



# MMWR™

## Morbidity and Mortality Weekly Report

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### Trends in Primary and Secondary Syphilis and HIV Infections in Men Who Have Sex with Men — San Francisco and Los Angeles, California, 1998–2002

Because syphilis infection facilitates acquisition and transmission of human immunodeficiency virus (HIV) (1,2), recent outbreaks of syphilis among men who have sex with men (MSM) in major U.S. cities (3), including San Francisco and Los Angeles (4,5), and reported increases in sexual risk behavior (5) have raised concerns about potential increases in HIV transmission. In 2002, MSM accounted for the majority of primary and secondary (P&S) syphilis cases in men reported in San Francisco (93%) and Los Angeles (81%). To investigate a potential change in HIV incidence associated with the syphilis outbreaks in the two cities, local, state, and federal health officials analyzed data from HIV counseling and testing centers and a municipal sexually transmitted disease (STD) clinic. This report describes the results of that investigation, which indicated that, as of 2002, the outbreaks of syphilis had not had a substantial impact on HIV incidence among MSM in these two cities. However, the continued increase in syphilis cases in MSM underscores the need for integrated HIV- and STD-prevention strategies to control syphilis outbreaks and prevent potential increases in HIV infections (6,7) and for further systematic studies of HIV incidence among MSM infected with syphilis.

For this analysis, numbers and characteristics of P&S syphilis cases among MSM in San Francisco and Los Angeles were determined from STD morbidity data. Rates of P&S syphilis per 100,000 MSM were calculated for the estimated 50,782 MSM living in San Francisco in 2001 (8). In 2002, approximately 47% and 18% of MSM with P&S syphilis in San Francisco and Los Angeles, respectively, had syphilis diagnosed at publicly funded sites, which included primarily STD clinics.

A sensitive/less sensitive HIV-1 enzyme immunoassay (EIA) (Vironostika HIV-1 Microelisa, bioMérieux, Durham, North Carolina) testing algorithm known as STARHS (9,10) was

used to estimate HIV incidence by using stored blood specimens for 1) MSM receiving confidential HIV counseling and testing at the City Clinic (SFCC), San Francisco's only municipal STD clinic, and 2) MSM receiving anonymous HIV counseling and testing at University of California at San Francisco AIDS Health Project (AHP) sites. For persons tested at AHP sites (1998–2002) and persons tested at SFCC (1998–2000), demographic and risk-factor information collected on the California HIV counseling and testing form was analyzed. For persons tested at SFCC (2001–2002), analogous information obtained from medical records was analyzed. Persons who tested reactive with the sensitive EIA and nonreactive with the less sensitive assay were considered recently HIV infected (mean seroconversion period: 170 days) (10). Annualized HIV incidence and 95% confidence intervals (CIs) based on a normal distribution were calculated; all reported p-values were obtained by using a chi-square test for trend.

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In Los Angeles, data from the California and CDC HIV counseling and testing forms were used to calculate the percentages and characteristics of MSM with newly diagnosed infections. These patients had received a confidential or anonymous HIV test at publicly funded sites during 1998–2002.

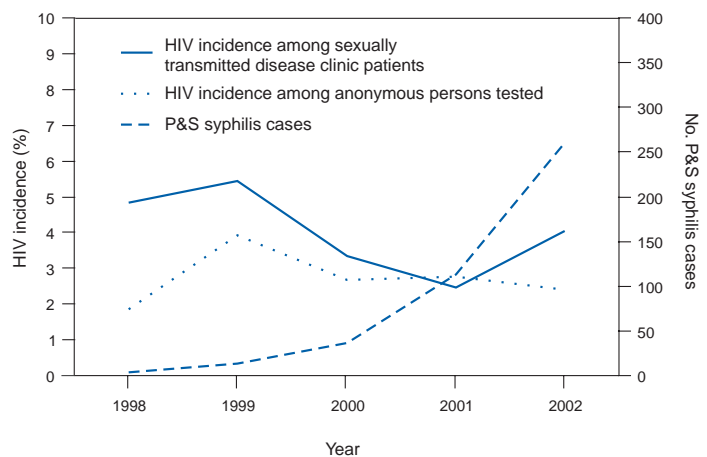
### San Francisco Surveillance Data

During 1998–2002, the number of P&S syphilis cases among MSM in San Francisco increased from four to 260 (Figure 1), and the P&S syphilis rate increased from eight to 512 per 100,000 MSM. In 2002, the median age of MSM P&S syphilis patients was 38 years; 70% were white, 14% were Hispanic, and 61% were HIV-infected. P&S syphilis cases among MSM at the SFCC also increased, from four in 1998 to 106 in 2002.

MSM receiving HIV testing had similar demographic characteristics and the two San Francisco testing populations. In 2002, at AHP and SFCC, respectively, the median age of these patients was 34 and 33 years; 70% and 61% were white, 3% and 6% were black, 11% and 19% were Hispanic, 12% and 14% were Asian/Pacific Islander (A/PI), and 4% and <1% were of other race/ethnicity.

Estimated HIV incidence among MSM who were tested in San Francisco was highest in 1999 (Figure 1, Table 1) and tended to decline from 1999 to 2002 at both sites; however, the trends were not statistically significant ( $p = 0.13$  for AHP;  $p = 0.36$  for SFCC). When injection-drug-using MSM were excluded from analyses, HIV incidence was lower (e.g., in 2002, incidence was 2.3% [95% CI = 1.0–3.5] at AHP and 3.3% [95% CI = 1.9–4.7] at SFCC), but temporal trends in

**FIGURE 1. Number of primary and secondary (P&S) syphilis cases among men who have sex with men (MSM) and incidence of human immunodeficiency virus (HIV) among MSM in two HIV-testing populations, by year — San Francisco, California, 1998–2002**



**TABLE 1. Number and rate\* of primary and secondary (P&S) syphilis cases among men who have sex with men (MSM†) and human immunodeficiency virus (HIV) incidence among MSM in two HIV-testing populations, by year — San Francisco, California, 1998–2002**

Year	P&S syphilis cases		No. P&S syphilis cases at SFCC <sup>§</sup>	MSM HIV testing at AIDS Health Project				MSM HIV testing at SFCC			
	No.	Rate		No. testing	No. with incident HIV infection	HIV incidence (%)	(95% CI) <sup>¶</sup>	No. testing	No. with incident HIV infection	HIV incidence (%)	(95% CI)
1998	4	8	4	2,726	23	1.9	(1.1–2.6)	791	17	4.8	(2.5–7.1)
1999	13	26	8	1,598	28	3.9	(2.5–5.4)	868	21	5.4	(3.1–7.8)
2000	36	71	12	1,721	21	2.7	(1.5–3.8)	1,324	20	3.3	(1.9–4.8)
2001	113	223	42	1,762	22	2.8	(1.6–3.9)	1,274	14	2.5	(1.2–3.7)
2002	260	512	106	1,280	14	2.4	(1.2–3.7)	1,544	28	4.0	(2.5–5.5)

\* Per 100,000 men who have sex with men.

† Men who reported having sex with men during the preceding 12 months.

§ San Francisco City Clinic.

¶ Confidence interval.

HIV incidence were similar. Median age of the 42 MSM with incident HIV infection at these testing sites in 2002 was 32 years; 23 (55%) were white, and 12 (29%) were Hispanic.

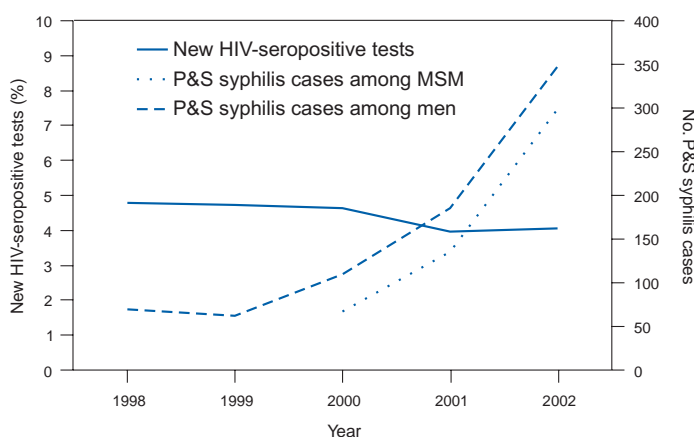
HIV incidence was estimated by STARHS for men who had P&S syphilis diagnosed at SFCC in 2002 and 2003 and who accepted confidential HIV-antibody and STARHS testing. Of 74 men, 16 (22%) were HIV seropositive, and four (25%) of these had a recent HIV infection identified by STARHS; all four of these patients reported having had HIV-seronegative test results within the previous 2 years. On the basis of STARHS, estimated HIV incidence in this population was 13.9% per year (95% CI = 0.3–27.5).

## Los Angeles Surveillance Data

During 2000–2002, P&S syphilis cases among MSM in Los Angeles County increased from 67 to 299, accounting for the majority of male syphilis patients (Figure 2). In 2002, median age of MSM with P&S syphilis was 37 years; 51% were white, 31% were Hispanic, and 58% were HIV infected.

MSM receiving HIV testing at Los Angeles County sites had similar demographic characteristics during 1998–2002. In 2002, the median age of 15,161 MSM who were tested was 32 years; 42% were white, 10% were black, 37% were Hispanic, 7% were A/PI, and 4% were of other race/ethnicity. The percentage of MSM with HIV newly diagnosed (i.e., without any previous HIV-positive test) decreased from 4.8% (608 of 12,693) in 1998 to 4.1% (615 of 15,161) in 2002 ( $p < 0.001$ ) (Table 2). In 2002, the 615 MSM who had newly diagnosed HIV had a median age of 32 years; 29% were white, 18% were black, and 45% were Hispanic. However, among MSM who had an HIV-negative test result within the previous 12 months, the percentage of men with a new HIV-positive test increased from 2.4% (102 of 4,196) in 1998 to 2.9% (186 of 6,446) in 2002 ( $p = 0.37$ ).

**FIGURE 2. Number of primary and secondary (P&S) syphilis cases among men who have sex with men (MSM) and percentage of newly identified human immunodeficiency virus (HIV)-seropositive MSM at county HIV-testing sites, by year — Los Angeles County, California, 1998–2002**



**TABLE 2. Number of primary and secondary (P&S) syphilis cases among men who have sex with men (MSM) and number and percentage of human immunodeficiency virus (HIV)-seropositive MSM at county HIV-testing sites, by year — Los Angeles County, California, 1998–2002**

Year	No. P&S syphilis patients*	No. patients tested for HIV <sup>†</sup>	HIV-positive patients		Newly diagnosed <sup>§</sup> HIV-positive patients	
			No.	(%)	No.	(%)
1998	—	12,693	759	(6.0)	608	(4.8)
1999	—	12,632	771	(6.1)	599	(4.7)
2000	67	12,527	717	(5.7)	581	(4.6)
2001	135	14,498	683	(4.7)	576	(4.0)
2002 <sup>¶</sup>	299	15,161	702	(4.6)	615	(4.1)

\* MSM who reported having sex with men during the time they likely contracted primary (preceding 90 days) or secondary (preceding 200 days) syphilis.

† MSM who reported having sex with men since their most recent HIV test or during the preceding 2 years.

§ MSM with no previous HIV-positive test.

¶ Provisional data.

**Reported by:** JW Dilley, San Francisco AIDS Health Project; JD Klausner, MD, W McFarland, PhD, TA Kellogg, MA, R Kohn, MPH, W Wong, MD, BT Louie, San Francisco Dept of Public Health; MM Taylor, MD, PR Kerndt, MD, J Carlos, MPH, CR Chavers, MSPH, Los Angeles County Dept of Public Health, Los Angeles; G Bolan, MD, California Dept of Health Svcs. SD Holmberg, MD, AE Greenberg, MD, RH Byers, PhD, Div of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention; KA Buchacz, PhD, P Patel, MD, JB King, MD, EIS officers, CDC.

**Editorial Note:** The number of new HIV infections among MSM at public HIV-testing sites in San Francisco and Los Angeles did not increase during 1999–2002, a period when syphilis cases among MSM increased substantially in both cities. Within the SFCC population, no temporal correlation was detected between an increase in the number of MSM P&S syphilis cases and the rates of new HIV infections among MSM who received HIV testing at this STD clinic. Whether the syphilis outbreaks are sentinel events indicating increased risk behavior that could eventually result in increased HIV incidence is not known.

The findings of this ecological analysis are subject to at least five limitations. First, whereas the overall P&S syphilis morbidity data were reported from both private and public providers, with the majority of MSM P&S syphilis cases being reported from private sources, HIV incidence (San Francisco) and new HIV diagnoses (Los Angeles) could be examined only for select populations at publicly funded HIV-testing sites. MSM attending public HIV-testing venues might differ in their demographics and risk behaviors from MSM who seek HIV testing from private providers or who have not been HIV tested. Second, changes in testing practices and number and characteristics of MSM in the two public HIV-testing populations might weaken inferences about trends in HIV incidence or new HIV diagnoses among these populations. Analyses might include persons who tested anonymously and repeatedly at SFCC, AHP, and Los Angeles HIV-testing sites, and potential changes in repeat HIV-testing patterns over time could affect HIV incidence trends. Third, the proportion of oral HIV antibody tests performed for MSM at AHP sites increased from 11% in 1998 to 36% in 2002, thus increasing the proportion of patients tested who were excluded from STARHS-based estimates of HIV incidence. Fourth, STARHS might misclassify a small percentage of persons with longstanding infection as recently infected and vice versa (9,10). Finally, the SFCC estimate of HIV incidence among MSM with P&S syphilis (13.9% per year) has wide associated variability (95% CI = 0.3–27.5) and must be interpreted with caution because not all male syphilis patients accepted HIV testing.

