, proportions, and standard error were calculated by using SUDAAN to account for complex BRFSS survey design.

variability in unhealthy days (36.3% among men and 33.4% among women). Nearly half (48.8%) of respondents aged 45–54 or 55–64 years with the lowest income reported a current activity limitation, and nearly one third (34.6%) reported being unable to work (Table).

Reported by: *HS Zahran, MD, Association of Teachers of Preventive Medicine, Atlanta, Georgia. DG Moriarty, MM Zack, MD, R Kobau, MPH, Div of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.*

Editorial Note: Persons aged 45–64 with annual household income of <$15,000 have substantially worse HRQOL. This finding confirms previous findings that adults in their preretirement years (aged 55–64 years) with the least education and lowest income report more unhealthy days than older adults with similar education and income (*2*). Employment status and activity limitation accounted for nearly one third of the variability in mean unhealthy days reported by adults aged 45–64 years with annual household income of <$15,000. These findings also are consistent with several other studies relating socioeconomic status (SES) and employment status to health (*6–9*). SES shapes exposure to many psychosocial, environmental, behavioral, and biomedical risk factors that directly and indirectly affect mental and physical health (*9*). Low-income adults aged 45–64 years in whom chronic health conditions and activity limitations develop at earlier ages might benefit from health and social services (*2*).

Both men and women with low incomes report substantial numbers of unhealthy days, unlike other income groups, in which women typically report worse health than men. Persons with lower SES are known to report lower perceived control over life events, including health-related behaviors (*10*). Perception of less control might underlie adverse coping mechanisms and risky behaviors related to higher reported numbers of unhealthy days for both men and women in this income group. This study also found that adults aged 45–54 years with annual household income of <$15,000 had the highest mean number of mentally unhealthy days. The high levels of unemployment, inability to work, and activity limitation among adults in this age-income group could affect mental health adversely (*6,7*).

The findings in this report are subject to at least five limitations. First, because BRFSS surveys only noninstitutionalized adults by telephone, persons in institutions and households without telephones, both of whom might have worse HRQOL than others, are excluded (*3*). Second, whether poor HRQOL precedes being unemployed or being unable to work, or whether being unemployed or unable to work precedes poor HRQOL could not be determined. Third, demographic, socioeconomic, and activity limitation variables explained only approximately one third of the variability in unhealthy days in the lowest income group of persons aged 45–64 years. Other factors (e.g., behaviors, physical and social environment, psychosocial factors, health conditions, and unmeasured socioeconomic factors) could account for much of the remaining variability. Fourth, because not all states interviewed respondents with the optional BRFSS HRQOL module intermittently during the study period, these findings might not be generalizable to other states or to other periods. Finally, because 16% of BRFSS respondents either did not know or refused to report their annual household incomes, these findings might not be generalizable to all groups.

Low-income adults aged 45–64 years report more physically and mentally unhealthy days than younger and older low-income adults and higher income adults of the same ages. Unemployment, inability to work, and activity limitation accounted for some of these differences. Targeting these risk factors and improving access to health care (e.g., Medicaid and rehabilitation programs) and social services (e.g., job training programs) could help increase the quality and years of healthy life and eliminate health disparities for persons in this age group.

Acknowledgments

This report is based on data contributed by state BRFSS coordinators. The project was supported under a cooperative agreement from CDC through the Association of Teachers of Preventive Medicine.

References

1. CDC. Measuring healthy days: population assessment of health-related quality of life. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC, 2000.
2. CDC. Surveillance for sensory impairment, activity limitation, and health-related quality of life among older adults. In: CDC Surveillance Summaries (December 17). MMWR 1999;48(No.SS-8).
3. CDC. Behavioral Risk Factor Surveillance System. Available at http://www.cdc.gov/brfss.
4. Andresen EM, Catlin TK, Wyrwich KW, Jackson-Thompson J. Retest reliability of surveillance questions on health related quality of life. J Epidemiol Community Health 2003;57:339–43.
5. Moriarty DG, Zack MM, Kobau R. The Centers for Disease Control and Prevention's Healthy Days Measures—population tracking of perceived physical and mental health over time. Health and Quality of Life Outcomes 2003;1:37.
6. Duncan GJ, Daly MC, McDonough P, Williams DR. Optimal indicators of socioeconomic status for health research. Am J Public Health 2002;92:1151–7.
7. Bartley M. Unemployment and ill health: understanding the relationship. J Epidemiol Community Health 1994;48:333–7.
8. Breslin FC, Mustard C. Factors influencing the impact of unemployment on mental health among young and older adults in a longitudinal, population-based survey. Scand J Work Environ Health 2003;29:5–14.
9. Adler NE, Newman K. Socioeconomic disparities in health: pathways and policies. Inequality in education, income, and occupation exacerbates the gaps between the health "haves" and "have-nots." Health Affairs 2002;21:60–76.
10. Bailis DS, Segall A, Mahon MJ, Chipperfield JG, Dunn EM. Perceived control in relation to socioeconomic and behavioral resources for health. Soc Sci & Med 2001;52:1661–76.

Direct and Indirect Costs of Arthritis and Other Rheumatic Conditions — United States, 1997

Arthritis and other rheumatic conditions (AORC) are the leading cause of disability in the United States (*1*). The impact of AORC has been measured in terms of disability (*1*), ambulatory care (*2*), and hospitalization (*3*). To estimate the direct and indirect costs of AORC in the United States, CDC analyzed data from the 1997 Medical Expenditure Panel Survey (MEPS) (*4*). This report summarizes the results of that analysis, which found that, in 1997, the total cost of AORC in the United States was $116.3 billion (i.e., $51.1 billion in direct costs plus $65.2 billion in indirect costs), approximately 1.4% of the U.S. gross domestic product. Total costs attributable to AORC, by state, ranged from $163 million in Wyoming to $11.3 billion in California. These results underscore the need, as the U.S. population ages and treatments grow more costly, for state and local public health officials to implement additional self-management programs to help reduce the cost of AORC and help patients improve the quality of their lives.

MEPS is an annual, nationally representative, longitudinal survey of the U.S. civilian, noninstitutionalized population that collects individual-level information about medical conditions, medical expenditures, employment, and earnings during an entire year. Each MEPS panel is a sample population from the previous year's National Health Interview Survey (NHIS) respondents. AORC cases from MEPS were defined by using the three-digit codes from the *International Classification of Disease, Ninth Revision, Clinical Modification* (ICD-9-CM)* selected by the National Arthritis Data Workgroup (*5*). This analysis used data from respondents (response rate: 66.4%) to the MEPS household and medical provider components. The 1997 MEPS did not include the nursing home component, excluding those costs from the

---

* ICD-9-CM codes 274, 354, 390, 391, 443, 446, 710–716, 719–721, and 725–729.

analysis. A total of 22,435 respondents aged ≥18 years with complete data for all covariates were sampled; 4,449 had conditions consistent with the case definition.

Individual-level direct costs (i.e., medical-care expenditures) were estimated by using a series of two- and four-stage econometric regression models (*6*), adjusting for six sociodemographic factors (i.e., age, sex, race, Hispanic ethnicity, marital status, and education level), eight of the most costly comorbidities (i.e., hypertension, other forms of heart disease, pulmonary conditions, stroke, other neurologic conditions, diabetes, cancer, and mental illness), and health-insurance status. The incremental cost attributable to AORC for each person was calculated as the difference between observed costs and corresponding expected values, which was determined by applying parameter estimates from persons without AORC to estimates from persons with AORC. Total costs attributable to AORC were calculated by multiplying the mean incremental cost of AORC by the number of persons with AORC as estimated by MEPS. Direct-cost estimates were generated for the overall total and the following treatment categories: 1) outpatient, 2) inpatient, 3) prescription drugs, and 4) residual (i.e., home health care, vision aids, dental visits, and medical devices). Statistical analyses were conducted in SAS and SUDAAN, which was used to adjust standard error estimates for the MEPS clustered sampling design (*4*).

The attributable fraction (AF) for direct costs was estimated by dividing the sum of AORC-attributable medical costs for all AORC patients by the sum of medical costs for all persons in the sample for overall total and the four treatment categories. Indirect costs (i.e., lost earnings attributable to AORC) were estimated by using a series of two- and four-stage regression models (*6*) with adjustments for the same sociodemographic, comorbidity, and health-insurance variables used for the direct cost estimates. Direct cost analyses modeled probability and magnitude of health-care expenditures; indirect cost analyses modeled probability of employment and magnitude of lost earnings. Indirect cost estimates were generated for respondents aged 18–64 years. Direct and indirect costs for arthritis for each state were determined by applying the state's proportion of national doctor-diagnosed arthritis from the 2001 Behavioral Risk Factor Surveillance System (BRFSS) survey (response rate: 51.1%) to national cost estimates derived from the 1997 MEPS.

In 1997, a total of 38.4 million (14.2%) U.S. residents aged ≥18 years had conditions consistent with the AORC case definition. On a national level, direct costs attributable to AORC were estimated at $51.1 billion; outpatient, inpatient, prescription drug, and residual direct costs totaled $22.0 billion, $14.7 billion, $4.1 billion, and $6.5 billion, respectively[†]. The AFs of AORC-attributable costs were 10% for total direct costs, 15% for outpatient, 7% for inpatient, 5% for prescription drugs, and 8% for residual categories. Among persons aged 18–64 years, indirect costs from AORC were estimated at $65.2 billion in lost earnings.

By state, 1997 direct costs for AORC ranged from $72 million in Wyoming to approximately $5 billion in California (median: $726 million) (Table). Indirect costs ranged from $91 million in Wyoming to approximately $6 billion in California (median: $926 million).

Reported by: *M Cisternas, MA, MGC Data Svcs, Carlsbad; E Yelin, PhD, L Trupin, MPH, Univ of California at San Francisco. L Murphy, Association of Teachers of Preventive Medicine Fellow, CG Helmick, MD, Div of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.*

Editorial Note: This report presents the first population-based national AFs and state cost estimates for AORC and updates national direct and indirect cost estimates. Except for the 1996 MEPS-based arthritis estimates (*7*), the findings in this report are the first national estimates based on individual-level population data.

To estimate AORC costs reliably, CDC generated national cost estimates from statistical models that controlled for costs associated with eight of the most costly comorbidities. Because the statistical models did not adjust for additional comorbidities, certain residual confounding occurred, resulting in overestimation of national costs. However, this overestimation probably was countered by other factors that led to cost underestimation, including omission of certain medical cost categories (e.g., long-term mental health services, complementary and alternative medicine, and nondurable medical goods) (*8*), institutionalized and military populations, and costs for unpaid services. In addition, the three-digit ICD-9-CM case definition resulted in a smaller prevalence estimate for AORC than other data sources (e.g., NHIS) (*9*). An alternative method for generating state-specific direct cost estimates might have been to apply the MEPS-derived AFs to state-specific direct-cost estimates from National Health Accounts (NHA) data, but this approach might have led to overestimates because substantial differences exist between the methodologies of MEPS and NHA.

The findings in this report are subject to at least five limitations. First, because no state-specific data exist on individual-level arthritis costs, synthetic state cost estimates were generated

---

[†] Direct costs for each of the four categories do not sum to $51.1 billion. Estimates for each of the categories were from independent regression models, and the discrepancy arises from consolidation of variance across regression models.

TABLE. Proportion of national arthritis[*] cases and estimated direct, indirect, and total[†] costs[§] of arthritis and other rheumatic conditions (AORC), by state — United States, 1997

	% national arthritis	AORC costs ($)		
State[¶]	**cases**	**Direct**	**Indirect**	**Total**
Alabama	2.08	1,064	1,356	**2,420**
Alaska	0.15	77	98	**174**
Arizona	1.86	951	1,213	**2,164**
Arkansas	1.13	578	737	**1,315**
California	9.69	4,955	6,318	**11,273**
Colorado	1.32	675	861	**1,536**
Connecticut	1.11	568	724	**1,291**
Delaware	0.29	148	189	**337**
District of Columbia	0.19	97	124	**221**
Florida	6.53	3,339	4,258	**7,596**
Georgia	2.91	1,488	1,897	**3,385**
Hawaii	0.22	112	143	**256**
Idaho	0.42	215	274	**489**
Illinois	4.35	2,224	2,836	**5,060**
Indiana	2.50	1,278	1,630	**2,908**
Iowa	0.95	486	619	**1,105**
Kansas	0.96	491	626	**1,117**
Kentucky	1.87	956	1,219	**2,175**
Louisiana	1.51	772	985	**1,757**
Maine	0.50	256	326	**582**
Maryland	1.77	905	1,154	**2,059**
Massachusetts	2.08	1,064	1,356	**2,420**
Michigan	4.34	2,219	2,830	**5,049**
Minnesota	1.51	772	985	**1,757**
Mississippi	1.10	562	717	**1,280**
Missouri	2.32	1,186	1,513	**2,699**
Montana	0.33	169	215	**384**
Nebraska	0.53	271	346	**617**
Nevada	0.67	343	437	**779**
New Hampshire	0.41	210	267	**477**
New Jersey	2.82	1,442	1,839	**3,281**
New Mexico	0.59	302	385	**686**
New York	6.71	3,431	4,375	**7,806**
North Carolina	2.96	1,514	1,930	**3,443**
North Dakota	0.20	102	130	**233**
Ohio	4.49	2,296	2,927	**5,223**
Oklahoma	1.42	726	926	**1,652**
Oregon	1.16	593	756	**1,349**
Pennsylvania	5.10	2,608	3,325	**5,933**
Rhode Island	0.43	220	280	**500**
South Carolina	1.48	757	965	**1,722**
South Dakota	0.25	128	163	**291**
Tennessee	2.36	1,207	1,539	**2,745**
Texas	6.17	3,155	4,023	**7,178**
Utah	0.60	307	391	**698**
Vermont	0.20	102	130	**233**
Virginia	2.54	1,299	1,656	**2,955**
Washington	1.86	951	1,213	**2,164**
West Virginia	0.87	445	567	**1,012**
Wisconsin	2.03	1,038	1,324	**2,362**
Wyoming	0.14	72	91	**163**
Total	**100.0**	**51,132**	**65,200**	**116,332**
Median	**—**	**726**	**926**	**1,652**

[*] Doctor-diagnosed arthritis cases.
[†] Total of direct and indirect costs.
[§] In millions.
[¶] Including District of Columbia.

from national cost data. Second, national direct and indirect cost estimates were apportioned by state-specific proportions of doctor-diagnosed arthritis, introducing error to the state estimates. For direct costs, data were not adjusted for differences among states in provider charges or treatment resources; for indirect costs, data were not adjusted for state wage differentials. Costs among states with medical expenditures or wages higher than the national mean probably are underestimated, and costs among those below the mean probably are overestimated. Third, the state-specific analysis used the ICD-9-CM codes reported by MEPS panelists and BRFSS reports of doctor-diagnosed arthritis. Both MEPS and BRFSS are subject to similar self-report bias. However, state-specific arthritis costs for 1990, based on the ICD-9-CM code definition for AORC (*5*), were compared with 2001 BRFSS estimates and found to be distributed similarly within each state in both periods (*6*). Fourth, indirect cost estimates were limited to data on lost earnings among MEPS respondents aged 18–64 years. Although total earnings of those aged ≥65 years probably are not large enough to influence these results, costs incurred through loss of unpaid work (e.g., caretaking), if included, would elevate these estimates (*10*). Finally, BRFSS prevalence data were applied to MEPS data because arthritis prevalences by state cannot be estimated from MEPS. The 2001 BRFSS data were used because they are the only directly measured state-specific estimates of arthritis prevalence. However, both MEPS and BRFSS were designed to be nationally representative surveys of U.S. noninstitutionalized civilians, and each state's proportion of national arthritis cases probably was similar during 1997–2001.

The cost estimates in this report are part of CDC's ongoing effort to fully characterize the 1997 arthritis burden in the United States. Substantial increases in costs are anticipated as the U.S. population ages and increased use is made of more costly AORC interventions (e.g., COX-2 inhibitors, biologic response modifiers, and total joint replacement surgery). More widespread public health efforts to expand the use of AORC self-management programs and practices (e.g., increased physical activity or maintaining healthy weight) might help reduce these costs and improve the quality of patients' lives.

References

1. CDC. Prevalence of disabilities and associated health conditions among adults—United States, 1999. MMWR 2001;50:120–5.
2. Hootman JM, Helmick CG, Schappert SM. Magnitude and characteristics of arthritis and other rheumatic conditions on ambulatory medical care visits, United States, 1997. Arthritis Rheum 2002;47:571–81.
3. Lethbridge-Çejku M, Helmick CG, Popovic J. Hospitalizations for arthritis and other rheumatic conditions: data from the 1997 National Hospital Discharge Survey. Medical Care, 2003 (in press).

4. Yelin E, Cisternas M, Pasta D, Trupin L. Direct and indirect costs of musculoskeletal conditions in 1997: total and incremental estimates. Available at http://ihps.ucsf.edu/arg/1997costofmuscfinal.pdf.
5. CDC. Arthritis prevalence and activity limitations—United States, 1990. MMWR 1994;43:433–8.
6. Duan N, Manning W, Morris C, Newhouse JA. Comparison of alternative models for the demand of medical care. Journal of Business and Economic Statistics 1983;1:115–26.
7. Dunlop DD, Manheim LM, Yelin EH, Song J, Chang RW. The costs of arthritis. Arthritis Rheum 2003;49:101–13.
8. Selden TM, Levit KR, Cohen JW, et al. Reconciling medical expenditure estimates from the MEPS and the NHA, 1996. Health Care Finance Rev 2001;23:161–78.
9. CDC. Prevalence of arthritis—United States, 1997. MMWR 2001;50:334–6.
10. Katz P, Yelin E. Activity loss and the onset of depressive symptoms: do some activities matter more than others? Arthritis Rheum 2001;44:1194–202.

Diabetes Among Young American Indians — Montana and Wyoming, 2000–2002

Type 2 diabetes is increasing among young American Indians (AIs) and other populations (*1–4*), and accurate surveillance is important to monitor trends in diabetes prevalence. The Indian Health Service (IHS) patient database has been used to identify cases of diabetes and estimate diabetes prevalence among AIs aged ≥15 years (*5*). However, limited studies have assessed the use of health databases to ascertain diabetes cases in young persons. The Montana Department of Public Health and Human Services (MDPHHS), in collaboration with the Billings Area IHS, conducted a study to assess use of the IHS patient database to identify AIs aged <20 years with diabetes in Montana and Wyoming. This report summarizes the results of that study, which found that diabetes cases were identified more accurately by using at least two patient visits for diabetes rather than only one patient visit. To reduce misclassification of diabetes, health-care systems and managed care organizations that use patient databases for diabetes surveillance should evaluate the accuracy of case ascertainment periodically and ensure adequate training for staff responsible for coding health-care visits and database entry.

During 2000–2002, AIs aged <20 years with at least one outpatient visit or hospitalization coded for diabetes (i.e., using *International Classification of Diseases, Ninth Revision, Clinical Modification* [ICD-9-CM-CM] codes 250.0–250.9) at one of six IHS facilities were identified from the IHS database. Medical records of each person were reviewed to confirm the diagnosis and classify the type of diabetes (*6*). MDPHHS collected demographic and clinical data and assessed the diagnoses of diabetes. A case of confirmed diabetes was defined as a case with documented diagnostic blood glucose values (*7*) or a record of treatment with antidiabetic therapies (e.g., insulin or oral medication). To assess the accuracy of case ascertainment, the study compared the percentage of false positives (i.e., for which persons were determined not to have diabetes) for cases based on only one health-care visit with the percentage for cases based on at least two health-care visits during 2000–2002. Diagnostic codes or reason-for-visit narratives that might have led to case misclassification were identified for the false-positive cases.

The study identified 93 persons classified with diabetes based on one coded health-care visit. Assessment of the diagnoses by MDPHHS found that 40 persons (43%) did not have diabetes. No statistically significant differences by sex or by mean age were found when confirmed cases were compared with false positives. Wide variation was observed in the proportion of false-positive cases across the six clinical facilities: 0%, 25%, 27%, 50%, 67%, and 89%. Among the false-positive cases, the most common reason (15 cases out of 40) for a health-care visit was diabetes screening or a school health assessment; for 19 of the cases, no specific reason was identified (Table). On the basis of the 93 database cases with one coded health-care visit, the prevalence of diabetes in young AIs was 4.0 per 1,000 population (estimated population of AIs aged <20 years = 23,035) (*8*), and 2.3 per 1,000 population by using only the 53 confirmed cases.

On the basis of two health-care visits, the study identified 61 persons classified with diabetes; 12 (20%) were false positives. Once again, no statistically significant differences by sex or by mean age were found. Of the 12 persons with false-positive cases, seven had been referred for a health-care visit through diabetes screening or a school health assessment. On the basis of the 61 database cases with at least two coded visits, the prevalence of diabetes in young AIs was 2.9 per 1,000 population, and 2.1 per 1,000 population by using only the 49 confirmed cases.

TABLE. Diagnosis or reason for health-care visits by American Indians aged <20 years found to be false positive[*] for diabetes, by number of ICD-9-CM[†] coded visits — Montana and Wyoming, 2000–2002

	One visit		Two or more visits	
Diagnosis/Reason for visit	**No.**	**(%)**	**No.**	**(%)**
Diabetes screening/ School health assessment	15	(38)	7	(58)
Impaired glucose tolerance/ Insulin resistance syndrome	3	(8)	3	(25)
Hypothyroidism	1	(3)	—	—
Medical nutrition therapy	1	(3)	—	—
Otitis media	1	(3)	—	—
Other/Unknown	19	(48)	2	(17)
Total	**40**	**(100)[§]**	**12**	**(100)**

[*] Did not have diabetes.

[†] *International Classification of Diseases, Ninth Revision, Clinical Modification.*

[§] Total >100% because of rounding.

Reported by: *KR Moore, MD, Billings Area Indian Health Svc, Billings; TS Harwell, MPH, JM McDowall, CS Oser, MPH, SD Helgerson, MD, D Gohdes, MD, Montana Dept of Public Health and Human Svcs. NR Burrows, MPH, Div of Diabetes Translation, National Center for Chronic Disease Prevention and Health Promotion, CDC.*

Editorial Note: Accurate surveillance of type 1 and type 2 diabetes in young persons is important to monitor trends in prevalence and incidence. The findings in this report suggest that using only one ICD-9-CM coded visit during a 3-year period to ascertain diabetes cases among young AIs was accurate in only 57% of cases; therefore, the number of cases was probably overestimated by approximately 40%. The use of at least two ICD-9-CM coded visits for case ascertainment was substantially more accurate (80%). Because of the low national prevalence of diabetes in young AIs (less than five cases per 1,000 persons) (*3*), an increase in false-positive cases has little effect on the estimated rates; however, the number of affected young persons will be overestimated.

The findings in this report are subject to at least one limitation. This analysis included only six IHS facilities. The accuracy of case ascertainment in other IHS areas and facilities might vary by facility and by the prevalence of disease in young persons.

Patient databases have been useful for monitoring diabetes care in adults and can be helpful in monitoring diabetes prevalence in adolescents (*5,9,10*). This report highlights the importance of evaluating the use of patient databases for ascertaining diabetes cases among young persons and emphasizes the need to update and maintain case registries based on patient databases. In addition, adequate training of staff responsible for coding and database entry of patient diagnoses, particularly related to diabetes screening and school health assessments, probably will reduce misclassification of diabetes in young persons.