Despite the high HIV incidence in men with P&S syphilis, HIV incidence rates among MSM tested at large public sites in San Francisco and Los Angeles did not increase during 1999–2002. This stability likely is because 1) the number of new syphilis cases is small compared with the numbers of MSM at risk for HIV infection and 2) in both cities more than half of the MSM P&S syphilis patients had longstanding HIV infection before they acquired syphilis. However, if the outbreaks of syphilis continue unabated, HIV incidence among MSM at public HIV-testing sites and in the larger MSM community might increase. Recommendations include behavioral risk assessment, frequent STD screening, and prompt treatment of syphilis in HIV-infected persons and their partners to control syphilis outbreaks and prevent a potential increase in HIV infections.

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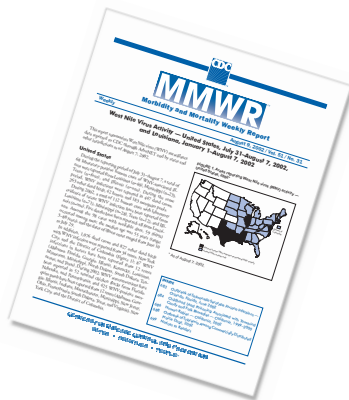
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## Adult Blood Lead Epidemiology and Surveillance — United States, 2002

CDC's state-based Adult Blood Lead Epidemiology and Surveillance (ABLES) program tracks laboratory-reported blood lead levels (BLLs) in adults. A national health objective for 2010 is to reduce to zero the number of adults with BLLs

dis·patch: *n*

(dis-'pach) 1 : a written message,  
particularly an official communication,  
sent with speed; see also *MMWR*.



know what matters.



$\geq 25$   $\mu\text{g}/\text{dL}$  (objective no. 20-07) (1). A second key ABLES measurement is BLLs  $\geq 40$   $\mu\text{g}/\text{dL}$ , the level under which the Occupational Safety and Health Administration allows workers to return to work after being removed with an elevated BLL, and the level under which an annual medical evaluation of health effects related to lead exposure is required (2,3). The most recent ABLES report provided data collected during 1994–2001 (4). This report presents ABLES data for 2002, the first year that individual rather than summary data were collected. The 2002 data indicate that approximately 95% of adult lead exposures were occupational, 94% of those exposed were male, and 91% were aged 25–64 years. The findings also indicated that the national decline in the number of adults with elevated BLLs continued in 2002; however, even greater prevention activities, particularly in work environments, will be necessary to achieve the 2010 health objective.

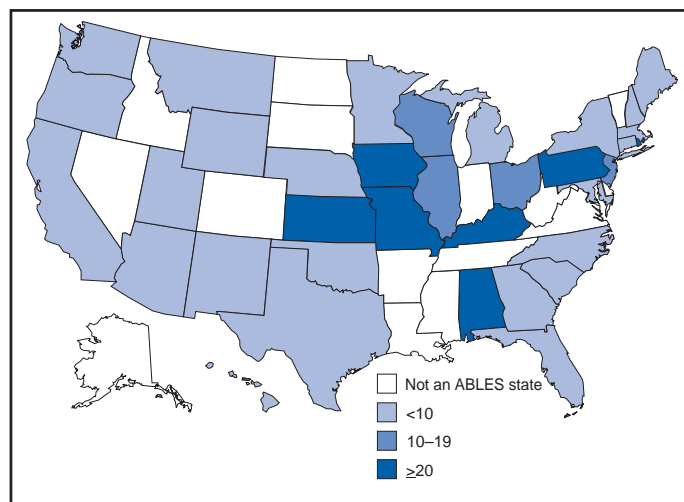
### Nationwide Magnitude and Trend

During 2002, a total of 10,658 adults from 35 states were reported with BLLs  $\geq 25$   $\mu\text{g}/\text{dL}$  (Figure 1). During 2001, a total of 9,943 adults from 23 states were reported with BLLs  $\geq 25$   $\mu\text{g}/\text{dL}$  (4). To compare yearly totals, the numbers of adults with elevated BLLs from each state were divided by the state's annual employed population aged  $\geq 16$  years to determine an annual state rate (5). The mean of the state rates in each year was then calculated to derive the average state rate. The average state rate for 2002 was 10.1 per 100,000 employed population, representing an 18% decrease from 2001 (12.3 per 100,000 employed population) (Figure 2) (4). Of the 10,658 adults with BLLs  $\geq 25$   $\mu\text{g}/\text{dL}$  in 2002, a total of 1.7 per 100,000 employed population (1,854) were reported with BLLs  $\geq 40$   $\mu\text{g}/\text{dL}$ , a 37% decrease compared with the 2.7 per 100,000 employed population (2,009) that were reported in 2001\* (4).

### Occupational Sources of Exposure

In 2002, ABLES began to collect individual data rather than summary data. These individual data for adults with BLLs  $\geq 25$   $\mu\text{g}/\text{dL}$  included Standard Industrial Classification (SIC) codes for the industries in which they worked and information regarding nonoccupational exposures. Twenty-seven of the 35 ABLES states provided SIC codes for 6,540 adults. These 27 states reported an additional 1,257 adults for whom SIC codes were unknown or unavailable. By industrial sector, among the 6,540 adults, 58% (3,771) were exposed in the manufacturing industry; 22% (1,458) in the construction

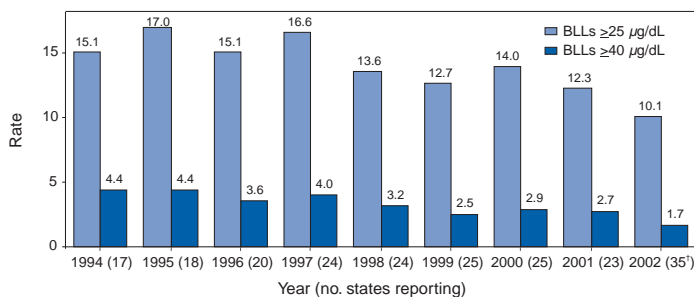
**FIGURE 1. Rate\* of adult blood lead levels  $\geq 25$   $\mu\text{g}/\text{dL}$ , by state — Adult Blood Lead Epidemiology and Surveillance program†, United States, 2002**



\* Per 100,000 employed persons aged  $\geq 16$  years, according to the Bureau of Labor Statistics' Current Population Survey.

† Alabama, Arizona, California, Connecticut, Florida, Georgia, Hawaii, Illinois, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Washington, Wisconsin, and Wyoming.

**FIGURE 2. Average state rate\* of adult elevated blood lead levels (BLLs), by year — Adult Blood Lead Epidemiology and Surveillance program†, United States, 1994–2002**



\* Per 100,000 employed persons aged  $\geq 16$  years, according to the Bureau of Labor Statistics' Current Population Survey. The average is determined by first calculating individual state rates for each year, and then calculating the average.

† Alabama, Arizona, California, Connecticut, Florida, Georgia, Hawaii, Illinois, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Washington, Wisconsin, and Wyoming.

industry; 8% (524) in mining; 7% (450) in the wholesale and retail trades; 3% (209) in the service industry; and 2% (128) in transportation and public utilities; finance, insurance, and real estate; or public administration. A further breakdown of

\* Rates differ slightly from those previously published (4) because the employed populations have been updated by the Bureau of Labor Statistics' Current Population Survey (5).

occupational exposure is provided by using the 10 SIC codes with the most exposed workers (Table).

### Nonoccupational Sources of Exposure

The same 27 states that provided SIC codes also provided exposure sources for 338 adults whose lead exposures were determined to be nonoccupational. This group represented 5% of the 6,878 (6,540 occupational plus 338 nonoccupational) adults with BLLs  $\geq 25$   $\mu\text{g}/\text{dL}$ . By state, percentages of nonoccupational exposures ranged from  $\geq 15\%$  in Connecticut, Maine, Maryland, Michigan, and Utah to  $< 1\%$  in Hawaii, Iowa, Montana, Nebraska, and Wisconsin. Among the 338 persons exposed to nonoccupational sources, 23% (78) were exposed from shooting firearms, 19% (65) from remodeling or renovation activities, 13% (45) from hobbies (e.g., casting, ceramics, and stained glass), 11% (36) from retained bullets or gunshot wounds, 7% (26) from pica, and 4% (13) from ingesting lead-contaminated food or liquids or nontraditional medicines.

### Distribution by State

For adults with BLLs  $\geq 25$   $\mu\text{g}/\text{dL}$ , with the exception of Alabama, states reporting prevalence rates of  $\geq 10$  per 100,000 employed population are clustered in the Midwest and lower Northeast (Figure 1). Rates ranged from a high of 46.9 per 100,000 employed population for Kansas to 0.8 for Arizona. Eighteen of the 23 states that reported BLLs in both 2001 and 2002 reported lower rates in 2002. The annual state rates of adults with BLLs  $\geq 40$   $\mu\text{g}/\text{dL}$  ranged from a high of 7.4 per 100,000 employed population for Alabama to no reported cases for Montana and Wyoming. Eighteen of the 23 states that reported in both 2001 and 2002 reported lower rates in 2002 for adults with BLLs  $\geq 40$   $\mu\text{g}/\text{dL}$ .

**TABLE. Number of workers with elevated blood lead levels (BLLs), by industry — Adult Blood Lead Epidemiology and Surveillance (ABLES) program\*, 2002**

Industry (Standard Industrial Classification [sic])	$\geq 25$ $\mu\text{g}/\text{dL}$	$\geq 40$ $\mu\text{g}/\text{dL}$
Manufacture of storage batteries (SIC 3691)	1,494	141
Painting, paperhanging, and decorating (SIC 1721)	863	236
Mining of lead and zinc ores (SIC 1031)	522	70
Secondary smelting (SIC 3341)	384	63
Wholesale distribution of electrical apparatus and equipment, wiring supplies, and construction materials (SIC 5063)	351	55
Manufacture of primary batteries (SIC 3692)	209	15
Bridge tunnel and elevated highway construction (SIC 1622)	149	16
Special trade contractors (e.g., lead abatement workers) (SIC 1799)	144	33
Primary smelting (SIC 3339)	121	17
Auto repair shops (e.g., radiator repair) (SIC 7539)	106	24

\* A total of 27 of 35 ABLES states reported; eight states (Alabama, Arizona, Georgia, Kentucky, North Carolina, Pennsylvania, Rhode Island, and Wyoming) did not track BLLs by SIC code.

**Reported by:** *RJ Roscoe, MS, JR Graydon, Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, CDC.*

**Editorial Note:** ABLES data for 2002 indicated that the nationwide rates of elevated BLLs in adults decreased, continuing their decline since 1994 (Figure 2). The decrease in rates could have resulted from improved prevention measures and also changes in employment patterns (e.g., decline in manufacturing jobs). The 2002 ABLES data provide nationwide information on individual adults for the first time; these data are expected to become more complete as reporting states become more experienced with the new individual reporting requirements.

The findings in this report are subject to at least two limitations. First, inconsistencies exist in the numerators used to calculate the rates. The number of adults with elevated BLLs reported by ABLES states is underreported because 1) not all employers provide BLL testing to all lead-exposed workers and 2) certain laboratories might not report all tests. In addition, these factors can vary among the 35 ABLES states. Second, using the employed population as denominator has the advantage of excluding unemployed adults, most of whom have little or no risk for lead exposure. However, because the distribution of jobs that include lead exposure varies among the ABLES states, caution should be exercised in comparing rates among states. Additional information regarding interpretation of specific state ABLES data is available at <http://www.cdc.gov/niosh/ables.html>.

Despite improvements in control of lead exposures, this hazard remains an occupational health problem in the United States. CDC's ABLES program continues to enhance surveillance for this preventable condition by increasing the number of participating states and by identifying the sources of persistent overexposures, helping states focus their intervention, education, and prevention activities.

### Acknowledgments

This report is based in part on the contributions of ABLES coordinators in Alabama, Arizona, California, Connecticut, Florida, Georgia, Hawaii, Illinois, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Washington, Wisconsin, and Wyoming.

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## Lead Poisoning Associated with Ayurvedic Medications — Five States, 2000–2003

Although approximately 95% of lead poisoning among U.S. adults results from occupational exposure (1), lead poisoning also can occur from use of traditional or folk remedies (2–5). Ayurveda is a traditional form of medicine practiced in India and other South Asian countries. Ayurvedic medications can contain herbs, minerals, metals, or animal products and are made in standardized and nonstandardized formulations (2). During 2000–2003, a total of 12 cases of lead poisoning among adults in five states associated with ayurvedic medications or remedies were reported to CDC (Table). This report summarizes these 12 cases. Culturally appropriate educational efforts are needed to inform persons in populations using

traditional or folk medications of the potential health risks posed by these remedies.

The first three cases described in this report were reported to CDC by staff at Dartmouth Hitchcock Medical Center at Dartmouth Medical School, New Hampshire; the California Childhood Lead Poisoning Prevention Program; and the California Department of Health Services. To ascertain whether other lead poisoning cases associated with ayurvedic medicines had occurred, an alert was posted on the *Epidemic Information Exchange (Epi-X)*, and findings from the cases in California were posted on the Adult Blood Lead Epidemiology and Surveillance (ABLES) listserv. Nine additional cases were reported by state health departments in Massachusetts, New York, and Texas (Table).