References

1. Rosenbloom AL, Joe JR, Young RS, Winter WE. Emerging epidemic of type 2 diabetes in youth. Diabetes Care 1999;22:345–54.
2. Fagot-Campagna A, Pettitt DJ, Engelgau MM, et al. Type 2 diabetes among North American children and adolescents: an epidemiologic review and a public health perspective. J Pediatr 2000;136:664–72.
3. Acton KJ, Burrows NR, Moore K, Querec L, Geiss LS, Engelgau MM. Trends in diabetes prevalence among American Indian and Alaska Native children, adolescents, and young adults. Am J Public Health 2002;92:1485–90.
4. Dabelea D, Hanson RL, Bennett PH, Roumain J, Knowler WC, Pettitt DJ. Increasing prevalence of type II diabetes in American Indian children. Diabetologia 1998;41:904–10.
5. Wilson C, Susan L, Lynch A, Saria R, Peterson D. Patients with diagnosed diabetes mellitus can be accurately identified in an Indian Health Service patient registration database. Public Health Rep 2001;116:45–9.

6. Harwell TS, McDowall JM, Moore K, Fagot-Campagna A, Helgerson SD, Gohdes D. Establishing surveillance for diabetes in American Indian youth. Diabetes Care 2001;24:1029–32.
7. American Diabetes Association. Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. Diabetes Care 2003;26(suppl 1):S5–S20.
8. U.S. Department of Health and Human Services. User population estimates 1995 to 1997. Available at http://www.ihs.gov/facilitiesservices/areaoffices/billings/stats/population.asp.
9. Hebert PL, Geiss LS, Tierney EF, Engelgau MM, Yawn BP, McBean AM. Identifying persons with diabetes using Medicare claims data. Am J Med Qual 1999;14:270–7.
10. Hux JE, Ivis F, Flintoft V, Bica A. Diabetes in Ontario: determination of prevalence and incidence using a validated administrative data algorithm. Diabetes Care 2002;25:512–6.

Investigation of a Ricin-Containing Envelope at a Postal Facility — South Carolina, 2003

On October 15, 2003, an envelope with a threatening note and a sealed container was processed at a mail processing and distribution facility in Greenville, South Carolina. The note threatened to poison water supplies if demands were not met. The envelope was isolated from workers and other mail and removed from the facility, and an investigation was begun. On October 21, laboratory testing at CDC confirmed that ricin was present in the container. To assess the human health effects related to possible ricin exposure, the South Carolina Department of Health and Environmental Control (SCDHEC) and CDC interviewed all workers at the postal facility and initiated statewide surveillance for illness consistent with ricin exposure during October 15–29. On October 22, the facility was closed for a detailed epidemiologic and environmental investigation. This report summarizes the results of the investigation, which found no evidence of environmental contamination and no cases of ricin-associated illness. Clinicians and public health officials should be vigilant for illnesses suggestive of ricin exposure.

SCDHEC asked emergency departments, clinicians, health departments, and the local postal facility to report any cases consistent with ricin exposure to the state health department and CDC. State poison control center records and intensive care unit charts at seven hospitals in the Greenville, Spartanburg, and Anderson areas were reviewed daily for illness consistent with ricin exposure. A CDC medical toxicologist and state and local health department epidemiologists interviewed all 36 workers at the postal facility to identify ricin-related illnesses.

CDC conducted environmental assessment and sampling at the postal facility, consisting of 70 wipe samples and five surface dust samples (collected by sampling pumps and sampling filter media). Wipe samples were obtained by using Dacron™ swabs moistened with sterile buffered solution and were collected from specific surfaces in the facility, including storage bins, surfaces, conveyor belts, and sorting tables that had been in contact with the letter. All environmental samples were analyzed at CDC and were negative for ricin.

No workers had illness suggestive of ricin exposure. Statewide surveillance did not identify any cases of ricin-associated illness. However, two cases of multisystem organ failure and several nonspecific illnesses, which likely were detected because of increased surveillance and reporting, were investigated within the state. The postal facility was reopened after 1) all workers who had worked at the facility since the package was discovered had been contacted and confirmed to be well and 2) environmental samples for ricin were negative. As of November 19, no ricin-associated cases had been identified.

Regional and national surveillance for illness consistent with ricin poisoning was initiated through an ongoing collaboration between CDC, ATSDR, and the American Association of Poison Control Centers' Toxic Exposure Surveillance System (TESS). Surveillance for potential cases was accomplished by monitoring call volumes at 62 of the 63 poison control centers in the United States for clinical effects consistent with ricin poisoning and for cases referring to the specific product code ("Contaminated Water") because water had been stated as a potential target by the note in the package. During October 15–29, approximately 97,000 human exposure calls were reported to TESS. No ricin-associated syndromes or events were identified.

Reported by: *J Gibson, MD, D Drociuk, MSPH, T Fabian, MD, S Brundage, MD, L Ard, N Fitzpatrick, MPH, W Moorhead, JD, South Carolina Dept of Health and Environmental Control. M Schwartz, MD, E Kilbourne, MD, ATSDR; J Schier, MD, M Patel, MD, M Belson, MD, C Rubin, DVM, Div of Environmental Hazards and Health Effects, J Osterloh, MD, Div of Laboratory Sciences, S Deitchman, MD, National Center for Environmental Health; Max Kiefer, CIH, National Institute for Occupational Safety and Health, R Meyer, PhD, Bioterrorism Preparedness Response Program, National Center for Infectious Diseases, CDC.*

Editorial Note: The Federal Bureau of Investigation (FBI) and local law enforcement authorities are conducting an investigation to identify the illegal source of this toxin. However, until a source is identified and eliminated, health-care providers and public health officials must consider ricin to be a potential public health threat and be vigilant about recognizing illness consistent with ricin exposure.

Ricin is a biologic toxin derived from the castor bean plant *Ricinus communis* (*1,2*) (Box). Ricin is one of several toxalbumins that exert toxicity by inhibiting protein synthesis in eukaryotic cells (*1,2*). Several instances of ricin procurement for use as a terrorist weapon have been documented (*3–5*).

Routes of exposure to ricin include ingestion, inhalation, parenteral, dermal, or ocular; however, systemic toxicity has been described in humans only after ingestion or injection. Ricin is considered to be a much more potent toxin when inhaled or injected compared with other routes of exposure. Ricin poisoning is not contagious, and person-to-person transmission does not occur.

Processed and purified ricin can be disseminated by aerosol, contamination of food or water, or injection (*1,6*). Ricin particles of <5 microns have been used for aerosol dispersion in animal studies and can stay suspended in undisturbed air for several hours. Resuspension of settled ricin from disturbed surfaces also might occur.

Data about the effects of ricin poisoning on humans are limited. Because ricin poisoning might resemble typical gastroenteritis or respiratory illness, it might at first be difficult to discern from other illnesses. For this reason, suspicion of cases should occur in conjunction with epidemiologic clues suggestive of chemical release (e.g., an unusual increase in the number of patients seeking care or unexpected progression of symptoms in a group of patients) or a credible threat of chemical release in the community (*7*). As in the instance described in this report, health departments should inform clinicians, poison control centers, and other health departments rapidly of any emerging evidence of ricin exposures.

Clinical Manifestations

Ingestion: No reports of illness after ingestion of purified ricin toxin have occurred. Signs and symptoms from oral exposure to purified ricin are presumed to be similar to reports of illness after castor bean mastication and ingestion (*6*). However, reports of illness from castor bean ingestion also are not well documented. Toxicity can range from mild to severe and can progress to death (*6*). Mild illness can include nausea, vomiting, diarrhea, and/or abdominal cramping. Onset of gastrointestinal symptoms typically occurs in 1–4 hours (*6*). In moderate to severe illness, gastrointestinal symptoms (i.e., persistent vomiting and voluminous diarrhea [bloody or non-bloody]) typically lead to substantial fluid loss, resulting in dehydration and possibly hypovolemic shock (*6*). In severe poisoning, liver and renal failure and death are possible.

BOX. Background, diagnosis, treatment, and prevention and reporting of ricin poisoning

Background

- Ricin is a toxin derived from the castor bean plant *Ricinus communis*.
- Poisoning can occur via ingestion, inhalation, or injection.
- Ricin poisoning can have a presentation similar to gastroenteritis or respiratory illnesses.
- Epidemiologic clues include increased number of patients seeking care, unexpected progression of symptoms, or a credible threat of ricin release in the community.
- Person-to-person transmission does not occur.
- Ricin has been procured for use as a terrorist weapon.
- Inhalation and injection are considered to be the most lethal routes of exposure.

Clinical Findings

- Ingestion: Mild poisoning can result in nausea, vomiting, diarrhea, and/or abdominal pain. In moderate to severe poisoning, gastrointestinal symptoms can progress (4–36 hours) to hypotension, liver and renal dysfunction, and possibly death.
- Inhalation: Illness can occur within 8 hours and include cough, dyspnea, arthralgias, and fever, and can progress to respiratory distress and death.
- Injection: Initial (i.e., ≤6 hours) symptoms can include generalized weakness and myalgias; progression of illness (24–36 hours) can include vomiting, fever, hypotension, and/or multi-organ failure and death.

Laboratory Testing

- No methods are available to detect ricin in biologic fluids.
- CDC and Laboratory Response Network laboratories conduct tests to detect ricin in environmental samples.

Recommended Treatment

- Treatment is mainly supportive and includes intravenous fluid and vasopressors (e.g., dopamine) for hypotension.
- Activated charcoal should be administered to persons with known or suspected ricin ingestion if vomiting has not begun and airway is secure.
- Gastric lavage may be considered if ingestion has occurred in ≤1 hour.
- If a credible threat exists, patients with illness consistent with ricin poisoning should be observed for illness progression.
- The regional poison control center should be contacted for individualized care and further management.

Prevention and Reporting

- All known or suspected cases of ricin exposure should be reported to the regional poison control center (1-800-222-1222) and local and state health departments.
- Clinicians, other health departments, and other poison control centers also should be alerted when ricin poisoning is suspected.

Inhalational Exposure: Data on inhalational exposure to ricin in humans are limited. Workers exposed to castor bean dust have described allergic reactions (e.g., nasal and throat congestion, eye irritation, hives, chest tightness, and wheezing) (*8*). Aerosol exposures to ricin can be followed within 4–8 hours by fever, chest tightness, cough, dyspnea, nausea, and arthralgias followed by diaphoresis (*9*).

Parenteral Exposure: In a single human trial evaluating low doses of intravenous ricin as a chemotherapeutic agent, influenza-like symptoms with fatigue and myalgias for several days were reported (*1*). Ricin injection in one case caused weakness within 5 hours, fever and vomiting within 24 hours, followed by shock and multi-organ failure, and death in 3 days (*1*).

Management and Decontamination

Treatment for ricin toxicity is primarily supportive, including intravenous fluids, vasopressors, respiratory support, and cardiac monitoring. No specific antidotal therapy exists, and ricin cannot be removed by dialysis. Prophylactic vaccine and immunotherapy are not available (*1*). The same general guidelines for gastrointestinal decontamination employed for other ingested toxins should be applied to ricin (*10*). A single dose of activated charcoal should be administered as soon as possible if the patient is suspected of ricin ingestion and is not vomiting. The efficacy of gastric lavage is controversial but may be considered for known or suspected substantial ingestions if presentation to the hospital occurs within 1 hour of ingestion. Ipecac, whole bowel irrigation, and cathartics should not be used routinely for known or suspected ricin poisoning. Clinical presentations and their management can vary considerably. Clinicians are strongly advised to contact their regional poison control center immediately upon suspicion of a case of ricin exposure for guidance and further individualized management.

Skin decontamination for ricin exposure should be performed if a powder or similar substance is found on the patient, preferably in a designated area outside the main emergency department. Potentially exposed persons should be advised to wash their hands thoroughly with soap and water and refrain from any hand-to-mouth activities.

Laboratory Detection

No methods are available for the detection of ricin in biologic fluids. Ricinine is a separate compound from ricin present in the castor bean and might be more feasible to monitor in persons exposed to ricin-containing plant material.

Preparations of ricin-containing substances and environmentally collected specimens can be tested for the presence of ricin by a time-resolved fluorescence immunoassay, available at CDC and member Laboratory Response Network state public health laboratories. In addition, CDC performs a polymerase chain reaction assay on similar type specimens that will detect the gene in the plant material that codes for the ricin protein. Several commercial handheld or test-strip detection devices are available, but the performance of these assays is unknown.