## Case Reports

**New Hampshire.** A woman aged 37 years with rheumatoid arthritis visited an emergency department (ED) with diffuse abdominal pain, nausea, and vomiting of 6 days' duration. Tests revealed microcytic anemia, moderate basophilic stippling, and no identifiable source of blood loss. Her blood lead level (BLL) was 81  $\mu\text{g}/\text{dL}$  (geometric mean BLL = 1.75  $\mu\text{g}/\text{dL}$  for U.S. population aged  $\geq 20$  years [6]), and her zinc protoporphyrin (ZPP) concentration was 286  $\mu\text{g}/\text{dL}$  (normal:  $<35 \mu\text{g}/\text{dL}$  [7]). She reported ingesting five different traditional medications (two powders and three tablets) obtained from an ayurvedic physician in India for her rheumatoid arthritis. Analysis of the two powders revealed 17,000 and 12,000 parts per million (ppm) lead, respectively, and 60–100 ppm lead in the three tablets. She began oral chelation therapy; 1 week after completion, her BLL was 35  $\mu\text{g}/\text{dL}$ . Her

**TABLE. Reported cases of adult lead poisoning related to ayurvedic medications, by state and selected characteristics — United States, 2000–2003**

State	Year	Age (yrs)	Sex	Patient's country of origin	BLL* at presentation ( $\mu\text{g}/\text{dL}$ )	Type of ayurvedic medications ingested	Lead concentration of medications (ppm)	Received chelation therapy
New Hampshire	2001	37	Female	India	81	Two powders, three tablets	Powders: 12,000–17,000 Tablets: 60–100	Yes
California	2003	31	Female	India	112	Nine medications, including pill taken four times daily	Pill taken four times daily: 73,900; Three others: 21, 65, and 285	Yes
California	2003	34	Male	India	80	10 powders, tablets, syrups	Tablet: 78,000; Pill: 36	Yes
Massachusetts	2002	62	Male	India	89	Guglu tablets	14,000	Yes
Massachusetts	2002	56	Female	India	60	Guglu tablets	14,000	Yes
Massachusetts	2003	19	Female	Nepal	46	Sundari Kalp (pill and liquid)	Pill: 96,000; Liquid: 0	Yes
New York	2000	25	Female	India	91	Pill	79,000	Yes
New York	2001	52	Male	India	49	Unknown form	Not known	Not known
New York	2000	57	Female	India	27	Unknown form	Not known	No
New York	2000	40	Female	India	92	Jambrulin	44,000	Yes
New York	2001	56	Male	India	100	Powder	Not known	Yes
Texas	2003	50	Male	Not stated	92	Jambrulin	22,700–26,700	Yes

\* Blood lead level.



two children, aged 6 and 7 years, had BLLs of 5 and 3  $\mu\text{g}/\text{dL}$ , respectively. Two years later, the woman reported to her physician with joint symptoms from rheumatoid arthritis and was found to have microcytic anemia and a BLL of 64  $\mu\text{g}/\text{dL}$ . She reported restarting ayurvedic medications 2 weeks previously. She agreed to stop taking the medications, and her physician decided against chelation therapy.

**California.** A woman aged 31 years visited an ED with nausea, vomiting, and lower abdominal pain 2 weeks after a spontaneous abortion. One week later, she was hospitalized for severe, persistent microcytic anemia with prominent basophilic stippling that was not improving with iron supplementation. A heavy metals screen revealed a BLL of 112  $\mu\text{g}/\text{dL}$ ; a repeat BLL 10 days later was 71  $\mu\text{g}/\text{dL}$ , before initiation of oral chelation therapy. A ZPP measurement performed at that time was  $>400$   $\mu\text{g}/\text{dL}$ . Her husband's BLL was 6  $\mu\text{g}/\text{dL}$ . No residential or occupational lead sources were identified, but the woman reported taking nine different ayurvedic medications prescribed by a practitioner in India for fertility during a 2-month period, including one pill four times daily. She discontinued the medications after an abnormal fetal ultrasound 1 month before her initial BLL. Analysis of her medications revealed 73,900 ppm lead in the pill taken four times daily and 21, 65, and 285 ppm lead in three other remedies. Her BLL was 22  $\mu\text{g}/\text{dL}$  when she was tested 9.5 months after the initial BLL testing.

A man aged 34 years was evaluated twice in an ED for back pain and abdominal pain. A screen for heavy metals revealed a BLL of 80  $\mu\text{g}/\text{dL}$ . He was hospitalized for chelation therapy and disclosed that he had been taking ayurvedic medications prescribed by a practitioner in India to increase fertility. He had discontinued use the previous day. The 10 preparations included pills, powders, and syrups, most of which were not labeled. He had taken one type of tablet once daily for 3 months; samples of one of these tablets contained 78,000 ppm lead. A second variety of pill contained 36 ppm lead. A home investigation revealed no other sources of lead. His BLL was 17  $\mu\text{g}/\text{dL}$  when tested 7.5 months after the initial BLL test.

**Massachusetts, New York, and Texas.** Nine additional cases were reported from Massachusetts, New York, and Texas (Table). The median age of patients was 52 years; five patients were female. The five women were taking the medications for arthritis (one), menstrual health (one), and diabetes (three). The four men were taking the medications for arthritis (one) and diabetes (three).

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**Editorial Note:** Although the majority of cases of lead poisoning in adults result from occupational exposures, use of traditional or folk medications also can cause lead poisoning. In the United States, lead exposure in adults has decreased substantially during the preceding two decades because of removal of lead from gasoline and regulation of lead exposure in the workplace. Nevertheless, 10,658 cases of BLLs  $\geq 25$   $\mu\text{g}/\text{dL}$  in adults (aged  $\geq 16$  years) were reported from the 35 states that provided data to the ABLES program in 2002 (1).

Certain traditional or folk medications used in East Indian, Indian, Middle Eastern, West Asian, and Hispanic cultures contain lead and other adulterants (3). In this report, the majority of persons affected were of Asian Indian or other East Indian descent. Several ayurvedic and other traditional medications do not contain lead; however, lead content has ranged from 0.4 to 261,200 ppm in certain common ayurvedic preparations (8). Certain branches of ayurvedic medicine consider heavy metals to be therapeutic and encourage their use in the treatment of certain ailments.

Symptoms of lead toxicity in adults often vary and are non-specific; these include abdominal pain, fatigue, decreased libido, headache, irritability, arthralgias, myalgias, and neurologic dysfunction ranging from subtle neurocognitive deficits to a predominantly motor peripheral neuropathy to encephalopathy (9). The number and severity of symptoms typically increase as BLLs increase; however, the toxic effects of lead can occur without overt symptoms. In assessing patients with nonspecific, multisystemic symptoms, medical and public health professionals should consider lead toxicity in the differential diagnosis and request BLL testing. The finding of a high BLL without an obvious occupational or environmental source should elicit inquiries about traditional or folk medications as a potential source of exposure. Primary management of lead toxicity is source identification and exposure cessation. In adults, chelation therapy usually is reserved for patients with substantial symptoms or signs of lead toxicity or BLLs of  $>80$   $\mu\text{g}/\text{dL}$  (9).

Culturally appropriate educational efforts are needed to inform persons of the potential health risks posed by these remedies, particularly in populations in which traditional or folk medication use is prevalent. For remedies known to contain lead or to be possibly adulterated with lead, educational materials should state the potential health effects. Young children and fetuses of pregnant women are at added risk for the toxic effects of lead, particularly because of the use of these products to treat infertility in women (10).

Identification of the additional nine cases underscores the value of electronic health communications systems, such as listservs and *Epi-X*. These systems disseminate information quickly for geographically dispersed events that could be missed by routine surveillance systems.

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## Childhood Lead Poisoning from Commercially Manufactured French Ceramic Dinnerware — New York City, 2003

Lead poisoning adversely affects children worldwide. During 1999–2000, an estimated 434,000 children aged 1–5 years in the United States had elevated blood lead levels (BLLs)  $\geq 10$   $\mu\text{g}/\text{dL}$  (1). Glazes found on ceramics, earthenware, bone china, and porcelain often contain lead and are a potential source of lead exposure. Children are especially vulnerable to

the neurotoxic effects of lead. Exposures to lead in early childhood can have adverse effects on the developing nervous system, resulting in decreased intelligence and changes in behavior (1). In addition, certain behaviors (e.g., thumb sucking) place children at greater risk for exposure to lead. In 2003, the New York City Department of Health and Mental Hygiene's Lead Poisoning Prevention Program (LPPP), and the Mount Sinai Pediatric Environmental Health Specialty Unit (PEHSU) investigated a case of lead poisoning in a boy aged 20 months. This report summarizes that case investigation, which identified ceramic dinnerware imported from France as the source of lead exposure. This case underscores the susceptibility of children to a toxic exposure associated with 1) the high proportion of time spent in the home and 2) dietary habits that promote exposure to lead leached from ceramic ware.

In July 2002, the patient's lead exposure was first identified when a routine lead screening at age 12 months revealed a BLL of 15  $\mu\text{g}/\text{dL}$ , which exceeds CDC's level of concern ( $\geq 10$   $\mu\text{g}/\text{dL}$ ). Follow-up at age 15 months documented a BLL of 18  $\mu\text{g}/\text{dL}$ . The child's pediatrician provided guidance to the child's parents on lead hazards. A private environmental testing company confirmed the absence of lead-based paint in the family's home by using x-ray fluorescence. However, at age 18 months, the child's BLL increased to 23  $\mu\text{g}/\text{dL}$ . In February 2003, LPPP completed a comprehensive investigation of the child's home and assessed the child's routine daily activities and physical environment and found no lead paint hazards, although concern was raised by an LPPP investigator about the ceramic dinnerware used regularly by the child. A home lead test (2) was conducted by the family and revealed that the ceramic dinnerware was positive for lead.

In March 2003, the child was referred to Mount Sinai PEHSU for a secondary evaluation. A plate from the dinnerware also was submitted for evaluation, and PEHSU requested assistance from the Food and Drug Administration (FDA) to test the plate. The sample plate appeared to be in good condition and had no visible cracks or signs of wear. The plate was tested for lead by using an FDA protocol, whereby lead is extracted from the food contact surface (3–5). In accordance with this standard protocol, the plate was leached in a 4% acetic acid solution for 24 hours at a temperature of 71.6° F (22.2° C). The amount of lead released was measured by flame atomic absorption spectroscopy. The ceramic plate released 29.6  $\mu\text{g}/\text{mL}$  of lead into the leaching solution, a level exceeding the FDA compliance guideline of  $\leq 3$   $\mu\text{g}/\text{mL}$ .

The child was home full time and consumed all meals and beverages using the dinnerware. Because of concerns about lead exposure to other family members, BLLs of the child's mother and grandmother also were assessed. Results for both

were  $< 5$   $\mu\text{g}/\text{dL}$ , substantially lower than the child's BLLs. The family was advised to discontinue use of the dinnerware. On follow-up at age 23 months, the child's BLL had decreased to 8  $\mu\text{g}/\text{dL}$ .

The particular brand of dinnerware identified in this investigation is no longer sold in the United States. However, plates of this brand are available online and might still be available for sale in discount stores, flea markets, and online auctions. Additional tests will be conducted on plates from the same manufacturer to determine the extent of the problem. A complete listing of dinnerware that has been restricted for importation into the United States is available at [http://www.fda.gov/ora/fiars/ora\\_import\\_ia5208.html](http://www.fda.gov/ora/fiars/ora_import_ia5208.html).

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**Editorial Note:** When investigating lead poisonings, examining the most common sources of lead exposure (e.g., occupational exposures or lead-based paint) is a critical first step; after these sources are ruled out, other sources should be investigated. Traditionally, more concern has been raised about the presence of lead glazes in homemade ceramics than in manufactured dinnerware. The case described in this report illustrates how imported, commercially manufactured dinnerware also should be considered as potential sources of lead exposure.

Lead can leach out of ceramic ware when the glaze is improperly fired or when the glaze has broken down because of wear from daily usage, particularly after repeated use in a microwave or dishwasher (6). Chips and cracks in ceramic ware also allow leaching of lead. When lead is released into food and drink from ceramics, hazardous levels can contaminate food substances and expose children and adults to toxic levels. Children's risk for such exposures is compounded by their diets, especially their frequent consumption of acidic juices (e.g., orange and apple juices) that promote leaching of lead from ceramics.

#### Acknowledgment

This report is based on data contributed by W Yip, K Simmonds, Northeast Regional Laboratory, Food Chemistry Br, Food and Drug Administration, Jamaica, New York.

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## West Nile Virus Activity — United States, June 30–July 6, 2004

During June 30–July 6, a total of 21 human cases of West Nile virus (WNV) illness were reported from two states (Arizona and California). During 2004, eight states have reported a total of 78 human cases of WNV illness to CDC through ArboNET (Table, Figure). Of these, 57 (73%) were reported from Arizona. Forty-seven (61%) of the 78 cases occurred in males; the median age of patients was 53 years (range: 1–84 years); the dates of illness onset ranged from April 23 to June 28; and one case was fatal.

A total of 20 presumptive West Nile viremic blood donors (PVDs) have been reported to ArboNET. Of these, 19 were reported from Arizona, and one was reported from New Mexico. Of the 20 PVDs reported to ArboNET, one person aged 69 years subsequently had neuroinvasive illness, and four

**TABLE. Number of human cases of West Nile virus (WNV) illness, by state — United States, 2004\***

State	Neuroinvasive disease <sup>†</sup>	West Nile fever <sup>§</sup>	Other clinical/ unspecified <sup>¶</sup>	Total reported to CDC**	Deaths
Arizona	42	8	7	57	1
California	4	8	0	12	0
Florida	1	1	0	2	0
Michigan	1	0	0	1	0
Nebraska	0	1	0	1	0
New Mexico	0	3	0	3	0
South Dakota	1	0	0	1	0
Wyoming	0	1	0	1	0
<b>Total</b>	<b>49</b>	<b>22</b>	<b>7</b>	<b>78</b>	<b>1</b>

\* As of July 6, 2004.