Reporting

Suspected or known cases of ricin poisoning should be reported immediately to the regional poison control center (telephone, 1-800-222-1222) and to local or state public health agencies, which will report cases to other health departments, CDC, and other federal agencies.

References

1. Franz DR, Jaax NK. Ricin toxin. In: Textbook of Military Medicine: Medical Aspects of Chemical and Biological Warfare. Washington, DC: TMM Publications, 1997.
2. Olsnes S, Kozlov JV. Ricin. Toxicon 2001;39:1723–8.
3. U.S. Federal Bureau of Investigation. Counterterrorism Threat Assessment and Warning Unit. Terrorism in the United States, 1995: Renditions and Convictions of Suspected Terrorists. Washington, DC: U.S. Government Printing Office, 1995.
4. Cameron G. WMD terrorism in the United States: the threat and possible countermeasures. The Nonproliferation Reviews 2000;Spring:162–1794.
5. U.S. House of Representatives Subcommittee on Oversight and Investigations. Threatened Use and Possession of Biological Agents Hearing, 19 May 1999. Washington, DC: U.S. Government Printing Office, 1999.
6. Challoner KR, McCarron MM. Castor bean intoxication. Ann Emerg Med 1990;19:159–65.
7. CDC. Recognition of illness associated with exposure to chemical agents—United States, 2003. MMWR 2003;52:938–40.
8. Brugsch HG. Toxic hazards: the castor bean. Mass Med Soc 1960;262:1039–40.
9. U.S. Army Medical Research Institute of Infectious Diseases. USAMRIID's Medical Management of Biological Casualties Handbook, 4th ed. Fort Detrick, Maryland: U.S. Army Medical Research Institute of Infectious Diseases, 2001.
10. Chyka PA, Seger D. Position statement: single-dose activated charcoal. American Academy of Clinical Toxicology; European Association of Poisons Centres and Clinical Toxicologists. J Toxicol Clin Toxicol 2000;38:721–41.

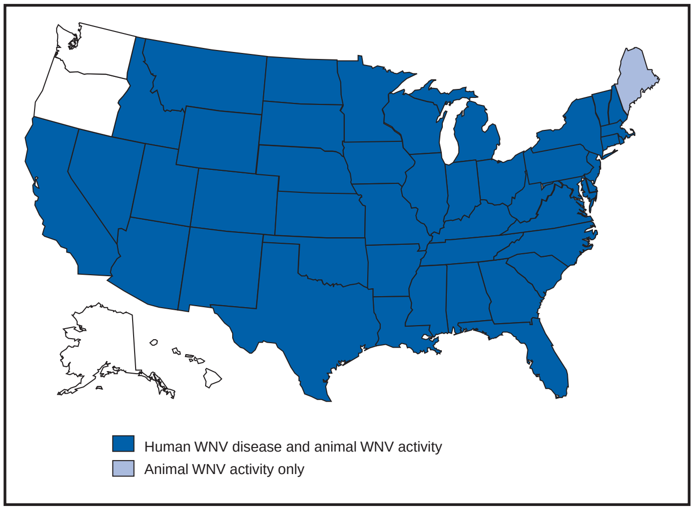
West Nile Virus Activity — United States, November 13–19, 2003

This report summarizes West Nile virus (WNV) surveillance data reported to CDC through ArboNET as of 3 a.m., Mountain Standard Time, November 19, 2003.

During the reporting week of November 13–19, a total of 77 human cases of WNV infection were reported from 17 states (Arizona, Arkansas, Delaware, Georgia, Idaho, Indiana, Iowa, Louisiana, Michigan, Montana, Nebraska, New Jersey, New Mexico, Ohio, Rhode Island, Tennessee, and Texas), including five fatal cases from five states (Arizona, Delaware, Louisiana, Ohio, and Texas). During the same period, WNV infections were reported in 98 dead birds, 100 mosquito pools, 21 horses, one dog, and one unidentified animal species.

During 2003, a total of 8,470 human cases of WNV infection have been reported from Colorado (n = 2,477), Nebraska (n = 1,727), South Dakota (n = 989), Texas (n = 526), North Dakota (n = 422), Wyoming (n = 339), Pennsylvania (n = 225), Montana (n = 222), New Mexico (n = 202), Minnesota (n = 144), Iowa (n = 142), Ohio (n = 108), Louisiana (n = 105), Kansas (n = 88), Oklahoma (n = 75), New York (n = 67), Mississippi (n = 62), Missouri (n = 59), Maryland (n = 56), Illinois (n = 50), Georgia (n = 42), Indiana (n = 37), Alabama (n = 33), Florida (n = 32), New Jersey (n = 31), Arkansas (n = 25), North Carolina (n = 24), Tennessee (n = 24), Virginia (n = 23), Delaware (n = 16), Massachusetts (n = 16), Kentucky (n = 14), Wisconsin (n = 13), Connecticut (n = 12), Michigan (n = 11), Arizona (n = eight), Rhode Island (n = seven), the District of Columbia (n = three), New Hampshire (n = three), Vermont (n = three), California (n = two), Nevada (n = two), Idaho (n = one), South Carolina (n = one), Utah (n = one), and West Virginia (n = one) (Figure). Of 8,333 (98%) cases for which demographic data were available, 4,399 (53%) occurred among males; the median age was 47 years (range: 1 month–99 years), and the dates of illness onset ranged from March 28 to November 1. Of the 8,333 cases, 189 fatal cases were reported from Colorado (n = 45), Texas (n = 27), Nebraska (n = 21), South Dakota (n = 13), New York (n = eight), Wyoming (n = eight), Pennsylvania (n = seven), Maryland (n = five), Missouri (n = five), Georgia (n = four), Iowa (n = four), Kansas (n = four), Louisiana (n = four), Minnesota (n = four), New Mexico (n = four), North Dakota (n = four), Ohio (n = four), Alabama (n = three), Delaware (n = two), Indiana (n = two), Montana (n = two), New Jersey (n = two), Arizona (n = one), Illinois (n = one), Kentucky (n = one), Michigan (n = one), Mississippi (n = one), Tennessee (n = one), and Virginia (n = one). A total of 724 presumptive West Nile viremic blood donors have been reported to ArboNET, including 626 (86%) from the following nine western and midwestern states: Colorado, Kansas, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming. Of the 593 donors for whom data were reported completely, six (1%) subsequently had neuroinvasive disease (median age: 45 years; range: 28–76 years), and 96 (16%) had West Nile fever.

FIGURE. Areas reporting West Nile virus (WNV) activity — United States, 2003*



* As of 3 a.m., Mountain Standard Time, November 19, 2003.

In addition, 11,213 dead birds with WNV infection have been reported from 42 states, the District of Columbia, and New York City. WNV infections also have been reported from 41 states in horses (n = 4,105), dogs (n = 27), squirrels (n = 17), cats (n = one), and unidentified animal species (n = 32). During 2003, WNV seroconversions have been reported in 1,377 sentinel chicken flocks from 15 states. Of the 61 seropositive sentinel horses reported, Illinois reported 43, West Virginia reported eight, Minnesota reported seven, and South Dakota reported three. In addition, seropositivity was reported from one other unidentified animal species. A total of 7,702 WNV-positive mosquito pools have been reported from 38 states, the District of Columbia, and New York City.

Additional information about WNV activity is available from CDC at http://www.cdc.gov/ncidod/dvbid/westnile/index.htm and http://westnilemaps.usgs.gov.

Notice to Readers

CDC Announces The CDC Experience

CDC announces The CDC Experience, a new fellowship in applied epidemiology for third- and fourth-year medical students sponsored by Pfizer Foundation and Pfizer Inc. through the CDC Foundation. Beginning in September 2004, eight competitively selected medical students will come to CDC for a 10–12 month fellowship in applied epidemiology. Students will participate in day-to-day applied epidemiology activities, including field work and possibly outbreak investigations, in programs throughout CDC, with an emphasis on noninfectious diseases. Participants will have an opportunity to understand the critical role of epidemiologic science in the development of public health policy. Topics that will be covered in a series of training exercises and seminars include epidemiologic methods, biostatistics, policy development, and the impact of population health on clinical practice.

Additional information about The CDC Experience, including application information, is available from the CDC Foundation at http://www.cdcfoundation.org/fellowships/cdcexperience.html. The deadline for applications is December 5, 2003.

Erratum: MMWR Summary of Notifiable Diseases — United States, 2001, Vol. 50, No. 53, 2003

In the *MMWR Summary of Notifiable Diseases — United States, 2001*, published May 2, 2003, errors occurred in the death counts for hepatitis A, B, and C, congenital rubella syndrome, botulism, and cholera in Table 12 on page 98. The corrected table is provided below. Several diseases (i.e., *Chlamydia trachomatis* genital infections, cryptosporidiosis, cyclosporiasis, human granulocytic ehrlichiosis, human monocytic ehrlichiosis, *Escherichia coli* infections, legionellosis, and Lyme disease) are excluded from the revised table because no specific *International Classification of Diseases, Ninth Revision* codes represent those diseases, and therefore no corresponding death counts are available.

TABLE 12. Deaths from selected notifiable diseases — United States, 1996–1999

	Cause of death codes		Estimated comparability	1996 No. of deaths allocated according to		1997 No. of deaths allocated according to		1998 No. of deaths allocated according to		1999 Number of deaths
Cause of death	**ICD-10***	**ICD-9†**	**ratio§**	**ICD-10¶**	**ICD-9****	**ICD-10**	**ICD-9**	**ICD-10**	**ICD-9**	**ICD-10**
AIDS††	B20–B24	042–044	1.0824	33,695	31,130	17,877	16,516	14,532	13,426	14,802
Anthrax	A22	022	§§	§§	—	§§	—	§§	—	—
Botulism, foodborne	A05.1	005.1	§§	§§	1	§§	2	§§	—	4
Brucellosis	A23	023	§§	§§	—	§§	1	§§	1	—
Chancroid	A57	099.0	§§	§§	—	§§	—	§§	—	—
Cholera	A00	001	§§	§§	2	§§	—	§§	1	1
Diphtheria	A36	032	§§	§§	—	§§	—	§§	1	1
Encephalitis										
California serogroup viral	A83.5	062.5	§§	§§	1	§§	1	§§	—	1
Eastern equine	A83.2	062.2	§§	§§	1	§§	2	§§	1	—
St. Louis	A83.3	062.3	§§	§§	—	§§	1	§§	—	2
Western equine	A83.1	062.1	§§	§§	—	§§	—	§§	1	—
Gonococcal infections	A54	098	§§	§§	4	§§	3	§§	4	9
Haemophilus influenzae	A49.2	041.5	§§	§§	7	§§	7	§§	11	6
Hansen disease	A30	030	§§	§§	—	§§	2	§§	—	2
Hepatitis A	B15	070.0-070.1	0.9328	113	121	118	127	106	114	134
Hepatitis B	B16, B18.0, B18.1	070.2-070.3	0.6879	744	1,082	709	1,030	724	1,052	832
Hepatitis C	B17.1, B18.2	070.4–070.5	0.7114	1,692	2,378	1,940	2,727	2,457	3,454	3,763
Malaria	B50–B54	084	§§	§§	4	§§	7	§§	6	7
Measles	B05	055	§§	§§	1	§§	2	§§	—	2
Meningococcal disease	A39	036	0.9861	286	290	305	309	231	234	227
Mumps	B26	072	§§	§§	1	§§	—	§§	1	1
Pertussis	A37	033	§§	§§	4	§§	6	§§	5	7
Plague	A20	020	§§	§§	2	§§	—	§§	—	1
Poliomyelitis	A80	045	§§	§§	—	§§	—	§§	—	—
Psittacosis	A70	073	§§	§§	1	§§	—	§§	—	—
Q fever	A78	083.0	§§	§§	1	§§	—	§§	—	—
Rabies, human	A82	071	§§	§§	3	§§	4	§§	1	—
Rubella	B06	056	§§	§§	—	§§	—	§§	—	—
Rubella, congenital syndrome	P35.0	771.0	§§	§§	4	§§	4	§§	4	8
Salmonellosis	A02	003	0.8929	52	58	46	51	33	37	38
Shigellosis	A03	004	§§	§§	5	§§	5	§§	5	6
Spotted fever (tickborne rickettsioses)	A77.0	082.0	§§	§§	6	§§	12	§§	3	5
Syphilis, all stages	A50–A53	090–097	0.7887	58	73	49	62	35	45	33
Tetanus	A35	037	§§	§§	1	§§	4	§§	7	7
Trichinosis	B75	124	§§	§§	—	§§	—	§§	—	—
Tuberculosis	A16–A19	010–018	0.8821	1,060	1,202	1,029	1,166	981	1,112	930
Typhoid fever	A01.0	002.0	§§	§§	1	§§	—	§§	—	–
Varicella (chickenpox)¶¶	B01	052	0.7848	64	81	78	99	64	81	48
Yellow fever	A95	060	§§	§§	1	§§	—	§§	—	1

* World Health Organization. *International Statistical Classification of Disease and Related Health Problems, Tenth Revision*, 1992.

† World Health Organization. *International Classification of Diseases, Ninth Revision*, 1975.

§ Unpublished estimates; see also Anderson RN, Minino AM, Hoyert DL, et al. Comparability of cause of death between ICD-9 and ICD-10: Preliminary estimates. CDC, National Center for Health Statistics. 2001; DHHS publication no. (PHS) 2001-1120. (National Vital Statistics Report Vol. 49, No. 2).

¶ Number of deaths modified with the comparability ratio for ICD-10 code.

** Number of deaths based on ICD-9 code; unmodified with the comparability ratio for ICD-10 code.

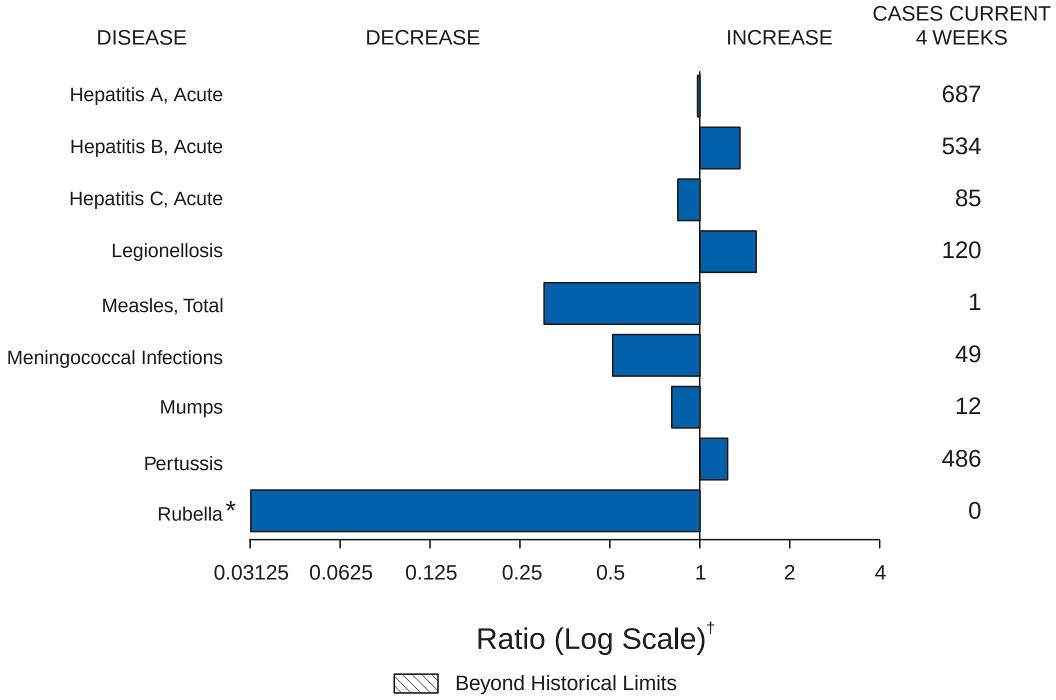
†† Acquired immunodeficiency syndrome. In 1987, the National Center for Health Statistics introduced ICD-9 categories 042–044 for classifying and coding human immunodeficiency virus (HIV) infection.

§§ Comparability ratio not calculated because it does not meet standards of reliability or precision.

¶¶ Varicella was removed from the nationally notifiable disease list in 1991. Many states continue to report these cases to CDC.

Source: CDC WONDER Compressed Mortality Files (http://wonder.cdc.gov/mortsql.html) provided by the National Center for Health Statistics. National Vital Statistics System, 1996–1999. Deaths are classified according to the *ICD-9* (1996–1998) and *ICD-10* (1999). Data for 2000 and 2001 are not available.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals November 15, 2003, with historical data



* No rubella cases were reported for the current 4-week period yielding a ratio for week 46 of zero (0).

[†] 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 of provisional cases of selected notifiable diseases, United States, cumulative, week ending November 15, 2003 (46th Week)*

	Cum. 2003	Cum. 2002		Cum. 2003	Cum. 2002
Anthrax	-	2	Hansen disease (leprosy)[†]	49	77
Botulism:	-	-	Hantavirus pulmonary syndrome[†]	15	17
foodborne	11	25	Hemolytic uremic syndrome, postdiarrheal[†]	139	184
infant	58	57	HIV infection, pediatric[†§]	187	144
other (wound & unspecified)	24	17	Measles, total	42[¶]	39**
Brucellosis[†]	73	105	Mumps	169	242
Chancroid	42	61	Plague	1	1
Cholera	1	2	Poliomyelitis, paralytic	-	-
Cyclosporiasis[†]	60	155	Psittacosis[†]	14	15
Diphtheria	1	1	Q fever[†]	65	51
Ehrlichiosis:	-	-	Rabies, human	3	3
human granulocytic (HGE)[†]	305	289	Rubella	7	16
human monocytic (HME)[†]	173	182	Rubella, congenital	-	1
other and unspecified	37	20	Streptococcal toxic-shock syndrome[†]	132	102
Encephalitis/Meningitis:	-	-	Tetanus	13	21
California serogroup viral[†]	79	140	Toxic-shock syndrome	112	94
eastern equine[†]	9	6	Trichinosis	4	13
Powassan[†]	-	1	Tularemia[†]	72	71
St. Louis[†]	30	20	Yellow fever	-	-
western equine[†]	2	-			

-: No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

[†] Not notifiable in all states.

[§] Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update October 26, 2003.

[¶] Of 42 cases reported, 31 were indigenous, and 11 were imported from another country.

** Of 39 cases reported, 24 were indigenous, and 15 were imported from another country.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending November 15, 2003, and November 16, 2002 (46th Week)[*]

	AIDS		Chlamydia[†]		Coccidiodomycosis		Cryptosporidiosis		Encephalitis/Meningitis West Nile	
Reporting area	Cum. 2003[§]	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	38,482	36,114	723,926	735,684	3,478	3,746	2,883	2,714	1,598	2,513
NEW ENGLAND	1,277	1,435	23,814	24,491	-	-	154	181	-	27
Maine	49	28	1,600	1,523	N	N	19	11	-	-
N.H.	34	35	1,037	1,380	-	-	11	29	-	-
Vt.	15	12	947	833	-	-	29	32	-	-
Mass.	518	752	10,071	9,660	-	-	65	73	-	18
R.I.	90	86	2,601	2,437	-	-	15	20	-	-
Conn.	571	522	7,558	8,658	N	N	15	16	-	9
MID. ATLANTIC	9,040	8,429	97,083	82,620	-	-	344	372	161	125
Upstate N.Y.	853	665	17,505	14,864	N	N	118	124	4	39
N.Y. City	4,989	5,063	29,638	26,943	-	-	80	133	-	28
N.J.	1,356	1,250	11,103	12,570	-	-	7	15	16	23
Pa.	1,842	1,451	38,837	28,243	N	N	139	100	141	35
E.N. CENTRAL	3,556	3,865	123,415	136,117	7	21	854	910	106	1,424
Ohio	718	726	28,490	33,920	-	-	142	117	97	270
Ind.	482	463	14,262	15,384	N	N	80	53	1	18
Ill.	1,609	1,866	38,867	43,023	-	2	77	116	1	554
Mich.	581	646	27,971	28,655	7	19	124	124	7	532
Wis.	166	164	13,825	15,135	-	-	431	500	-	50
W.N. CENTRAL	685	612	41,568	41,676	1	1	530	381	335	180
Minn.	144	131	8,687	9,182	N	N	140	185	49	17
Iowa	72	71	3,344	5,096	N	N	118	42	75	-
Mo.	319	279	15,903	14,238	-	-	40	37	32	107
N. Dak.	2	3	1,027	1,071	N	N	13	24	5	-
S. Dak.	10	10	2,342	1,935	-	-	38	28	40	14
Nebr.[¶]	52	58	4,234	4,196	1	1	18	49	47	32
Kans.	86	60	6,031	5,958	N	N	163	16	87	10
S. ATLANTIC	10,692	10,600	137,720	139,238	5	4	352	292	163	64
Del.	195	165	2,673	2,363	N	N	4	3	12	-
Md.	1,285	1,510	14,624	14,677	5	4	23	19	39	21
D.C.	859	616	2,795	2,983	-	-	17	4	-	-
Va.	819	713	15,282	16,055	-	-	42	21	17	-
W. Va.	79	76	2,300	2,186	N	N	4	2	1	2
N.C.	1,006	836	22,918	22,110	N	N	44	32	-	-
S.C.[¶]	719	747	13,885	12,817	-	-	8	6	1	1
Ga.	1,667	1,431	27,574	28,839	-	-	116	111	45	21
Fla.	4,063	4,506	35,669	37,208	N	N	94	94	48	19
E.S. CENTRAL	1,704	1,754	45,916	46,664	N	N	112	114	43	273
Ky.	175	277	7,164	7,818	N	N	23	8	11	42
Tenn.	738	725	17,906	14,215	N	N	37	53	16	8
Ala.	390	344	10,850	14,209	-	-	42	45	16	33
Miss.	401	408	9,996	10,422	N	N	10	8	-	190
W.S. CENTRAL	4,110	3,637	89,425	96,181	4	11	86	60	474	418
Ark.	165	206	6,832	6,590	-	-	16	8	22	11
La.	522	880	15,294	16,933	N	N	2	9	43	204
Okla.	176	166	10,147	9,877	N	N	16	16	25	-
Tex.	3,247	2,385	57,152	62,781	4	11	52	27	384	203
MOUNTAIN	1,342	1,233	39,565	45,635	2,157	2,327	122	146	312	2
Mont.	13	10	1,727	1,973	N	N	18	5	216	1
Idaho	21	28	2,220	2,218	N	N	26	28	-	1
Wyo.	7	8	860	823	1	-	5	9	89	-
Colo.	328	282	9,594	12,642	N	N	32	53	-	-
N. Mex.	103	78	6,284	6,691	7	7	9	18	3	-
Ariz.	584	487	11,103	13,166	2,102	2,267	6	16	1	-
Utah	60	57	2,951	2,809	16	11	19	13	1	-
Nev.	226	283	4,826	5,313	31	42	7	4	2	-
PACIFIC	6,076	4,549	125,420	123,062	1,303	1,381	329	258	4	-
Wash.	422	412	14,573	13,014	N	N	43	36	-	-
Oreg.	229	288	6,585	6,001	-	-	36	37	4	-
Calif.	5,321	3,713	97,940	96,793	1,303	1,381	249	182	-	-
Alaska	15	28	3,186	3,260	-	-	1	1	-	-
Hawaii	89	108	3,136	3,994	-	-	-	2	-	-
Guam	6	2	-	589	-	-	-	-	-	-
P.R.	944	1,042	1,755	2,177	N	N	N	N	-	-
V.I.	31	63	208	125	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	-	U	-	U	-	U	-	U

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

[*] Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

[†] Chlamydia refers to genital infections caused by *C. trachomatis*.