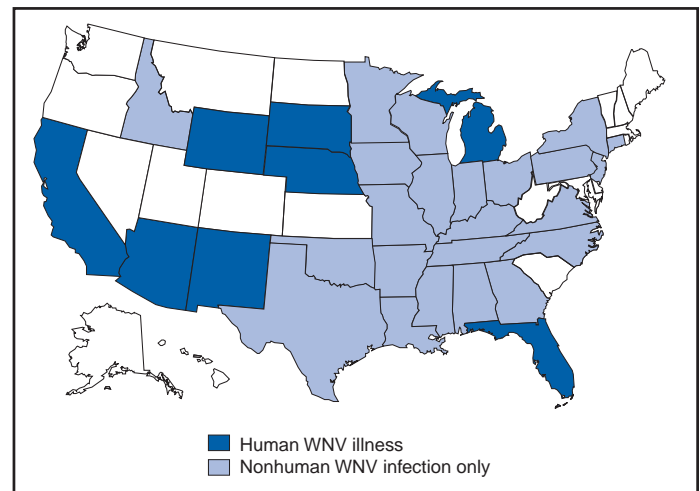
<sup>†</sup> Cases with neurologic manifestations (e.g., West Nile meningitis, West Nile encephalitis, and West Nile myelitis).

<sup>§</sup> Cases with no evidence of neuroinvasion.

<sup>¶</sup> Illnesses for which sufficient clinical information was not provided.

\*\* Total number of human cases of WNV illness reported to ArboNet by state and local health departments.

**FIGURE. Areas reporting West Nile virus (WNV) activity — United States, 2004\***



\* As of 3 a.m., Mountain Standard Time, July 6, 2004.

persons aged 22, 51, 52, and 57 years subsequently had West Nile fever. In New Mexico, the first reported human WNV infection in 2004 was in a PVD; in Arizona, three of the first seven reported human WNV infections of 2004 were in PVDs.

In addition, during 2004, a total of 861 dead corvids and 86 other dead birds with WNV infection have been reported from 24 states, and 42 WNV infections in horses have been reported from 11 states (Alabama, Arizona, California, Idaho, Missouri, North Carolina, Oklahoma, South Dakota, Tennessee, Texas, and Virginia). WNV seroconversions have been reported in 110 sentinel chicken flocks from four states (Arizona, California, Florida, and Louisiana). Three seropositive sentinel horses were reported from Puerto Rico. A total of 226 WNV-positive mosquito pools have been reported from 12 states (Arizona, California, Illinois, Indiana, Louisiana, Michigan, Missouri, New Jersey, Ohio, Pennsylvania, Texas, and Virginia).

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

## Investigation of Rabies Infections in Organ Donor and Transplant Recipients — Alabama, Arkansas, Oklahoma, and Texas, 2004

*On July 1, this report was posted as an MMWR Dispatch on the MMWR website (<http://www.cdc.gov/mmwr>).*

On June 30, 2004, CDC confirmed diagnoses of rabies in three recipients of transplanted organs and in their common

donor, who was found subsequently to have serologic evidence of rabies infection. The transplant recipients had encephalitis of unknown etiology after transplantation and subsequently died. Specimens were sent to CDC for diagnostic evaluation. This report provides a brief summary of the ongoing investigation and information on exposure risks and postexposure measures.

### Organ Donor

The organ donor was an Arkansas man who visited two hospitals in Texas with severe mental status changes and a low-grade fever. Neurologic imaging indicated findings consistent with a subarachnoid hemorrhage, which expanded rapidly in the 48 hours after admission, leading to cerebral herniation and death. Donor eligibility screening and testing did not reveal any contraindications to transplantation, and the patient's family agreed to organ donation. Lungs, kidneys, and liver were recovered. No other organs or tissues were recovered from the donor, and the donor did not receive any blood products before death. The liver and kidneys were transplanted into three recipients on May 4 at a transplant center in Texas. The lungs were transplanted in an Alabama hospital into a patient who died of intraoperative complications.

### Liver Recipient

The liver recipient was a man with end-stage liver disease. The patient did well immediately after transplantation and was discharged home on postoperative day 5. Twenty-one days after transplant, the patient was readmitted with tremors, lethargy, and anorexia; he was afebrile. The patient's neurologic status deteriorated rapidly during the next 24 hours; he required intubation and critical care support. A lumbar puncture indicated a mild lymphocytic pleocytosis (25 white blood cells/mm<sup>3</sup>) and a mildly elevated protein. Magnetic resonance imaging (MRI) of the brain indicated increased signal in the cerebrospinal fluid. His neurologic status continued to deteriorate. Six days after admission, a repeat MRI indicated diffuse encephalitis. The patient subsequently died.

### Female Kidney Recipient

The first kidney recipient was a woman with end-stage renal disease caused by hypertension and diabetes. She had no postoperative complications and was discharged home on postoperative day 7. Twenty-five days after transplant, she was readmitted with right-side flank pain and underwent an appendectomy. Two days after this procedure, she had diffuse twitching and was noted to be increasingly lethargic. Neurologic imaging with computed tomography and MRI indicated

no abnormality. During the next 24–48 hours, the patient had worsening mental status, seizures, hypotension, and respiratory failure requiring intubation. Her mental status continued to deteriorate, and cerebral imaging 2 weeks after admission indicated severe cerebral edema. The patient subsequently died.

### Male Kidney Recipient

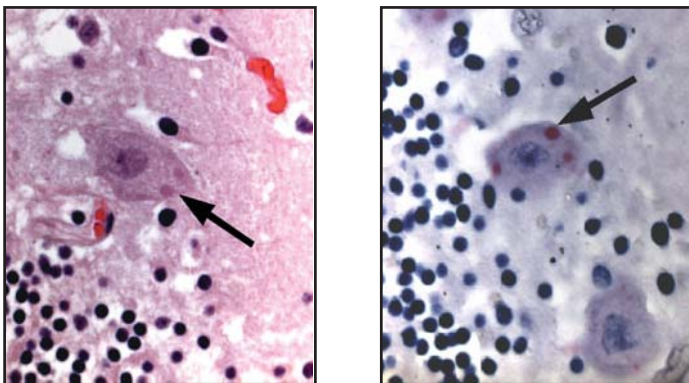
The second renal recipient was a man with end-stage renal disease caused by focal, segmental glomerulosclerosis. His posttransplant course was complicated briefly by occlusions of an arterial graft leading to infarction of the lower pole of the transplanted kidney. The patient was discharged home 12 days after transplantation. Twenty-seven days after transplantation, he visited a hospital emergency department and was then transferred to the transplant center with myoclonic jerks and altered mental status; he was afebrile. An MRI of the brain performed on admission revealed no abnormalities. His mental status deteriorated rapidly during the next 24 hours. A lumbar puncture revealed mild lymphocytic pleocytosis (16 white blood cells/mm<sup>3</sup>) and a mildly elevated protein. His mental status continued to deteriorate, leading to respiratory failure requiring intubation. A repeat MRI performed 10 days after admission indicated diffuse edema. The patient subsequently died.

### Laboratory Investigation

In all three patients, histopathologic examination of central nervous system (CNS) tissues at CDC revealed an encephalitis with viral inclusions suggestive of Negri bodies; the diagnosis of rabies in all three recipients was confirmed by immunohistochemical testing and by the detection of rabies virus antigen in fixed brain tissue by direct fluorescent antibody tests (Figure 1). Electron microscopy of CNS tissue of one of the renal transplant recipients also identified characteristic rhabdovirus inclusions and viral particles (Figure 2).

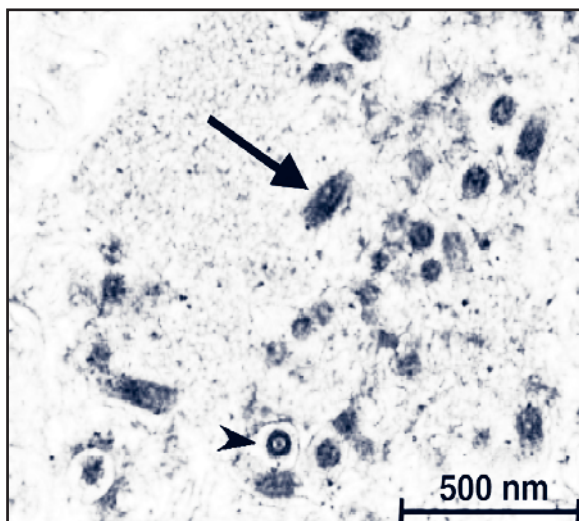
Suckling mice inoculated intracranially and intraperitoneally with brain tissue from one kidney recipient died 7–9 days after injection. Thin-section electron microscopy of CNS tissue of the mice had visible rhabdovirus particles, and immunohistochemical testing detected rabies viral antigens. Antigenic typing performed upon brain tissue from one recipient was compatible with a rabies virus variant associated with bats. Rabies virus antibodies were demonstrated in blood from two of the three recipients and the donor. Detecting rabies antibodies in the donor suggests that he was the likely source of rabies transmission to the organ recipients. Testing of additional donor specimens is ongoing.

**FIGURE 1.** At left, cerebellum of female kidney recipient with characteristic Negri bodies (arrow). At right, immunohistochemical staining of rabies viral antigen (arrow) in the same patient.



CDC Photo

**FIGURE 2.** Typical rhabdovirus inclusion as viewed by electron microscope in midbrain of male kidney recipient. Virus particles are sectioned longitudinally (arrow) and transversely (arrowhead).



CDC Photo

**Reported by:** Univ of Alabama at Birmingham Hospital; Jefferson County Health Dept, Birmingham; Alabama Dept of Public Health. Arkansas State Dept of Health. Oklahoma State Dept of Health. Regional and local health depts; Texas Dept of Health. Div of Healthcare Quality Promotion; Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

**Editorial Note:** Rabies is an acute fatal encephalitis caused by neurotropic viruses in the genus *Lyssavirus*, family

*Rhabdoviridae* (1). The majority of rabies cases are caused by bites by rabid mammals (1,2). Nonbite exposures, including scratches, contamination of an open wound, or direct mucous membrane contact with infectious material (e.g., saliva or neuronal tissue from rabid animals), rarely cause rabies. After an incubation period of several weeks to months, the virus passes via the peripheral nervous system and replicates in the central nervous system. Rabies virus can then be disseminated to salivary glands and other organs via neural innervation (3). Rabies can be prevented by administration of rabies postexposure prophylaxis (PEP) (4), which is highly effective in preventing rabies when administered before onset of clinical signs.

Although transmission of rabies has occurred previously among eight recipients of transplanted corneas in five countries (4), this report describes the first documented cases of rabies virus transmission among solid organ transplant recipients. Infection with rabies virus likely occurred via neuronal tissue contained in the transplanted organs, as rabies virus is not spread hematologically. In collaboration with CDC, state and local health departments in Alabama, Arkansas, Oklahoma, and Texas have initiated investigations to identify a potential source of exposure for the donor and to identify contacts of patients among health-care providers or domestic contacts who might need rabies PEP.

The risk for health-care-associated transmission of rabies is extremely low; transmission of rabies virus from infected patients to health-care providers has not been documented (5). The use of Standard Precautions (6) for contact with blood and body fluids (e.g., gloves, gown, mask, goggles, or face shield as indicated for the type of patient contact) prevents exposure to the rabies virus. No laboratory-confirmed cases of human-to-human transmission of rabies among household contacts have been reported (4). No cases of rabies have been reported in association with transmission by fomites or environmental surfaces.

Routes of possible exposure include percutaneous and mucocutaneous entry of the rabies virus through a wound, nonintact skin, or mucous membrane contact. Intact skin contact with infectious materials is not considered an exposure to the rabies virus. Persons with exposure as defined above to saliva, nerve tissue, or cerebral spinal fluid from any of the four infected patients should receive rabies PEP. Types of exposures in domestic settings for which administration of PEP would be appropriate include bites, sexual activity, exchanging kisses on the mouth or other direct mucous membrane contact with saliva, and sharing eating or drinking utensils or cigarettes. In health-care settings, additional

opportunities that can lead to contamination of mucous membranes or nonintact skin with oral secretions include procedures such as intubation or suctioning of respiratory secretions or injuries with sharp instruments (e.g., needlesticks or scalpel cuts). Percutaneous injuries (e.g., needlesticks) are considered exposures because of potential contact with nervous tissue. Contact with patient fluids (e.g., blood, urine, or feces) does not pose a risk for rabies exposure (4).

All potential organ donors in the United States are screened and tested to identify if the donor might present an infectious risk. Organ procurement organizations are responsible for evaluating organ donor suitability, consistent with minimum procurement standards (7). Donor eligibility is determined through a series of questions posed to family and contacts, physical examination, and blood testing for evidence of organ dysfunction and selected bloodborne viral pathogens and syphilis. Laboratory testing for rabies is not performed. In the case reported here, the donor's death was attributed to noninfectious causes. The role of organ donor deferral is to optimize successful transplantation in the recipient, including minimizing risk of infectious disease transmission to the lowest level reasonably achievable without unduly decreasing the availability of this life-saving resource. The benefits from transplanted organs outweigh the risk for transmission of infectious diseases from screened donors. CDC is working with federal and organ procurement agencies to review donor screening practices.