[§] Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update October 26, 2003.

[¶] Contains data reported through National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 15, 2003, and November 16, 2002 (46th Week)*

	Escherichia coli, Enterohemorrhagic (EHEC)									
	O157:H7		Shiga toxin positive, serogroup non-O157		Shiga toxin positive, not serogrouped		Giardiasis		Gonorrhea	
Reporting area	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	2,334	3,416	238	175	123	45	16,010	18,432	276,386	312,283
NEW ENGLAND	148	252	53	46	16	5	1,235	1,615	6,275	6,889
Maine	10	36	3	8	1	-	169	190	162	123
N.H.	12	33	2	-	-	-	22	41	76	112
Vt.	16	12	-	1	-	1	112	131	76	84
Mass.	63	115	8	19	15	4	617	870	2,674	2,903
R.I.	1	12	-	1	-	-	95	140	836	818
Conn.	46	44	40	17	-	-	220	243	2,451	2,849
MID. ATLANTIC	221	381	16	1	35	7	3,126	3,776	37,079	37,702
Upstate N.Y.	88	155	10	-	18	-	923	1,103	6,898	7,630
N.Y. City	5	16	-	-	-	-	1,001	1,304	11,709	11,281
N.J.	20	59	1	-	-	1	314	434	6,292	6,932
Pa.	108	151	5	1	17	6	888	935	12,180	11,859
E.N. CENTRAL	524	798	23	31	22	4	2,656	3,229	55,669	66,392
Ohio	126	147	17	11	21	3	816	836	15,790	19,439
Ind.	79	73	-	1	-	-	-	-	5,689	6,650
Ill.	108	174	-	6	-	-	685	913	17,524	21,633
Mich.	84	131	-	3	-	1	657	849	12,148	13,087
Wis.	127	273	6	10	1	-	498	631	4,518	5,583
W.N. CENTRAL	412	481	50	30	20	5	1,810	1,878	14,698	16,036
Minn.	129	152	20	25	1	-	700	708	2,454	2,759
Iowa	99	114	-	-	-	-	250	285	775	1,213
Mo.	84	68	17	-	1	-	449	454	7,575	7,941
N. Dak.	13	18	4	-	8	1	35	30	56	66
S. Dak.	28	39	4	2	-	-	74	72	204	238
Nebr.	33	59	4	3	-	-	108	158	1,414	1,389
Kans.	26	31	1	-	10	4	194	171	2,220	2,430
S. ATLANTIC	142	342	62	31	9	1	2,474	2,628	68,668	79,058
Del.	11	9	N	N	N	N	41	52	1,018	1,404
Md.	12	26	-	-	-	-	105	105	6,925	8,117
D.C.	1	-	-	-	-	-	46	43	2,222	2,374
Va.	38	61	10	9	-	-	321	275	7,025	9,054
W. Va.	5	9	-	-	-	1	37	53	766	865
N.C.	4	130	26	-	-	-	N	N	13,498	14,208
S.C.	2	5	-	-	-	-	128	120	7,551	8,147
Ga.	28	43	3	7	-	-	834	838	13,875	15,870
Fla.	41	59	23	15	9	-	962	1,142	15,788	19,019
E.S. CENTRAL	77	103	2	-	7	10	319	350	22,731	26,986
Ky.	25	30	2	-	7	10	N	N	3,198	3,336
Tenn.	33	44	-	-	-	-	160	171	7,471	8,379
Ala.	13	18	-	-	-	-	159	179	6,908	9,148
Miss.	6	11	-	-	-	-	-	-	5,154	6,123
W.S. CENTRAL	82	105	5	2	9	8	267	228	36,881	42,991
Ark.	11	11	-	-	-	-	133	154	3,486	4,156
La.	3	4	-	-	-	-	9	6	9,247	10,435
Okla.	27	22	-	-	-	-	124	66	4,168	4,224
Tex.	41	68	5	2	9	8	1	2	19,980	24,176
MOUNTAIN	304	327	24	27	5	5	1,431	1,490	8,643	10,031
Mont.	16	29	-	-	-	-	98	78	93	99
Idaho	76	42	15	16	-	-	179	119	66	82
Wyo.	4	14	1	2	-	-	20	29	39	55
Colo.	70	97	3	6	5	5	402	499	2,307	3,136
N. Mex.	10	12	4	3	-	-	44	135	1,007	1,334
Ariz.	36	33	N	N	N	N	234	188	3,060	3,284
Utah	70	72	-	-	-	-	338	298	316	289
Nev.	22	28	1	-	-	-	116	144	1,755	1,752
PACIFIC	424	627	3	7	-	-	2,692	3,238	25,742	26,198
Wash.	105	139	1	-	-	-	307	399	2,417	2,562
Oreg.	94	202	2	7	-	-	361	398	878	763
Calif.	213	244	-	-	-	-	1,876	2,258	21,233	21,679
Alaska	4	7	-	-	-	-	76	104	469	544
Hawaii	8	35	-	-	-	-	72	79	745	650
Guam	N	N	-	-	-	-	-	7	-	42
P.R.	-	1	-	-	36	-	129	79	184	312
V.I.	-	-	-	-	-	-	-	-	55	31
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) **Provisional cases of selected notifiable diseases, United States, weeks ending November 15, 2003, and November 16, 2002 (46th Week)***

	Haemophilus influenzae, invasive†								Hepatitis (viral, acute), by type	
	All ages		Age <5 years							
	All serotypes		Serotype b		Non-serotype b		Unknown serotype		A	
Reporting area	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	1,463	1,474	19	28	79	123	165	134	6,190	7,970
NEW ENGLAND	106	111	1	-	5	10	5	2	295	273
Maine	4	1	-	-	-	-	1	-	17	8
N.H.	11	8	1	-	-	-	-	-	11	11
Vt.	8	7	-	-	-	-	-	-	6	1
Mass.	46	43	-	-	5	4	3	2	179	133
R.I.	6	10	-	-	-	-	1	-	14	30
Conn.	31	42	-	-	-	6	-	-	68	90
MID. ATLANTIC	324	273	-	2	1	14	45	22	1,380	1,028
Upstate N.Y.	120	105	-	2	1	4	13	8	129	165
N.Y. City	53	63	-	-	-	-	10	9	389	410
N.J.	55	52	-	-	-	-	7	5	137	173
Pa.	96	53	-	-	-	10	15	-	725	280
E.N. CENTRAL	212	284	4	3	8	12	31	41	583	966
Ohio	63	70	-	-	-	1	11	8	107	269
Ind.	42	38	1	1	4	7	-	-	61	46
Ill.	69	113	-	-	-	-	15	20	180	251
Mich.	21	15	3	2	4	4	1	-	193	211
Wis.	17	48	-	-	-	-	4	13	42	189
W.N. CENTRAL	110	66	2	1	7	2	15	6	164	271
Minn.	44	43	2	1	7	2	2	4	37	39
Iowa	-	1	-	-	-	-	-	-	27	61
Mo.	40	12	-	-	-	-	12	2	61	79
N. Dak.	3	4	-	-	-	-	-	-	1	3
S. Dak.	1	1	-	-	-	-	-	-	-	3
Nebr.	3	-	-	-	-	-	-	-	11	17
Kans.	19	5	-	-	-	-	1	-	27	69
S. ATLANTIC	349	320	3	5	14	15	21	24	1,620	2,183
Del.	-	-	-	-	-	-	-	-	7	15
Md.	82	80	1	2	6	3	1	1	158	282
D.C.	-	-	-	-	-	-	-	-	38	73
Va.	51	29	-	-	-	-	6	4	94	130
W. Va.	15	17	-	-	-	1	-	1	14	18
N.C.	36	30	-	-	3	3	2	-	98	198
S.C.	4	12	-	-	-	-	1	2	35	56
Ga.	58	71	-	-	-	-	5	11	788	443
Fla.	103	81	2	3	5	8	6	5	388	968
E.S. CENTRAL	71	62	1	1	2	5	10	11	240	252
Ky.	6	6	-	-	2	1	-	1	29	41
Tenn.	43	31	-	-	-	1	6	7	181	112
Ala.	20	16	1	1	-	3	3	1	15	37
Miss.	2	9	-	-	-	-	1	2	15	62
W.S. CENTRAL	63	53	1	2	8	10	5	2	351	962
Ark.	7	1	-	-	1	-	-	-	19	68
La.	12	7	-	-	-	-	5	2	51	81
Okla.	42	43	-	-	7	10	-	-	20	46
Tex.	2	2	1	2	-	-	-	-	261	767
MOUNTAIN	141	171	4	6	19	37	21	15	428	497
Mont.	-	-	-	-	-	-	-	-	8	13
Idaho	4	2	-	-	-	-	1	1	-	29
Wyo.	1	2	-	-	-	-	-	-	1	3
Colo.	35	31	-	-	-	-	7	3	67	71
N. Mex.	14	25	-	-	4	6	1	1	19	28
Ariz.	64	82	4	4	6	25	8	6	244	254
Utah	13	17	-	1	5	4	4	1	42	51
Nev.	10	12	-	1	4	2	-	3	47	48
PACIFIC	87	134	3	8	15	18	12	11	1,129	1,538
Wash.	11	3	-	2	7	1	3	-	59	143
Oreg.	40	52	-	-	-	-	4	3	54	57
Calif.	20	43	3	6	8	17	4	4	997	1,303
Alaska	-	1	-	-	-	-	-	1	8	10
Hawaii	16	35	-	-	-	-	1	3	11	25
Guam	-	-	-	-	-	-	-	-	-	1
P.R.	-	1	-	-	-	-	-	-	50	218
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

† Non-serotype b: nontypeable and type other than b; Unknown serotype: type unknown or not reported. Previously, cases reported without type information were counted as non-serotype b.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 15, 2003, and November 16, 2002 (46th Week)*

	Hepatitis (viral, acute), by type									
	B		C		Legionellosis		Listeriosis		Lyme disease	
Reporting area	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	6,133	6,562	1,685	1,615	1,784	1,125	549	576	15,844	20,060
NEW ENGLAND	227	265	6	19	89	105	43	59	3,075	6,533
Maine	1	11	-	-	2	3	7	5	201	102
N.H.	11	20	-	-	6	6	3	4	95	237
Vt.	3	6	6	13	6	35	1	3	42	33
Mass.	177	138	-	6	38	42	14	33	982	1,778
R.I.	13	26	-	-	14	5	-	1	529	327
Conn.	22	64	U	U	23	14	18	13	1,226	4,056
MID. ATLANTIC	789	1,374	144	97	507	322	107	172	10,313	10,336
Upstate N.Y.	115	105	39	41	141	93	32	53	4,108	4,542
N.Y. City	265	676	-	-	45	61	16	37	5	57
N.J.	165	294	-	5	62	31	15	33	1,786	2,246
Pa.	244	299	105	51	259	137	44	49	4,414	3,491
E.N. CENTRAL	367	604	147	102	361	264	63	75	780	1,224
Ohio	126	83	10	2	213	109	22	21	79	67
Ind.	33	43	8	-	24	20	7	10	20	20
Ill.	1	138	16	21	3	25	7	18	33	47
Mich.	176	295	113	75	105	75	19	18	10	26
Wis.	31	45	-	4	16	35	8	8	638	1,064
W.N. CENTRAL	289	201	230	625	59	60	20	16	371	363
Minn.	31	28	8	2	3	14	10	1	259	268
Iowa	11	18	1	1	9	12	-	2	45	41
Mo.	203	103	220	607	30	17	5	9	55	39
N. Dak.	2	5	-	-	1	-	-	1	-	1
S. Dak.	2	2	-	1	2	4	-	1	1	2
Nebr.	23	24	1	14	4	13	4	1	2	6
Kans.	17	21	-	-	10	-	1	1	9	6
S. ATLANTIC	1,893	1,536	144	186	476	191	115	76	1,042	1,269
Del.	5	13	-	-	25	9	N	N	173	178
Md.	121	116	17	9	122	44	24	18	580	695
D.C.	10	21	-	-	18	6	-	-	14	22
Va.	163	176	7	15	88	24	8	7	83	145
W. Va.	29	18	4	3	16	-	6	-	22	17
N.C.	148	207	11	25	36	11	16	6	95	124
S.C.	146	110	24	4	7	8	4	8	8	20
Ga.	704	407	5	63	29	18	29	12	16	2
Fla.	567	468	76	67	135	71	28	25	51	66
E.S. CENTRAL	382	347	77	126	88	41	29	20	58	68
Ky.	63	50	15	4	40	19	7	4	15	22
Tenn.	176	121	18	26	32	14	8	11	15	24
Ala.	57	92	7	10	13	8	12	4	5	11
Miss.	86	84	37	86	3	-	2	1	23	11
W.S. CENTRAL	885	954	782	306	58	32	41	34	77	136
Ark.	59	105	3	10	2	-	1	-	-	3
La.	100	120	97	92	1	4	2	4	6	5
Okla.	41	65	2	5	7	3	3	9	-	-
Tex.	685	664	680	199	48	25	35	21	71	128
MOUNTAIN	542	543	47	49	63	48	30	27	19	17
Mont.	16	9	2	1	4	3	2	-	-	-
Idaho	-	6	-	1	3	1	2	2	3	4
Wyo.	29	17	-	5	2	2	-	-	2	2
Colo.	74	70	15	6	13	8	10	6	4	1
N. Mex.	31	144	-	2	2	2	2	3	1	1
Ariz.	262	195	7	4	11	12	10	12	3	3
Utah	57	46	-	4	21	14	-	3	3	5
Nev.	73	56	23	26	7	6	4	1	3	1
PACIFIC	759	738	108	105	83	62	101	97	109	114
Wash.	62	67	15	24	10	5	5	8	3	10
Oreg.	98	117	13	11	N	N	4	9	15	12
Calif.	571	537	77	69	73	54	87	72	88	89
Alaska	9	8	1	-	-	2	-	-	3	3
Hawaii	19	9	2	1	-	1	5	8	N	N
Guam	-	1	-	-	-	-	-	-	-	-
P.R.	80	169	-	-	-	-	-	2	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 15, 2003, and November 16, 2002 (46th Week)*

Reporting area	Malaria		Meningococcal disease		Pertussis		Rabies, animal		Rocky Mountain spotted fever	
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	1,010	1,270	1,387	1,587	6,561	7,303	5,066	6,962	807	967
NEW ENGLAND	40	72	65	84	849	721	517	839	-	7
Maine	3	5	6	4	12	17	61	53	-	-
N.H.	4	7	3	11	60	18	13	45	-	-
Vt.	2	4	3	4	60	137	30	87	-	-
Mass.	11	31	41	46	679	509	198	275	-	3
R.I.	2	7	2	5	17	13	55	70	-	4
Conn.	18	18	10	14	21	27	160	309	-	-
MID. ATLANTIC	245	346	162	189	809	446	845	1,180	35	55
Upstate N.Y.	53	43	43	44	487	299	376	637	2	-
N.Y. City	117	217	29	34	-	20	6	17	12	10
N.J.	37	40	22	27	65	2	62	171	10	16
Pa.	38	46	68	84	257	125	401	355	11	29
E.N. CENTRAL	81	153	194	242	558	859	152	161	15	31
Ohio	20	21	52	72	242	380	51	39	10	12
Ind.	2	13	40	31	61	124	27	31	1	4
Ill.	26	61	43	53	-	157	23	31	-	12
Mich.	23	45	41	39	102	50	44	46	4	3
Wis.	10	13	18	47	153	148	7	14	-	-
W.N. CENTRAL	44	57	133	137	385	667	515	447	67	104
Minn.	21	17	26	34	141	341	36	37	1	-
Iowa	5	4	25	22	109	113	97	73	2	3
Mo.	5	15	61	45	78	134	51	49	53	96
N. Dak.	1	1	1	3	6	6	52	50	-	-
S. Dak.	3	2	1	2	5	6	67	87	5	1
Nebr.	-	5	8	23	7	8	58	-	3	4
Kans.	9	13	11	8	39	59	154	151	3	-
S. ATLANTIC	283	298	238	259	600	383	2,299	2,401	493	456
Del.	3	5	8	7	8	3	57	24	1	1
Md.	68	102	24	8	74	59	255	365	103	39
D.C.	13	20	-	-	3	2	-	-	1	2
Va.	36	30	24	41	90	133	469	532	29	37
W. Va.	4	3	6	4	18	31	79	161	5	2
N.C.	21	21	32	30	118	40	711	646	241	274
S.C.	3	7	21	28	156	41	211	133	33	69
Ga.	55	49	30	29	32	26	346	377	68	19
Fla.	80	61	93	112	101	48	171	163	12	13
E.S. CENTRAL	19	19	77	89	130	237	170	207	103	125
Ky.	8	7	17	15	43	92	37	25	2	5
Tenn.	5	3	26	36	65	104	99	108	62	79
Ala.	3	4	15	21	16	32	33	70	12	14
Miss.	3	5	19	17	6	9	1	4	27	27
W.S. CENTRAL	75	73	160	196	566	1,496	206	1,146	84	171
Ark.	4	3	13	23	37	486	25	94	31	97
La.	4	4	32	41	6	7	-	-	-	-
Okla.	4	9	16	20	24	35	181	109	42	61
Tex.	63	57	99	112	499	968	-	943	11	13
MOUNTAIN	44	46	69	87	855	961	164	299	9	14
Mont.	-	2	5	2	5	5	20	18	1	1
Idaho	1	-	7	4	71	65	15	38	2	-
Wyo.	1	-	2	-	123	11	6	18	2	5
Colo.	21	23	22	23	311	384	38	59	2	2
N. Mex.	3	3	8	4	63	181	5	10	-	1
Ariz.	13	10	15	29	126	172	63	132	-	-
Utah	4	5	2	5	123	96	14	13	2	-
Nev.	1	3	8	20	33	47	3	11	-	5
PACIFIC	179	206	289	304	1,809	1,533	198	282	1	4
Wash.	24	23	29	60	638	411	-	-	-	-
Oreg.	10	9	53	43	419	168	6	14	-	3
Calif.	137	165	194	189	735	922	184	242	1	1
Alaska	1	2	3	4	7	4	8	26	-	-
Hawaii	7	7	10	8	10	28	-	-	-	-
Guam	-	-	-	1	-	2	-	-	-	-
P.R.	1	1	5	7	1	3	67	82	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 15, 2003, and November 16, 2002 (46th Week)*

							Streptococcus pneumoniae, invasive			
	Salmonellosis		Shigellosis		Streptococcal disease, invasive, group A		Drug resistant, all ages		Age <5 years	
Reporting area	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	36,277	38,884	19,375	18,766	4,677	4,101	1,821	2,148	382	316
NEW ENGLAND	1,867	2,025	287	309	348	296	40	103	8	3
Maine	119	132	6	8	26	20	-	-	-	-
N.H.	100	126	5	11	21	35	-	-	N	N
Vt.	64	71	7	1	19	9	6	5	4	2
Mass.	1,107	1,136	193	191	166	100	N	N	N	N
R.I.	118	153	15	17	14	15	10	13	4	1
Conn.	359	407	61	81	102	117	24	85	U	U
MID. ATLANTIC	4,056	5,219	2,000	1,610	824	648	114	102	85	72
Upstate N.Y.	1,017	1,373	465	281	332	254	63	80	67	58
N.Y. City	1,155	1,265	341	439	114	144	U	U	U	U
N.J.	483	959	240	569	134	140	N	N	N	N
Pa.	1,401	1,622	954	321	244	110	51	22	18	14
E.N. CENTRAL	4,795	5,059	1,533	1,946	951	876	380	208	154	128
Ohio	1,242	1,246	273	559	272	190	249	62	86	19
Ind.	521	512	147	102	97	47	131	144	44	56
Ill.	1,525	1,667	780	942	182	249	-	2	-	-
Mich.	705	804	222	168	331	275	N	N	N	N
Wis.	802	830	111	175	69	115	N	N	24	53
W.N. CENTRAL	2,306	2,365	743	974	301	229	145	419	52	53
Minn.	506	500	96	203	147	113	-	292	43	49
Iowa	356	459	75	116	N	N	N	N	N	N
Mo.	903	768	352	172	68	42	11	5	2	1
N. Dak.	37	40	4	18	14	3	3	1	7	3
S. Dak.	111	108	16	154	21	13	1	1	-	-
Nebr.	131	166	101	223	24	23	-	25	N	N
Kans.	262	324	99	88	27	35	130	95	N	N
S. ATLANTIC	9,783	10,096	6,519	6,225	812	661	940	978	18	32
Del.	87	90	154	294	6	2	1	3	N	N
Md.	782	845	545	1,054	245	107	-	-	-	22
D.C.	45	75	69	59	13	8	2	-	7	3
Va.	978	1,101	400	887	93	69	N	N	N	N
W. Va.	116	137	-	12	31	19	65	42	11	7
N.C.	1,199	1,367	898	399	94	112	N	N	U	U
S.C.	664	743	441	109	36	36	126	171	N	N
Ga.	1,998	1,784	1,522	1,525	108	120	222	246	N	N
Fla.	3,914	3,954	2,490	1,886	186	188	524	516	N	N
E.S. CENTRAL	2,454	2,996	847	1,335	186	106	125	120	-	-
Ky.	355	349	120	164	43	19	16	17	N	N
Tenn.	684	748	322	115	143	87	109	103	N	N
Ala.	498	793	242	734	-	-	-	-	N	N
Miss.	917	1,106	163	322	-	-	-	-	-	-
W.S. CENTRAL	4,365	4,318	4,044	2,883	322	265	53	171	60	24
Ark.	738	998	93	184	5	7	8	7	-	-
La.	420	742	226	439	1	1	45	164	8	9
Okla.	436	462	765	533	80	41	N	N	32	3
Tex.	2,771	2,116	2,960	1,727	236	216	N	N	20	12
MOUNTAIN	2,020	2,006	1,117	822	394	507	21	47	5	4
Mont.	103	81	2	3	2	-	-	-	-	-
Idaho	160	135	28	13	18	9	N	N	N	N
Wyo.	73	93	7	8	2	7	4	13	-	-
Colo.	432	550	273	186	121	112	-	-	-	-
N. Mex.	231	277	217	197	96	97	17	33	-	-
Ariz.	659	505	485	339	144	252	-	-	N	N
Utah	203	167	46	29	9	30	-	-	5	4
Nev.	159	198	59	47	2	-	-	1	-	-
PACIFIC	4,631	4,800	2,285	2,662	539	513	3	-	-	-
Wash.	486	479	138	158	53	60	-	-	N	N
Oreg.	380	314	205	97	N	N	N	N	N	N
Calif.	3,507	3,691	1,893	2,336	380	368	N	N	N	N
Alaska	64	75	9	5	-	-	-	-	N	N
Hawaii	194	241	40	66	106	85	3	-	-	-
Guam	-	39	-	32	-	-	-	4	-	-
P.R.	321	505	8	30	N	N	N	N	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 15, 2003, and November 16, 2002 (46th Week)*