Additional information about rabies and its prevention is available from CDC, telephone 404-639-1050, or at <http://www.cdc.gov/ncidod/dvrd/rabies>. Additional information about organ transplantation is available at <http://www.optn.org/about/donation>.

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#### *Notice to Readers*

### **Updated Recommendations for Use of Pneumococcal Conjugate Vaccine: Reinstatement of the Third Dose**

In February 2004, production of the 7-valent pneumococcal conjugate vaccine (PCV7), marketed as Prevnar<sup>®</sup> and manufactured by Wyeth Vaccines (Collegeville, Pennsylvania), failed to meet demand, resulting in shortages. To conserve the limited supply, CDC recommended that the fourth dose of PCV7 be withheld from healthy children (1). In March, because evidence indicated that production would be curtailed for several months, CDC recommended that the third dose also be withheld (2). Production problems now appear to have been resolved. As a result, deliveries are projected during the near term to permit the recommendation that every child receive 3 doses. Some providers might have short-term difficulties obtaining vaccine because of distribution delays; however, every effort will be made to provide sufficient vaccine to all providers.

Effective immediately, CDC, in consultation with the Advisory Committee on Immunization Practices (ACIP), the American Academy of Family Physicians, and the American Academy of Pediatrics, recommends that providers administer 3 doses of vaccine (3). The fourth dose should still be deferred for healthy children until further production and supply data demonstrate that a 4-dose schedule can be sustained. The full, 4-dose series should continue to be administered to children at increased risk for pneumococcal disease because of certain immunocompromising or chronic conditions (e.g., sickle cell disease, anatomic asplenia, chronic heart or lung disease, diabetes, cerebrospinal fluid leak, and cochlear implant [4]). Alaska Native children and American Indian children who live in Alaska, Arizona, or New Mexico, and Navajo children who live in Colorado and Utah have a risk for invasive pneumococcal disease more than twice the national average. These children should receive the standard 4-dose PCV7 series despite the shortage.

An interim catch-up schedule is provided for children who are incompletely vaccinated (Table). The highest priority for catch-up vaccination is to ensure that children aged <5 years at high risk for invasive pneumococcal disease are fully vaccinated. Second priorities include vaccination of healthy children aged <24 months who have not received any doses of PCV7 and vaccination of healthy children aged <12 months who have not yet received 3 doses.

**TABLE. Recommended 7-valent pneumococcal conjugate vaccination (PCV7) regimens during the vaccine shortage, by age, history, and condition**

Age at examination (mos)	Vaccination history	Recommended regimen*
2–6	0 doses	3 doses, 2 mos apart
	1 dose	2 doses, 2 mos apart
	2 doses	1 dose, 2 mos after the most recent dose
7–11	0 doses	2 doses, 2 mos apart; third dose at age 12–15 mos
	1 dose before age 7 mos	1 dose at age 7–11 mos, with another dose at age 12–15 mos ( $\geq 2$ mos later)
	2 doses before age 7 mos	1 dose at age 7–11 mos
12–23	0 doses	2 doses, $\geq 2$ mos apart
	1 dose before age 12 mos	2 doses, $\geq 2$ mos apart
	1 dose at age $\geq 12$ mos	1 dose, $\geq 2$ mos after the most recent dose
	2 doses at age $< 12$ mos	1 dose, $\geq 2$ mos after the most recent dose
24–59		
Healthy children		Not routinely recommended <sup>†</sup>
Children at high risk <sup>§</sup>	Any incomplete schedule of $< 3$ doses	1 dose, $\geq 2$ mos after the most recent dose and another dose $\geq 2$ mos later
	Any incomplete schedule of 3 doses	1 dose, $\geq 2$ mos after the most recent dose

\* For children vaccinated at age  $< 12$  months, the minimum interval between doses is 4 weeks. Doses administered at age  $\geq 12$  months should be  $\geq 8$  weeks apart.

<sup>†</sup> When the shortage is resolved completely, health-care providers should consider administering a single dose to unvaccinated, healthy children aged 24–59 months (with priority given to children aged 24–35 months), black children, American Indian children not otherwise identified as high risk<sup>§</sup>, and children who attend day care centers.

<sup>§</sup> Children with sickle cell disease, asplenia, chronic heart or lung disease, diabetes, cerebrospinal fluid leak, cochlear implant, human immunodeficiency virus infection or another immunocompromising condition, and Alaska Native or American Indian children in areas with demonstrated risk for invasive pneumococcal disease more than twice the national average (i.e., Alaska, Arizona, New Mexico, and Navajo populations in Colorado and Utah).

Because of the frequency of health-care provider visits by children during their first 18 months, catch-up vaccination might occur at regularly scheduled visits for most children who receive vaccines from their primary-care providers. Programs that provide vaccinations but do not see children routinely for other reasons should consider a notification process to contact undervaccinated children.

Wyeth Vaccines is allocating nonpublic-purchased doses of Prevnar<sup>®</sup> directly to all physicians on the basis of previous purchasing patterns or practice birth cohort. Wyeth does not currently ship products to either wholesalers or distributors. Providers with questions about their allocation or about obtaining Prevnar<sup>®</sup> should contact Wyeth's customer service department, telephone 800-666-7428. For problems not resolved by the customer service department, providers can contact Wyeth directly, telephone 866-447-8888, extension 37932. For public-purchased vaccine, including Vaccines for Children Program vaccine, providers should contact their state/grantee immunization projects to obtain vaccine. These projects should contact their project officers at the National Immunization Program at CDC for information regarding vaccine supply.

This recommendation reflects CDC's assessment of the existing national PCV7 supply and will be changed if the supply changes. Updated information about the national PCV7 supply is available from CDC at <http://www.cdc.gov/nip/news/shortages/default.htm>.

## References

1. CDC. Limited supply of pneumococcal conjugate vaccine: suspension of recommendation for fourth dose. MMWR 2004;53:108–9.
2. CDC. Updated recommendations on the use of pneumococcal conjugate vaccine: suspension of recommendation for third and fourth dose. MMWR 2004;53:177–8.
3. CDC. Prevention of pneumococcal disease among infants and young children: recommendations of the Advisory Committee on Immunization Practices. MMWR 2000;49(No. RR-9).
4. CDC. Pneumococcal vaccination for cochlear implant candidates and recipients: updated recommendations of the Advisory Committee on Immunization Practices. MMWR 2003;52:739–40.

## Notice to Readers

### Availability of Revised Guidelines for Identifying and Managing Jaundice in Newborns

The American Academy of Pediatrics has published revised guidelines for identifying and managing jaundice in newborns. Jaundice is caused by an increase in serum bilirubin concentration (i.e., hyperbilirubemia) (1) and makes the skin appear yellow. Excessive hyperbilirubinemia can lead to permanent brain damage (i.e., kernicterus) (1). The revised guidelines were developed to promote greater uniformity and consistency of care for all newborns. Four key recommendations were emphasized for physicians:

- **Perform a systematic assessment of all infants before their discharge from the birth hospital.** This assessment will determine their risk for severe jaundice and can be



performed by measuring the total serum bilirubin or transcutaneous bilirubin levels, or assessing risk factors, or both (2).

- **Provide appropriate follow-up based on the time of discharge.** A follow-up visit should be scheduled within 3–5 days of an infant's birth, when the bilirubin level is likely to be highest.
- **Promote and support successful breastfeeding practices.** Encourage breastfeeding at least 8–12 times a day in the first days of an infant's life. Effective breastfeeding can reduce substantially the risk for hyperbilirubinemia.
- **Provide parents with written and oral information about the risks associated with jaundice in newborns.** Information about jaundice in newborns is available at <http://www.aap.org/family/jaundicefaq.htm>.

CDC supports the use of these guidelines for eliminating kernicterus and hyperbilirubinemia. In 2001, CDC reported an increase of kernicterus cases in the United States (2) and encouraged systematic assessment of bilirubin levels in newborns before their discharge from the birth hospital, along with proper follow-up care, lactation support, and parent education about jaundice. Additional information about kernicterus is available at <http://www.cdc.gov/ncbddd/dd/kernicterus.htm>. Information about the revised guidelines is available at <http://aappolicy.aappublications.org/cgi/content/abstract/pediatrics;114/1/297>.

#### References

1. American Academy of Pediatrics. Management of hyperbilirubinemia in the newborn infant 35 or more weeks of gestation. *Pediatrics* 2004;114:297–316.
2. CDC. Kernicterus in full-term infants—United States, 1994–1998. *MMWR* 2001;50:491.

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## e xperience.

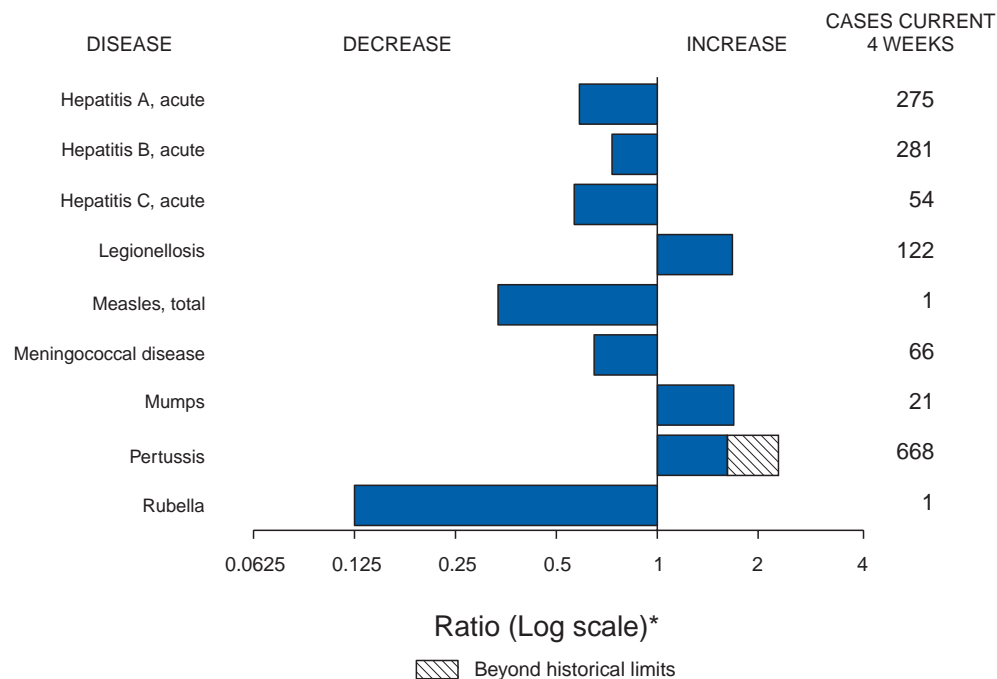
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**FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals July 3, 2004, with historical data**



\* 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 July 3, 2004 (26th Week)\***

	Cum. 2004	Cum. 2003		Cum. 2004	Cum. 2003
Anthrax	-	-	Hemolytic uremic syndrome, postdiarrheal <sup>†</sup>	47	58
Botulism:	-	-	HIV infection, pediatric <sup>†¶</sup>	78	112
foodborne	7	7	Measles, total	15**	31 <sup>††</sup>
infant	30	31	Mumps	103	116
other (wound & unspecified)	5	10	Plague	-	1
Brucellosis <sup>†</sup>	54	42	Poliomyelitis, paralytic	-	-
Chancroid	17	29	Psittacosis <sup>†</sup>	3	5
Cholera	2	1	Q fever <sup>†</sup>	25	42
Cyclosporiasis <sup>†</sup>	63	30	Rabies, human	-	-
Diphtheria	-	-	Rubella	13	5
Ehrlichiosis:	-	-	Rubella, congenital syndrome	-	1
human granulocytic (HGE) <sup>†</sup>	60	69	SARS-associated coronavirus disease <sup>† §§</sup>	-	7
human monocytic (HME) <sup>†</sup>	44	53	Smallpox <sup>† ¶¶</sup>	-	NA
human, other and unspecified	3	12	<i>Staphylococcus aureus</i> :	-	-
Encephalitis/Meningitis:	-	-	Vancomycin-intermediate (VISA) <sup>† ¶¶</sup>	4	NA
California serogroup viral <sup>† §</sup>	1	4	Vancomycin-resistant (VRSA) <sup>† ¶¶</sup>	1	1
eastern equine <sup>† §</sup>	-	1	Streptococcal toxic-shock syndrome <sup>†</sup>	61	113
Powassan <sup>† §</sup>	-	-	Tetanus	6	4
St. Louis <sup>† §</sup>	-	2	Toxic-shock syndrome	51	70
western equine <sup>† §</sup>	-	-	Trichinosis	2	-
Hansen disease (leprosy) <sup>†</sup>	36	39	Tularemia <sup>†</sup>	26	24
Hantavirus pulmonary syndrome <sup>†</sup>	7	14	Yellow fever	-	-

-: No reported cases.

\* Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).

<sup>†</sup> Not notifiable in all states.

<sup>§</sup> Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).

<sup>¶</sup> Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update May 23, 2004.

\*\* Of 15 cases reported, eight were indigenous, and seven were imported from another country.

<sup>††</sup> Of 31 cases reported, 22 were indigenous, and nine were imported from another country.

<sup>§§</sup> Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (notifiable as of July 2003).

<sup>¶¶</sup> Not previously notifiable.

**TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 2004, and June 28, 2003 (26th Week)\***

Reporting area	AIDS		Chlamydia <sup>†</sup>		Coccidiomycosis		Cryptosporidiosis		Encephalitis/Meningitis West Nile <sup>§</sup>	
	Cum. 2004 <sup>¶</sup>	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	17,011	21,197	417,650	427,648	2,703	1,486	1,099	983	49	18
NEW ENGLAND	569	782	14,189	13,579	-	-	63	65	-	-
Maine	5	35	980	938	N	N	14	5	-	-
N.H.	23	18	784	784	-	-	14	10	-	-
Vt.	13	6	511	504	-	-	6	12	-	-
Mass.	150	324	6,792	5,182	-	-	18	26	-	-
R.I.	66	63	1,619	1,546	-	-	2	9	-	-
Conn.	312	336	3,503	4,625	N	N	9	3	-	-
MID. ATLANTIC	3,912	4,755	54,128	52,716	-	-	170	139	-	4
Upstate N.Y.	453	585	11,184	9,546	N	N	43	35	-	-
N.Y. City	2,154	2,085	15,562	17,003	-	-	43	49	-	-
N.J.	675	882	6,307	7,724	-	-	11	8	-	-
Pa.	630	1,203	21,075	18,443	N	N	73	47	-	4
E.N. CENTRAL	1,455	1,997	72,730	77,551	7	3	241	243	1	1
Ohio	237	305	19,407	21,011	-	-	68	34	-	1
Ind.	166	260	8,930	8,513	N	N	31	27	-	-
Ill.	700	962	18,084	24,103	-	-	13	36	-	-
Mich.	269	364	18,931	15,378	7	3	55	45	1	-
Wis.	83	106	7,378	8,546	-	-	74	101	-	-
W.N. CENTRAL	331	397	23,987	24,506	4	2	156	102	1	1
Minn.	81	77	4,424	5,335	N	N	55	43	-	1
Iowa	21	45	2,311	2,791	N	N	30	16	-	-
Mo.	135	203	9,134	8,838	3	1	23	9	-	-
N. Dak.	12	1	769	774	N	N	7	6	-	-
S. Dak.	5	6	1,235	1,200	-	-	20	19	1	-
Nebr.**	18	30	2,546	2,105	1	1	9	4	-	-
Kans.	59	35	3,568	3,463	N	N	12	5	-	-
S. ATLANTIC	5,282	6,067	78,935	79,796	-	2	215	133	1	2
Del.	78	133	1,443	1,542	N	N	-	3	-	-
Md.	601	729	9,169	8,135	-	2	10	8	-	-
D.C.	308	655	1,508	1,650	-	-	3	1	-	-
Va.	288	506	10,802	9,470	-	-	24	14	-	-
W. Va.	30	47	1,369	1,238	N	N	3	3	-	-
N.C.	305	627	14,361	13,049	N	N	38	15	-	-
S.C.**	329	389	7,575	6,714	-	-	9	2	-	1
Ga.	782	736	11,743	17,167	-	-	69	51	-	-
Fla.	2,561	2,245	20,965	20,831	N	N	59	36	1	1
E.S. CENTRAL	782	912	26,766	27,630	2	1	46	58	-	2
Ky.	71	79	2,769	4,103	N	N	16	12	-	-
Tenn.**	326	436	11,121	9,715	N	N	12	21	-	-
Ala.	208	185	5,151	7,468	-	-	11	22	-	2
Miss.	177	212	7,725	6,344	2	1	7	3	-	-
W.S. CENTRAL	2,047	2,351	53,874	53,443	2	-	32	21	-	7
Ark.	87	86	3,842	3,786	1	-	9	3	-	-
La.	346	400	11,986	10,451	1	-	-	1	-	2
Okla.	90	109	5,166	5,431	N	N	10	4	-	-
Tex.	1,524	1,756	32,880	33,775	-	-	13	13	-	5
MOUNTAIN	571	831	20,677	25,444	1,677	965	57	48	42	1
Mont.	-	10	1,024	1,111	N	N	11	12	-	-
Idaho	3	13	1,434	1,227	N	N	5	7	-	-
Wyo.	6	5	512	489	-	-	2	2	-	-
Colo.	98	211	4,316	6,416	N	N	25	9	-	1
N. Mex.	91	62	2,586	3,764	9	4	2	3	-	-
Ariz.	208	339	7,200	7,596	1,625	938	9	3	42	-
Utah	34	39	1,635	1,848	14	3	2	9	-	-
Nev.	131	152	1,970	2,993	29	20	1	3	-	-
PACIFIC	2,062	3,105	72,364	72,983	1,011	513	119	174	4	-
Wash.	165	211	8,855	7,965	N	N	14	14	-	-
Oreg.	111	126	4,071	3,781	-	-	13	20	-	-
Calif.	1,731	2,696	56,287	56,667	1,011	513	91	140	4	-
Alaska	14	13	1,822	1,918	-	-	-	-	-	-
Hawaii	41	59	1,329	2,652	-	-	1	-	-	-
Guam	1	5	-	353	-	-	-	-	-	-
P.R.	209	620	1,002	1,191	N	N	N	N	-	-
V.I.	5	15	143	168	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	32	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 2003 and 2004 are provisional and cumulative (year-to-date).

<sup>†</sup> Chlamydia refers to genital infections caused by *C. trachomatis*.

<sup>§</sup> Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).

<sup>¶</sup> Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update May 30, 2004.

\*\* Contains data reported through National Electronic Disease Surveillance System (NEDSS).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 2004, and June 28, 2003 (26th Week)\*

Reporting area	<i>Escherichia coli</i> , Enterohemorrhagic (EHEC)						Giardiasis		Gonorrhea	
	O157:H7		Shiga toxin positive, serogroup non-O157		Shiga toxin positive, not serogrouped		Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003				
UNITED STATES	737	682	86	84	66	53	7,117	7,687	144,408	159,535
NEW ENGLAND	51	39	26	16	10	2	662	547	3,286	3,355
Maine	2	4	-	-	-	-	64	58	131	111
N.H.	9	7	5	2	-	-	16	22	62	55
Vt.	4	3	-	-	-	-	60	42	42	40
Mass.	24	14	3	6	10	2	292	263	1,544	1,262
R.I.	5	1	1	-	-	-	54	55	419	463
Conn.	7	10	17	8	-	-	176	107	1,088	1,424
MID. ATLANTIC	91	79	9	7	12	12	1,620	1,612	17,133	20,154
Upstate N.Y.	44	27	4	3	4	5	547	392	3,668	3,638
N.Y. City	12	3	-	-	-	-	508	571	4,990	6,555
N.J.	14	11	3	1	4	-	169	231	2,531	4,370
Pa.	21	38	2	3	4	7	396	418	5,944	5,591
E.N. CENTRAL	144	171	17	17	9	9	851	1,378	29,549	33,689
Ohio	37	40	4	10	9	9	357	387	9,209	10,840
Ind.	11	25	-	-	-	-	-	-	3,085	3,177
Ill.	28	29	-	1	-	-	84	427	7,708	10,382
Mich.	34	30	3	-	-	-	274	314	7,602	6,387
Wis.	34	47	10	6	-	-	136	250	1,945	2,903
W.N. CENTRAL	147	103	13	12	14	8	856	759	7,619	8,196
Minn.	31	38	6	8	2	-	304	272	1,583	1,337
Iowa	44	14	-	-	-	-	121	105	412	647
Mo.	28	29	7	2	5	1	218	223	3,712	4,181
N. Dak.	4	4	-	1	5	1	13	19	60	34
S. Dak.	9	5	-	-	-	-	32	21	136	95
Nebr.	19	5	-	1	-	-	64	55	509	675
Kans.	12	8	-	-	2	6	104	64	1,207	1,227
S. ATLANTIC	64	51	11	20	13	12	1,158	1,154	34,784	38,965
Del.	1	-	N	N	N	N	24	18	461	579
Md.	15	3	1	1	1	1	46	54	3,933	3,780
D.C.	1	1	-	-	-	-	33	17	1,034	1,209
Va.	8	17	6	4	-	-	185	153	4,277	4,330
W. Va.	1	2	-	-	-	-	12	14	423	423
N.C.	-	-	-	-	6	11	N	N	7,617	7,343
S.C.	3	-	-	-	-	-	27	61	3,514	3,864
Ga.	15	12	2	2	-	-	324	376	4,935	8,316
Fla.	20	16	2	13	6	-	507	461	8,590	9,121
E.S. CENTRAL	36	30	1	-	7	4	156	163	11,304	13,396
Ky.	14	10	1	-	4	4	N	N	1,218	1,718
Tenn.	7	12	-	-	3	-	72	73	4,018	3,938
Ala.	8	5	-	-	-	-	84	90	3,069	4,552
Miss.	7	3	-	-	-	-	-	-	2,999	3,188
W.S. CENTRAL	40	32	1	2	1	2	123	134	20,095	21,713
Ark.	7	4	-	-	-	-	53	72	1,889	2,037
La.	2	1	-	-	-	-	17	8	5,368	5,948
Okla.	9	7	-	-	-	-	53	54	2,163	2,086
Tex.	22	20	1	2	1	2	-	-	10,675	11,642
MOUNTAIN	64	76	7	8	-	4	571	610	4,734	5,362
Mont.	3	2	-	-	-	-	19	35	35	57
Idaho	18	18	3	5	-	-	77	72	40	37
Wyo.	-	2	1	-	-	-	8	9	27	24
Colo.	13	22	1	1	-	4	183	176	1,361	1,461
N. Mex.	4	2	-	2	-	-	31	23	313	618
Ariz.	7	16	N	N	N	N	84	109	1,836	1,986
Utah	12	9	1	-	-	-	128	126	249	177
Nev.	7	5	1	-	-	-	41	60	873	1,002
PACIFIC	100	101	1	2	-	-	1,120	1,330	15,904	14,705
Wash.	32	26	-	1	-	-	132	131	1,335	1,433
Oreg.	13	18	1	1	-	-	181	169	537	515
Calif.	48	56	-	-	-	-	734	946	13,420	11,947
Alaska	1	1	-	-	-	-	30	41	288	272
Hawaii	6	-	-	-	-	-	43	43	324	538
Guam	N	N	-	-	-	-	-	-	-	38
P.R.	-	1	-	-	-	-	11	103	91	136
V.I.	-	-	-	-	-	-	-	-	49	43
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	3	U

N: Not notifiable. U: Unavailable. -: No reported cases.  
 \* Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 2004, and June 28, 2003 (26th Week)\*

Reporting area	<i>Haemophilus influenzae</i> , invasive								Hepatitis (viral, acute), by type	
	All ages		Age <5 years						A	
	All serotypes		Serotype b		Non-serotype b		Unknown serotype			
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	998	973	9	14	53	68	98	116	2,645	3,133
NEW ENGLAND	93	65	1	1	5	5	3	3	422	139
Maine	7	2	-	-	-	-	-	1	9	5
N.H.	13	6	-	-	2	-	-	-	10	9
Vt.	5	6	-	-	-	-	1	-	7	4
Mass.	40	36	1	1	-	5	2	1	355	70
R.I.	3	4	-	-	-	-	-	1	10	11
Conn.	25	11	-	-	3	-	-	-	31	40
MID. ATLANTIC	213	195	-	1	3	2	26	28	300	669
Upstate N.Y.	71	69	-	1	3	2	3	7	42	53
N.Y. City	44	31	-	-	-	-	9	6	107	247
N.J.	40	42	-	-	-	-	3	7	61	107
Pa.	58	53	-	-	-	-	11	8	90	262
E.N. CENTRAL	152	161	-	2	10	3	20	31	235	306
Ohio	67	41	-	-	2	-	10	7	26	60
Ind.	29	23	-	-	4	-	1	2	15	26
Ill.	27	64	-	-	-	-	7	17	86	90
Mich.	13	12	-	2	4	3	1	-	87	99
Wis.	16	21	-	-	-	-	1	5	21	31
W.N. CENTRAL	60	67	2	-	3	6	4	7	95	81
Minn.	27	24	1	-	3	6	-	1	23	20
Iowa	1	-	1	-	-	-	-	-	27	16
Mo.	17	28	-	-	-	-	2	6	29	26
N. Dak.	3	2	-	-	-	-	-	-	1	-
S. Dak.	-	1	-	-	-	-	-	-	2	-
Nebr.	5	1	-	-	-	-	-	-	7	5
Kans.	7	11	-	-	-	-	2	-	6	14
S. ATLANTIC	243	189	-	-	15	7	19	12	510	682
Del.	8	-	-	-	-	-	2	-	5	4
Md.	40	44	-	-	3	4	1	-	72	65
D.C.	-	-	-	-	-	-	-	-	4	24
Va.	21	22	-	-	-	-	1	4	50	43
W. Va.	10	7	-	-	-	-	3	-	2	10
N.C.	35	15	-	-	5	-	-	1	35	33
S.C.	2	2	-	-	-	-	-	-	20	23
Ga.	66	38	-	-	-	-	12	4	180	276
Fla.	61	61	-	-	7	3	-	3	142	204
E.S. CENTRAL	37	43	-	1	-	2	7	4	81	88
Ky.	3	3	-	-	-	1	-	-	11	16
Tenn.	23	24	-	-	-	1	5	3	46	48
Ala.	11	16	-	1	-	-	2	1	6	11
Miss.	-	-	-	-	-	-	-	-	18	13
W.S. CENTRAL	41	48	1	1	4	7	1	3	211	313
Ark.	1	5	-	-	-	1	-	-	38	19
La.	7	15	-	-	-	2	1	3	12	30
Okla.	32	26	-	-	4	4	-	-	18	6
Tex.	1	2	1	1	-	-	-	-	143	258
MOUNTAIN	122	111	3	5	13	17	13	12	240	227
Mont.	-	-	-	-	-	-	-	-	4	2
Idaho	5	3	-	-	-	-	2	1	10	9
Wyo.	-	1	-	-	-	-	-	-	2	1
Colo.	28	20	-	-	-	-	3	4	25	31
N. Mex.	24	14	-	-	4	3	3	1	8	10
Ariz.	47	59	-	5	7	8	1	4	153	127
Utah	10	8	2	-	1	3	2	2	32	14
Nev.	8	6	1	-	1	3	2	-	6	33
PACIFIC	37	94	2	3	-	19	5	16	551	628
Wash.	3	5	2	-	-	4	1	1	31	34
Oreg.	24	23	-	-	-	-	1	2	40	35
Calif.	3	42	-	3	-	15	2	8	462	550
Alaska	2	18	-	-	-	-	1	5	4	5
Hawaii	5	6	-	-	-	-	-	-	14	4
Guam	-	-	-	-	-	-	-	-	-	1
P.R.	-	-	-	-	-	-	-	-	10	40
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 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 2004, and June 28, 2003 (26th Week)\*

Reporting area	Hepatitis (viral, acute), by type				Legionellosis		Listeriosis		Lyme disease	
	B		C		Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003						
UNITED STATES	2,912	3,371	585	538	590	662	228	264	4,459	5,709
NEW ENGLAND	164	165	4	2	12	26	10	13	504	820
Maine	1	1	-	-	-	1	2	2	53	-
N.H.	22	10	-	-	-	3	1	2	39	14
Vt.	1	2	1	2	1	1	-	-	13	8
Mass.	87	114	3	-	4	11	2	7	135	506
R.I.	3	4	-	-	2	2	1	-	57	121
Conn.	50	34	U	U	5	8	4	2	207	171
MID. ATLANTIC	508	412	56	62	143	150	47	46	3,292	3,999
Upstate N.Y.	45	37	6	8	33	37	17	9	1,196	1,151
N.Y. City	50	131	-	-	10	15	6	11	-	70
N.J.	277	106	-	-	34	18	10	9	919	1,227
Pa.	136	138	50	54	66	80	14	17	1,177	1,551
E.N. CENTRAL	245	254	35	84	154	143	34	34	90	301
Ohio	70	73	3	6	81	70	15	7	40	19
Ind.	8	13	2	3	11	9	6	1	2	6
Ill.	33	30	5	14	10	17	-	10	-	22
Mich.	134	110	25	57	50	36	12	11	6	-
Wis.	-	28	-	4	2	11	1	5	42	254
W.N. CENTRAL	200	150	197	117	13	31	6	8	94	73
Minn.	21	19	4	3	1	3	2	2	39	44
Iowa	9	4	-	-	3	5	1	-	9	9
Mo.	141	102	193	113	7	14	2	3	38	16
N. Dak.	2	-	-	-	1	1	-	-	-	-
S. Dak.	-	2	-	-	1	1	-	-	-	-
Nebr.	14	14	-	1	-	2	1	3	5	2
Kans.	13	9	-	-	-	5	-	-	3	2
S. ATLANTIC	920	897	101	82	142	173	35	56	396	391
Del.	18	6	-	-	4	6	N	N	35	79
Md.	79	53	14	6	27	39	4	7	246	242
D.C.	13	1	1	-	5	1	-	-	2	3
Va.	106	74	11	2	14	9	5	7	26	21
W. Va.	2	7	16	1	2	3	1	2	2	3
N.C.	91	95	6	5	15	16	8	10	49	20
S.C.	53	80	7	17	1	4	-	2	2	1
Ga.	291	279	7	6	14	18	7	16	7	9
Fla.	267	302	39	45	60	77	10	12	27	13
E.S. CENTRAL	200	212	57	43	24	41	16	10	26	25
Ky.	25	40	16	7	8	11	4	1	11	5
Tenn.	90	84	25	9	10	16	8	1	9	7
Ala.	32	42	1	5	6	11	3	6	1	1
Miss.	53	46	15	22	-	3	1	2	5	12
W.S. CENTRAL	88	548	73	94	33	33	18	30	9	57
Ark.	28	48	1	3	-	1	1	-	2	-
La.	30	75	40	56	3	1	2	1	2	6
Okla.	17	33	2	-	2	3	-	1	-	-
Tex.	13	392	30	35	28	28	15	28	5	51
MOUNTAIN	245	297	29	20	37	34	11	16	9	5
Mont.	2	8	2	1	1	1	-	1	-	-
Idaho	6	4	-	1	4	3	1	-	2	2
Wyo.	7	18	4	-	4	2	-	-	2	-
Colo.	21	43	4	5	4	7	3	6	-	-
N. Mex.	10	21	6	-	-	2	-	2	-	1
Ariz.	140	143	2	4	10	9	-	5	1	-
Utah	24	20	3	-	12	7	1	1	4	1
Nev.	35	40	8	9	2	3	6	1	-	1
PACIFIC	342	436	33	34	32	31	51	51	39	38
Wash.	26	35	10	11	6	4	6	3	3	-
Oreg.	48	68	9	5	N	N	4	2	17	8
Calif.	254	320	11	17	26	27	41	44	19	29
Alaska	12	3	-	-	-	-	-	-	-	1
Hawaii	2	10	3	1	-	-	-	2	N	N
Guam	-	3	-	1	-	-	-	-	-	-
P.R.	19	70	-	-	1	-	-	-	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 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 2004, and June 28, 2003 (26th Week)\*

Reporting area	Malaria		Meningococcal disease		Pertussis		Rabies, animal		Rocky Mountain spotted fever	
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	517	492	776	994	4,343	3,470	2,380	3,491	373	238
NEW ENGLAND	42	14	37	44	638	348	250	236	10	3
Maine	5	1	8	5	2	4	28	22	-	-
N.H.	-	2	3	3	23	21	10	10	-	-
Vt.	3	-	1	-	39	29	10	15	-	-
Mass.	19	11	20	27	546	271	102	89	9	3
R.I.	2	-	1	2	16	7	15	30	1	-
Conn.	13	-	4	7	12	16	85	70	-	-
MID. ATLANTIC	117	120	96	121	1,164	347	221	415	27	15
Upstate N.Y.	19	24	23	25	840	133	188	158	1	-
N.Y. City	53	59	17	29	73	54	4	4	4	4
N.J.	22	20	21	17	96	65	-	62	9	8
Pa.	23	17	35	50	155	95	29	191	13	3
E.N. CENTRAL	38	51	111	159	607	260	24	41	15	7
Ohio	13	10	44	43	213	110	9	16	8	3
Ind.	2	1	16	27	42	28	4	2	4	-
Ill.	2	24	12	44	107	20	9	6	-	2
Mich.	14	13	32	25	58	24	2	15	3	2
Wis.	7	3	7	20	187	78	-	2	-	-
W.N. CENTRAL	36	21	55	76	320	156	237	357	42	15
Minn.	18	12	14	17	71	56	26	13	-	-
Iowa	1	3	11	15	33	39	36	45	-	2
Mo.	7	1	16	30	168	31	13	3	35	11
N. Dak.	2	-	1	1	16	2	34	34	-	-
S. Dak.	1	1	2	1	9	2	10	73	-	-
Nebr.	2	-	2	5	3	2	53	69	6	2
Kans.	5	4	9	7	20	24	65	120	1	-
S. ATLANTIC	142	115	140	173	267	242	867	1,405	159	149
Del.	3	-	2	8	5	2	9	23	-	-
Md.	30	31	7	17	47	35	50	201	16	44
D.C.	8	7	4	3	2	-	-	-	-	-
Va.	12	8	9	17	79	58	220	275	7	3
W. Va.	-	4	4	1	4	5	32	43	1	3
N.C.	9	8	21	19	46	71	338	403	110	60
S.C.	7	3	12	14	26	15	69	84	8	9
Ga.	23	22	10	19	8	18	142	188	9	26
Fla.	50	32	71	75	50	38	7	188	8	4
E.S. CENTRAL	18	9	33	45	56	74	64	111	51	37
Ky.	1	1	3	8	11	18	12	20	-	-
Tenn.	3	4	10	11	29	37	21	78	25	23
Ala.	11	2	10	12	10	12	28	12	12	4
Miss.	3	2	10	14	6	7	3	1	14	10
W.S. CENTRAL	46	62	77	116	243	235	575	749	57	8
Ark.	6	4	12	10	9	11	27	25	26	-
La.	2	2	20	31	6	6	-	-	4	-
Okla.	2	2	4	9	17	18	69	130	27	2
Tex.	36	54	41	66	211	200	479	594	-	6
MOUNTAIN	19	16	36	53	504	530	54	72	8	4
Mont.	-	-	3	2	14	1	8	11	2	1
Idaho	1	1	4	6	18	29	-	2	1	1
Wyo.	-	-	2	2	3	119	-	1	1	2
Colo.	6	11	9	12	255	187	6	10	-	-
N. Mex.	1	-	5	7	61	31	2	5	1	-
Ariz.	4	2	6	20	109	95	38	37	1	-
Utah	5	1	4	-	34	50	-	4	2	-
Nev.	2	1	3	4	10	18	-	2	-	-
PACIFIC	59	84	191	207	544	1,278	88	105	4	-
Wash.	4	12	18	17	281	264	-	-	-	-
Oreg.	9	7	38	33	213	237	2	3	2	-
Calif.	45	63	130	145	35	770	78	97	2	-
Alaska	-	-	1	4	8	1	8	5	-	-
Hawaii	1	2	4	8	7	6	-	-	-	-
Guam	-	-	-	-	-	1	-	-	-	-
P.R.	-	-	4	6	2	1	27	31	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 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 2004, and June 28, 2003 (26th Week)\*

Reporting area	Salmonellosis		Shigellosis		Streptococcal disease, invasive, group A		Streptococcus pneumoniae, invasive			
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Drug resistant, all ages		Age <5 years	
							Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	13,632	15,370	5,022	11,230	2,762	3,622	1,246	1,229	315	423
NEW ENGLAND	679	797	118	138	131	335	15	67	7	5
Maine	34	53	2	5	5	20	2	-	1	-
N.H.	42	55	5	4	13	21	-	-	N	N
Vt.	21	27	2	5	8	16	7	6	1	2
Mass.	381	466	73	88	88	145	N	N	N	N
R.I.	48	40	8	4	17	5	6	10	5	3
Conn.	153	156	28	32	-	128	-	51	U	U
MID. ATLANTIC	1,743	1,889	592	1,140	452	630	93	79	67	63
Upstate N.Y.	448	399	289	153	158	224	45	38	47	45
N.Y. City	484	514	166	183	65	92	U	U	U	U
N.J.	303	340	87	193	90	129	-	-	2	2
Pa.	508	636	50	611	139	185	48	41	18	16
E.N. CENTRAL	1,693	2,248	361	950	560	890	302	272	94	183
Ohio	515	600	79	152	157	208	222	186	56	62
Ind.	176	229	88	65	66	77	79	86	21	16
Ill.	321	813	87	529	125	228	-	-	-	71
Mich.	369	313	54	134	185	260	1	N	N	N
Wis.	312	293	53	70	27	117	N	N	17	34
W.N. CENTRAL	1,034	921	179	355	194	220	10	9	40	44
Minn.	243	219	23	45	97	107	-	-	31	33
Iowa	218	158	37	23	N	N	N	N	N	N
Mo.	294	306	77	182	41	46	7	6	4	2
N. Dak.	18	20	2	4	9	10	-	3	1	4
S. Dak.	45	33	6	8	8	18	3	-	-	-
Nebr.	66	67	8	60	10	20	-	-	4	5
Kans.	150	118	26	33	29	19	N	N	N	N
S. ATLANTIC	3,185	3,542	1,323	3,515	548	595	632	653	10	11
Del.	16	43	3	143	2	6	4	1	N	N
Md.	279	357	53	268	114	150	-	4	-	-
D.C.	17	14	20	31	5	5	3	-	3	3
Va.	363	357	55	190	43	75	N	N	N	N
W. Va.	62	43	-	-	16	27	64	40	7	8
N.C.	389	482	137	449	82	66	N	N	U	U
S.C.	185	187	185	225	35	30	54	100	N	N
Ga.	512	583	305	746	115	120	149	150	N	N
Fla.	1,362	1,476	565	1,463	136	116	358	358	N	N
E.S. CENTRAL	853	989	283	496	132	122	75	92	-	-
Ky.	146	156	36	57	45	32	19	11	N	N
Tenn.	209	315	107	177	87	90	56	81	N	N
Ala.	252	250	111	158	-	-	-	-	N	N
Miss.	246	268	29	104	-	-	-	-	-	-
W.S. CENTRAL	1,244	1,801	1,161	3,128	155	167	34	50	66	67
Ark.	216	218	30	48	8	5	6	17	7	4
La.	188	306	118	249	1	1	28	33	8	14
Okla.	147	140	256	455	41	53	N	N	29	30
Tex.	693	1,137	757	2,376	105	108	N	N	22	19
MOUNTAIN	982	957	358	454	331	320	18	4	31	50
Mont.	64	48	4	2	-	1	-	-	-	-
Idaho	70	90	6	11	5	12	N	N	N	N
Wyo.	22	48	1	1	6	1	5	3	-	-
Colo.	231	235	60	69	83	84	-	-	28	38
N. Mex.	101	92	55	97	57	81	5	-	-	8
Ariz.	317	279	193	226	151	121	N	N	N	N
Utah	102	89	19	22	28	19	6	1	3	4
Nev.	75	76	20	26	1	1	2	-	-	-
PACIFIC	2,219	2,226	647	1,054	259	343	67	3	-	-
Wash.	212	266	55	87	34	29	-	-	N	N
Oreg.	172	197	33	49	N	N	N	N	N	N
Calif.	1,623	1,626	532	897	180	252	N	N	N	N
Alaska	35	46	4	4	-	-	-	-	N	N
Hawaii	177	91	23	17	45	62	67	3	-	-
Guam	-	24	-	22	-	-	-	-	-	-
P.R.	79	294	1	5	N	N	N	N	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	3	U	-	U	-	U	-	U	-	U

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

\* Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).



TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 2004, and June 28, 2003 (26th Week)\*

Reporting area	Syphilis				Tuberculosis		Typhoid fever		Varicella (Chickenpox)	
	Primary & secondary		Congenital		Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003						
UNITED STATES	3,479	3,521	157	227	4,583	6,082	116	150	8,915	9,629
NEW ENGLAND	93	109	1	-	184	201	13	16	577	2,112
Maine	2	4	-	-	-	11	-	-	176	634
N.H.	3	12	-	-	7	10	-	1	-	-
Vt.	-	-	-	-	-	5	-	-	401	481
Mass.	59	70	-	-	116	94	11	8	-	103
R.I.	14	12	-	-	17	25	1	2	-	3
Conn.	15	11	1	-	44	56	1	5	-	891
MID. ATLANTIC	499	405	28	34	970	1,066	29	25	33	12
Upstate N.Y.	45	17	2	3	110	115	3	3	-	-
N.Y. City	256	230	9	20	511	582	7	13	-	-
N.J.	83	79	17	11	204	193	9	8	-	-
Pa.	115	79	-	-	145	176	10	1	33	12
E.N. CENTRAL	383	486	33	41	549	558	6	18	4,078	3,666
Ohio	116	104	1	2	98	94	2	-	965	890
Ind.	28	23	8	8	70	65	-	4	-	-
Ill.	121	202	2	15	242	269	-	7	-	-
Mich.	104	146	22	16	106	99	3	7	2,766	2,219
Wis.	14	11	-	-	33	31	1	-	347	557
W.N. CENTRAL	63	92	-	4	199	228	2	3	116	39
Minn.	11	31	-	-	80	84	1	1	-	-
Iowa	4	7	-	-	15	11	-	1	N	N
Mo.	30	30	-	4	57	64	1	1	2	-
N. Dak.	-	-	-	-	3	-	-	-	71	39
S. Dak.	-	1	-	-	5	13	-	-	43	-
Nebr.	4	3	-	-	15	10	-	-	-	-
Kans.	14	20	-	-	24	46	-	-	-	-
S. ATLANTIC	921	924	20	46	845	1,166	21	27	1,403	1,367
Del.	3	4	1	-	-	-	-	-	4	15
Md.	175	143	2	8	120	111	4	7	-	-
D.C.	33	28	1	-	-	-	-	-	17	18
Va.	50	42	1	1	103	108	2	11	344	348
W. Va.	2	1	-	-	11	10	-	-	821	823
N.C.	81	84	4	9	118	138	3	5	N	N
S.C.	49	56	1	4	90	83	-	-	217	163
Ga.	146	246	1	12	11	256	9	2	-	-
Fla.	382	320	9	12	392	460	3	2	-	-
E. S. CENTRAL	189	167	7	8	289	319	4	2	2	-
Ky.	24	21	1	1	51	58	2	-	-	-
Tenn.	72	68	1	2	98	97	2	1	-	-
Ala.	75	62	3	4	107	113	-	1	-	-
Miss.	18	16	2	1	33	51	-	-	2	-
W. S. CENTRAL	557	406	28	36	307	945	7	9	1,167	2,099
Ark.	20	24	-	1	63	49	-	-	-	-
La.	107	56	-	-	-	-	-	-	41	9
Okla.	13	24	2	1	68	66	-	-	-	-
Tex.	417	302	26	34	176	830	7	9	1,126	2,090
MOUNTAIN	178	158	30	19	196	183	5	4	1,539	334
Mont.	-	-	-	-	4	-	-	-	-	-
Idaho	13	4	2	-	-	3	-	-	-	-
Wyo.	1	-	-	-	1	2	-	-	20	35
Colo.	19	21	-	3	50	42	1	3	1,154	-
N. Mex.	26	32	1	4	13	26	-	-	67	-
Ariz.	106	93	27	12	108	74	2	1	-	-
Utah	3	2	-	-	20	15	1	-	298	299
Nev.	10	6	-	-	-	21	1	-	-	-
PACIFIC	596	774	10	39	1,044	1,416	29	46	-	-
Wash.	53	38	-	-	116	106	2	2	-	-
Oreg.	16	24	-	-	34	53	1	2	-	-
Calif.	524	705	10	39	828	1,179	20	42	-	-
Alaska	-	1	-	-	14	28	-	-	-	-
Hawaii	3	6	-	-	52	50	6	-	-	-
Guam	-	1	-	-	-	30	-	-	-	84
P.R.	54	104	2	8	14	49	-	-	150	284
V.I.	4	1	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	-	U	10	U	-	U	-	U

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

\* Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE III. Deaths in 122 U.S. cities,\* week ending July 3, 2004 (26th Week)

Reporting Area	All causes, by age (years)							P&I <sup>†</sup> Total	Reporting Area	All causes, by age (years)							P&I <sup>†</sup> Total
	All Ages	≥65	45-64	25-44	1-24	<1	All Ages			≥65	45-64	25-44	1-24	<1			
NEW ENGLAND	464	332	76	41	6	9	49	S. ATLANTIC	1,266	768	321	110	42	24	65		
Boston, Mass.	119	78	21	10	3	7	11	Atlanta, Ga.	137	74	36	21	6	-	5		
Bridgeport, Conn.	37	29	6	1	1	-	3	Baltimore, Md.	174	107	37	18	8	4	19		
Cambridge, Mass.	15	12	1	2	-	-	1	Charlotte, N.C.	98	66	23	4	3	2	9		
Fall River, Mass.	22	19	2	1	-	-	5	Jacksonville, Fla.	160	90	52	14	3	1	6		
Hartford, Conn.	45	31	7	6	-	1	8	Miami, Fla.	130	87	25	10	5	3	6		
Lowell, Mass.	9	6	1	1	1	-	1	Norfolk, Va.	28	15	7	2	1	3	-		
Lynn, Mass.	15	10	-	4	-	1	1	Richmond, Va.	60	33	19	4	3	1	8		
New Bedford, Mass.	25	18	6	1	-	-	5	Savannah, Ga.	47	21	18	5	1	2	1		
New Haven, Conn.	U	U	U	U	U	U	U	St. Petersburg, Fla.	40	24	13	2	1	-	-		
Providence, R.I.	67	47	14	6	-	-	6	Tampa, Fla.	178	124	35	9	8	1	7		
Somerville, Mass.	3	2	1	-	-	-	-	Washington, D.C.	198	111	56	21	3	7	3		
Springfield, Mass.	33	23	6	4	-	-	3	Wilmington, Del.	16	16	-	-	-	-	1		
Waterbury, Conn.	17	13	1	2	1	-	2	E.S. CENTRAL	797	513	189	65	17	12	60		
Worcester, Mass.	57	44	10	3	-	-	3	Birmingham, Ala.	173	116	36	16	2	2	20		
MID. ATLANTIC	2,033	1,373	423	129	57	47	105	Chattanooga, Tenn.	65	48	9	4	3	1	5		
Albany, N.Y.	57	43	6	6	2	-	4	Knoxville, Tenn.	118	84	22	10	-	2	1		
Allentown, Pa.	22	19	3	-	-	-	1	Lexington, Ky.	59	38	12	4	2	3	6		
Buffalo, N.Y.	78	52	16	4	2	4	-	Memphis, Tenn.	150	90	42	9	5	4	11		
Camden, N.J.	24	13	7	1	2	1	1	Mobile, Ala.	77	39	28	8	2	-	3		
Elizabeth, N.J.	12	4	5	3	-	-	-	Montgomery, Ala.	37	26	10	1	-	-	5		
Erie, Pa.	49	39	8	-	2	-	6	Nashville, Tenn.	118	72	30	13	3	-	9		
Jersey City, N.J.	52	29	18	4	-	1	-	W.S. CENTRAL	1,386	866	335	121	41	23	49		
New York City, N.Y.	1,023	697	215	65	21	21	38	Austin, Tex.	71	48	14	6	1	2	2		
Newark, N.J.	50	22	11	8	4	5	2	Baton Rouge, La.	21	11	5	5	-	-	-		
Paterson, N.J.	U	U	U	U	U	U	U	Corpus Christi, Tex.	U	U	U	U	U	U	U		
Philadelphia, Pa.	319	188	82	25	13	11	20	Dallas, Tex.	193	107	54	20	7	5	7		
Pittsburgh, Pa. <sup>‡</sup>	21	13	7	1	-	-	1	El Paso, Tex.	94	61	22	7	1	3	-		
Reading, Pa.	16	11	3	1	1	-	1	Ft. Worth, Tex.	145	101	29	9	4	2	8		
Rochester, N.Y.	130	100	19	3	4	4	19	Houston, Tex.	380	226	89	44	14	7	19		
Schenectady, N.Y.	21	19	1	-	1	-	2	Little Rock, Ark.	75	42	25	3	3	2	-		
Scranton, Pa.	20	19	1	-	-	-	-	New Orleans, La.	39	20	16	2	1	-	-		
Syracuse, N.Y.	78	59	10	4	5	-	7	San Antonio, Tex.	199	140	40	14	4	1	10		
Trenton, N.J.	23	19	3	1	-	-	1	Shreveport, La.	45	30	11	2	1	1	3		
Utica, N.Y.	21	14	5	2	-	-	2	Tulsa, Okla.	124	80	30	9	5	-	-		
Yonkers, N.Y.	17	13	3	1	-	-	-	MOUNTAIN	729	494	145	44	18	27	40		
E.N. CENTRAL	1,723	1,152	378	105	45	40	100	Albuquerque, N.M.	122	82	21	11	5	3	3		
Akron, Ohio	38	26	11	-	-	1	4	Boise, Idaho	51	37	12	1	-	1	4		
Canton, Ohio	38	29	7	1	1	-	3	Colo. Springs, Colo.	54	40	9	1	1	3	4		
Chicago, Ill.	296	177	75	25	10	6	23	Denver, Colo.	100	53	26	10	3	8	7		
Cincinnati, Ohio	44	29	7	2	4	2	4	Las Vegas, Nev.	U	U	U	U	U	U	U		
Cleveland, Ohio	202	134	56	6	4	2	-	Ogden, Utah	30	19	8	-	-	3	-		
Columbus, Ohio	179	124	31	11	8	5	18	Phoenix, Ariz.	97	57	23	10	2	4	5		
Dayton, Ohio	U	U	U	U	U	U	U	Pueblo, Colo.	29	19	4	3	2	1	2		
Detroit, Mich.	173	96	45	17	7	8	10	Salt Lake City, Utah	96	67	17	4	4	4	9		
Evansville, Ind.	55	34	12	5	2	2	7	Tucson, Ariz.	150	120	25	4	1	-	6		
Fort Wayne, Ind.	59	48	8	2	-	1	3	PACIFIC	2,072	1,425	439	113	59	35	203		
Gary, Ind.	10	6	4	-	-	-	-	Berkeley, Calif.	13	8	5	-	-	-	-		
Grand Rapids, Mich.	25	24	1	-	-	-	4	Fresno, Calif.	93	66	17	6	3	1	5		
Indianapolis, Ind.	150	101	31	11	3	4	4	Glendale, Calif.	39	32	5	2	-	-	4		
Lansing, Mich.	51	40	8	1	-	2	-	Honolulu, Hawaii	82	57	16	6	1	2	3		
Milwaukee, Wis.	116	81	21	12	-	2	4	Long Beach, Calif.	77	50	21	4	1	1	11		
Peoria, Ill.	41	37	3	1	-	-	3	Los Angeles, Calif.	791	555	158	40	26	12	87		
Rockford, Ill.	57	36	16	5	-	-	3	Pasadena, Calif.	24	17	4	1	-	2	7		
South Bend, Ind.	U	U	U	U	U	U	U	Portland, Oreg.	U	U	U	U	U	U	U		
Toledo, Ohio	116	72	31	6	4	3	4	Sacramento, Calif.	208	137	49	13	5	4	16		
Youngstown, Ohio	73	58	11	-	2	2	6	San Diego, Calif.	155	104	34	10	5	2	17		
W.N. CENTRAL	530	330	146	30	13	10	39	San Francisco, Calif.	131	92	24	10	3	2	17		
Des Moines, Iowa	59	41	14	2	1	1	4	San Jose, Calif.	167	109	38	10	4	5	15		
Duluth, Minn.	23	20	3	-	-	-	2	Santa Cruz, Calif.	33	21	10	2	-	-	2		
Kansas City, Kans.	29	16	10	3	-	-	2	Seattle, Wash.	115	81	27	3	2	2	6		
Kansas City, Mo.	82	51	16	8	4	3	5	Spokane, Wash.	45	31	10	-	2	2	5		
Lincoln, Nebr.	48	36	10	1	1	-	3	Tacoma, Wash.	99	65	21	6	7	-	8		
Minneapolis, Minn.	63	24	28	7	2	2	8	TOTAL	11,000 <sup>†</sup>	7,253	2,452	758	298	227	710		
Omaha, Nebr.	U	U	U	U	U	U	U										
St. Louis, Mo.	69	40	23	2	2	1	4										
St. Paul, Minn.	57	44	8	3	1	1	6										
Wichita, Kans.	100	58	34	4	2	2	5										

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.



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