	Syphilis				Tuberculosis		Typhoid fever		Varicella (Chickenpox)
	Primary & secondary		Congenital						
Reporting area	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003
UNITED STATES	5,955	5,971	314	380	9,840	11,232	279	293	11,174
NEW ENGLAND	178	126	1	1	287	368	23	13	1,616
Maine	7	2	1	-	5	20	-	-	772
N.H.	14	6	-	-	7	13	2	-	-
Vt.	1	1	-	-	7	4	-	-	688
Mass.	119	84	-	1	190	195	12	7	151
R.I.	16	6	-	-	28	46	2	-	5
Conn.	21	27	-	-	50	90	7	6	-
MID. ATLANTIC	755	658	55	60	1,866	1,954	47	74	35
Upstate N.Y.	41	29	9	4	249	282	10	9	N
N.Y. City	426	386	31	24	1,002	942	17	40	-
N.J.	142	148	15	31	359	438	14	17	-
Pa.	146	95	-	1	256	292	6	8	35
E.N. CENTRAL	769	1,087	65	58	992	1,124	23	31	4,876
Ohio	188	147	3	3	177	198	2	6	1,027
Ind.	44	55	10	3	113	110	4	2	-
Ill.	301	422	19	35	468	525	7	15	-
Mich.	225	439	33	17	182	232	10	4	3,135
Wis.	11	24	-	-	52	59	-	4	714
W.N. CENTRAL	127	113	4	2	418	460	4	9	71
Minn.	39	55	-	1	166	203	-	3	N
Iowa	7	2	-	-	25	24	2	-	N
Mo.	46	31	4	1	99	117	1	2	-
N. Dak.	2	-	-	-	4	6	-	-	71
S. Dak.	2	-	-	-	16	11	-	-	-
Nebr.	8	6	-	-	18	23	1	4	-
Kans.	23	19	-	-	90	76	-	-	-
S. ATLANTIC	1,603	1,523	55	83	2,024	2,297	49	40	1,932
Del.	6	11	-	-	23	18	-	-	28
Md.	261	180	10	15	213	257	8	7	-
D.C.	51	52	-	1	-	-	-	-	27
Va.	71	62	1	1	223	236	12	7	478
W. Va.	2	2	-	-	19	28	-	-	1,169
N.C.	139	261	16	18	281	308	9	2	N
S.C.	87	118	4	11	147	145	-	-	230
Ga.	415	332	6	13	327	468	7	5	-
Fla.	571	505	18	24	791	837	13	19	N
E.S. CENTRAL	285	425	10	27	591	662	5	4	2
Ky.	31	83	1	3	113	117	1	4	N
Tenn.	121	155	3	9	188	254	2	-	N
Ala.	106	143	4	9	202	181	2	-	-
Miss.	27	44	2	6	88	110	-	-	2
W.S. CENTRAL	836	754	57	82	1,376	1,648	32	28	2,096
Ark.	49	31	-	11	79	112	-	-	-
La.	147	135	-	-	-	-	-	-	11
Okla.	59	60	1	2	129	144	1	2	N
Tex.	581	528	56	69	1,168	1,392	31	26	2,085
MOUNTAIN	264	283	22	16	333	374	5	9	546
Mont.	-	-	-	-	5	6	-	-	N
Idaho	11	7	-	-	8	13	-	-	N
Wyo.	-	-	-	-	4	3	-	-	43
Colo.	24	58	3	2	62	83	3	4	-
N. Mex.	57	32	1	-	6	33	-	1	3
Ariz.	158	168	18	14	193	196	2	-	4
Utah	4	6	-	-	33	26	-	2	496
Nev.	10	12	-	-	22	14	-	2	-
PACIFIC	1,138	1,002	45	51	1,953	2,345	91	85	-
Wash.	70	54	-	1	212	211	3	6	-
Oreg.	40	20	-	-	88	101	5	2	-
Calif.	1,026	920	45	49	1,544	1,863	82	72	-
Alaska	-	-	-	-	50	43	-	-	-
Hawaii	2	8	-	1	59	127	1	5	-
Guam	-	6	-	-	-	62	-	-	-
P.R.	177	257	1	21	86	90	-	-	400
V.I.	1	1	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-

N: Not notifiable. U: Unavailable. - : No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE III. Deaths in 122 U.S. cities,* week ending November 15, 2003 (46th Week)

	All causes, by age (years)						
Reporting Area	**All Ages**	**≥65**	**45-64**	**25-44**	**1-24**	**<1**	**P&I[†] Total**
NEW ENGLAND	442	315	87	28	4	8	29
Boston, Mass.	129	91	24	8	1	5	11
Bridgeport, Conn.	32	21	6	4	1	-	1
Cambridge, Mass.	18	12	5	1	-	-	-
Fall River, Mass.	29	22	4	3	-	-	4
Hartford, Conn.	60	45	10	3	1	1	3
Lowell, Mass.	18	14	3	1	-	-	1
Lynn, Mass.	11	7	4	-	-	-	1
New Bedford, Mass.	17	15	2	-	-	-	1
New Haven, Conn.	U	U	U	U	U	U	U
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	4	3	1	-	-	-	-
Springfield, Mass.	42	24	12	5	-	1	2
Waterbury, Conn.	20	16	2	1	-	1	2
Worcester, Mass.	62	45	14	2	1	-	3
MID. ATLANTIC	1,946	1,319	418	128	34	38	101
Albany, N.Y.	47	32	10	-	1	4	4
Allentown, Pa.	18	15	3	-	-	-	-
Buffalo, N.Y.	85	64	7	7	4	3	6
Camden, N.J.	38	27	5	4	-	2	-
Elizabeth, N.J.	23	14	6	2	-	1	-
Erie, Pa.	45	31	11	3	-	-	1
Jersey City, N.J.	35	23	3	1	-	-	-
New York City, N.Y.	907	612	211	60	16	8	42
Newark, N.J.	45	24	14	6	-	1	3
Paterson, N.J.	21	13	6	1	1	-	-
Philadelphia, Pa.	277	144	79	29	10	14	7
Pittsburgh, Pa.[§]	38	24	7	3	2	2	2
Reading, Pa.	20	18	2	-	-	-	-
Rochester, N.Y.	137	115	16	5	-	1	16
Schenectady, N.Y.	25	23	2	-	-	-	1
Scranton, Pa.	30	19	10	1	-	-	-
Syracuse, N.Y.	55	40	11	3	-	1	6
Trenton, N.J.	44	38	5	-	-	1	4
Utica, N.Y.	28	21	5	2	-	-	8
Yonkers, N.Y.	28	22	5	1	-	-	1
E.N. CENTRAL	2,029	1,338	442	153	28	63	122
Akron, Ohio	52	34	16	1	-	1	4
Canton, Ohio	35	25	7	3	-	-	8
Chicago, Ill.	371	209	83	45	5	24	15
Cincinnati, Ohio	60	39	13	5	1	2	6
Cleveland, Ohio	189	121	43	12	5	8	10
Columbus, Ohio	200	139	39	17	2	3	9
Dayton, Ohio	114	79	25	8	-	2	3
Detroit, Mich.	177	94	49	17	10	7	11
Evansville, Ind.	42	35	7	-	-	-	7
Fort Wayne, Ind.	46	32	11	2	-	1	3
Gary, Ind.	7	6	1	-	-	-	-
Grand Rapids, Mich.	47	30	9	5	-	3	1
Indianapolis, Ind.	202	143	43	10	2	4	12
Lansing, Mich.	40	29	7	2	1	1	1
Milwaukee, Wis.	123	87	24	9	-	3	11
Peoria, Ill.	66	47	12	4	2	1	3
Rockford, Ill.	45	29	12	3	-	1	4
South Bend, Ind.	49	40	6	3	-	-	3
Toledo, Ohio	94	67	21	4	-	2	11
Youngstown, Ohio	70	53	14	3	-	-	-
W.N. CENTRAL	448	308	81	35	14	10	33
Des Moines, Iowa	67	47	13	5	1	1	7
Duluth, Minn.	26	22	3	-	1	-	2
Kansas City, Kans.	20	13	3	3	1	-	1
Kansas City, Mo.	76	49	17	6	2	2	3
Lincoln, Nebr.	31	26	3	2	-	-	2
Minneapolis, Minn.	50	34	7	5	3	1	4
Omaha, Nebr.	79	51	16	8	2	2	8
St. Louis, Mo.	U	U	U	U	U	U	U
St. Paul, Minn.	39	27	6	4	1	1	3
Wichita, Kans.	60	39	13	2	3	3	3
S. ATLANTIC	1,093	714	240	78	33	27	62
Atlanta, Ga.	102	59	29	10	2	2	3
Baltimore, Md.	172	109	34	16	7	6	18
Charlotte, N.C.	103	62	23	13	3	2	6
Jacksonville, Fla.	121	78	34	3	4	1	7
Miami, Fla.	71	43	15	5	5	3	2
Norfolk, Va.	53	35	13	2	1	2	1
Richmond, Va.	61	36	15	6	3	1	2
Savannah, Ga.	54	33	13	4	2	2	8
St. Petersburg, Fla.	64	47	10	1	3	3	1
Tampa, Fla.	170	127	30	9	2	2	11
Washington, D.C.	101	67	23	7	1	3	1
Wilmington, Del.	21	18	1	2	-	-	2
E.S. CENTRAL	846	536	179	48	23	30	47
Birmingham, Ala.	159	97	47	7	5	3	7
Chattanooga, Tenn.	68	50	9	4	3	2	-
Knoxville, Tenn.	86	62	18	4	2	-	4
Lexington, Ky.	63	34	15	9	1	4	8
Memphis, Tenn.	232	136	49	18	9	20	14
Mobile, Ala.	73	44	21	4	3	1	4
Montgomery, Ala.	34	25	9	-	-	-	2
Nashville, Tenn.	131	88	11	2	-	-	8
W.S. CENTRAL	1,429	930	320	102	37	40	80
Austin, Tex.	93	59	21	7	4	2	5
Baton Rouge, La.	38	24	7	6	1	-	-
Corpus Christi, Tex.	47	36	7	2	-	2	-
Dallas, Tex.	219	129	55	20	5	10	16
El Paso, Tex.	86	67	15	1	3	-	3
Ft. Worth, Tex.	124	85	27	7	3	2	2
Houston, Tex.	386	235	100	24	12	15	29
Little Rock, Ark.	63	37	13	7	2	4	1
New Orleans, La.	46	26	13	7	-	-	-
San Antonio, Tex.	209	145	41	13	6	4	14
Shreveport, La.	28	21	5	2	-	-	5
Tulsa, Okla.	90	66	16	6	1	1	5
MOUNTAIN	1,024	617	191	63	22	17	55
Albuquerque, N.M.	117	84	17	8	4	4	8
Boise, Idaho	54	40	8	3	2	1	3
Colo. Springs, Colo.	57	44	10	2	-	1	3
Denver, Colo.	106	70	21	7	2	6	3
Las Vegas, Nev.	228	141	61	19	6	1	10
Ogden, Utah	33	21	8	3	-	1	-
Phoenix, Ariz.	119	3	-	2	-	-	8
Pueblo, Colo.	31	20	7	3	-	1	5
Salt Lake City, Utah	115	81	22	7	4	1	9
Tucson, Ariz.	164	113	37	9	4	1	6
PACIFIC	1,264	894	235	77	30	27	118
Berkeley, Calif.	23	12	7	2	1	1	5
Fresno, Calif.	124	85	21	16	1	1	15
Glendale, Calif.	9	5	3	1	-	-	-
Honolulu, Hawaii	78	59	11	2	3	3	8
Long Beach, Calif.	56	39	10	3	2	2	9
Los Angeles, Calif.	206	128	54	13	9	2	11
Pasadena, Calif.	20	16	2	2	-	-	4
Portland, Oreg.	132	86	28	11	3	3	9
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	154	116	22	8	3	5	15
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	151	105	34	9	-	3	22
Santa Cruz, Calif.	31	25	5	1	-	-	5
Seattle, Wash.	112	85	18	2	3	4	4
Spokane, Wash.	67	55	8	1	1	2	6
Tacoma, Wash.	101	78	12	6	4	1	5
TOTAL	10,521[¶]	6,971	2,193	712	225	260	647

U: Unavailable. -:No reported cases.

* Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of ≥100,000. 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 this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

[¶] Total includes unknown ages.

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 each week, send an e-mail message to *listserv@listserv.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/mmwr* or from CDC's file transfer protocol server at *ftp://ftp.cdc.gov/pub/publications/mmwr*. 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 888-232-3228.

All *MMWR* references are available on the Internet at http://www.cdc.gov/mmwr. Use the search function to find specific articles.

☆U.S. Government Printing Office: 2004-633-140/69158 Region IV ISSN: 0149-2195