



MMWRTM

Morbidity and Mortality Weekly Report

Weekly

November 5, 2004 / Vol. 53 / No. 43

National Diabetes Awareness Month — November 2004

November is National Diabetes Awareness Month. An estimated 18.2 million persons in the United States (i.e., 6.3% of the population) have diabetes. However, 5.2 million (29%) of these persons have not had their condition diagnosed. Persons with diabetes have a risk of premature death that is approximately two times greater than that of persons without the disease. From 1980 to 2002, the number of persons with diabetes in the United States more than doubled. In 2000, diabetes was the sixth leading cause of death in the United States and cost the nation more than \$132 billion dollars in health-care expenditures. Additional information about diabetes is available from CDC at <http://www.cdc.gov/diabetes>.

During November, CDC, along with 59 state and territorial diabetes-control programs and other partners, will highlight activities that increase awareness about diabetes and women's health. More than 9.3 million women in the United States are now living with diabetes. CDC is a major partner in the *Initiative on Diabetes and Women's Health*, which will release a 30-minute video that emphasizes the healthy behaviors and coping skills that women have learned from adolescence through their older years to help manage their disease.

Throughout this month, *MMWR* will publish reports related to diabetes, including reports on diabetes among certain racial/ethnic populations, diabetes and obesity, diabetes and vision impairment, and psychological distress associated with the disease.

Influenza and Pneumococcal Vaccination Coverage Among Persons Aged ≥ 65 Years and Persons Aged 18–64 Years with Diabetes or Asthma — United States, 2003

Vaccination of persons at risk for complications from influenza and pneumococcal disease is a key public health strategy for preventing associated morbidity and mortality in the United States. Risk factors include older age and medical conditions that increase the risk for complications from infections. During the 1990–1999 influenza seasons, more than 32,000 deaths each year among persons aged ≥ 65 years were attributed to complications from influenza infection (1). National health objectives for 2010 call for 90% influenza and pneumococcal vaccination coverage among noninstitutionalized persons aged ≥ 65 years and 60% coverage among noninstitutionalized persons aged 18–64 years who have risk factors (e.g., diabetes or asthma) for complications from infections (2) (objective nos. 14.29a–d). To estimate influenza and pneumococcal vaccination coverage among these

INSIDE

- 1012 Influenza Vaccination and Self-Reported Reasons for Not Receiving Influenza Vaccination Among Medicare Beneficiaries Aged ≥ 65 years — United States, 1991–2002
- 1015 Acute Hepatitis B Among Children and Adolescents — United States, 1990–2002
- 1018 Blood Mercury Levels in Young Children and Childbearing-Aged Women — United States, 1999–2002
- 1020 Outbreak of Histoplasmosis Among Industrial Plant Workers — Nebraska, 2004
- 1022 West Nile Virus Activity — United States, October 27–November 2, 2004
- 1023 Notices to Readers

The *MMWR* series of publications is published by the Coordinating Center for Health Information and Service (Proposed), Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, GA 30333.

SUGGESTED CITATION

Centers for Disease Control and Prevention. [Article Title]. *MMWR* 2004;53:[inclusive page numbers].

Centers for Disease Control and Prevention

Julie L. Gerberding, M.D., M.P.H.
Director

Dixie E. Snider, M.D., M.P.H.
(Acting) Chief of Science

Tanja Popovic, M.D., Ph.D.
(Acting) Associate Director for Science

Coordinating Center for Health Information and Service (Proposed)

James S. Marks, M.D., M.P.H.
(Acting) Director

John W. Ward, M.D.
Editor, MMWR Series

Suzanne M. Hewitt, M.P.A.
Managing Editor, MMWR Series

Douglas W. Weatherwax
(Acting) Lead Technical Writer/Editor

Stephanie M. Malloy
Jude C. Rutledge
Teresa F. Rutledge
Writers/Editors

Lynda G. Cupell
Malbea A. LaPete
Visual Information Specialists

Kim L. Bright, M.B.A.
Quang M. Doan, M.B.A.
Erica R. Shaver
Information Technology Specialists

Notifiable Disease Morbidity and 122 Cities Mortality Data

Robert F. Fagan
Deborah A. Adams
Felicia J. Connor
Lateka Dammond
Rosaline Dhara
Donna Edwards
Patsy A. Hall
Pearl C. Sharp

populations, CDC analyzed data from the 2003 Behavioral Risk Factor Surveillance System (BRFSS) survey*. This report summarizes the results of that analysis, which indicated that 1) influenza vaccination levels among adults aged 18–64 with diabetes or asthma, 2) pneumococcal vaccination levels among adults aged 18–64 years with diabetes, and 3) influenza and pneumococcal vaccination levels among adults aged ≥ 65 years all were below levels targeted in the national health objectives for 2010. Moreover, vaccination coverage levels varied among states for both vaccines and both age groups. Innovative approaches and adequate, reliable supplies of vaccine are needed to increase vaccination coverage, particularly among adults with high-risk conditions.

BRFSS is a state-based, random-digit-dialed telephone survey of the U.S. civilian, noninstitutionalized population aged ≥ 18 years. All 50 states, the District of Columbia (DC), and three U.S. territories participate in the survey. Respondents were asked, “During the past 12 months, have you had a flu shot?” and “Have you ever had a pneumonia shot?” Persons with diabetes were defined as respondents who answered “yes” to the question, “Have you ever been told by a doctor that you have diabetes?” Women who were told that they had diabetes only during pregnancy were not defined as having diabetes. Participants were also asked, “Have you ever been told by a doctor, nurse, or other health professional that you had asthma?” Those who responded “yes” were then asked, “Do you still have asthma?” Respondents who answered affirmatively to both questions were classified as having asthma. For the 2003 BRFSS, the median state/area response rate was determined to be 53.2% (range: 34.4%–80.5%) by using the CASRO method. A total of 266,346 persons responded, of whom 207,735 (83.0%) were aged 18–64 years and 56,547 (17.0%) were aged ≥ 65 years. Among respondents aged 18–64 years, 17,084 (7.8%) reported having asthma and 12,412 (5.7%) reported having diabetes. Respondents with unknown influenza (0.3%) or pneumococcal (7.0%) vaccination status were excluded from the analysis. Vaccination levels were estimated for the 50 states, DC, Guam, Puerto Rico, and the U.S. Virgin Islands (USVI). Data were weighted by age, sex, and, in certain states/areas, race/ethnicity to reflect the estimated adult population. Statistical software was used to calculate point estimates and 95% confidence intervals.

In 2003, of respondents aged ≥ 65 years, influenza vaccination coverage levels during the preceding 12 months ranged from 34.9% (USVI) to 80.3% (Minnesota), with a median of 69.9% (Table 1). Among respondents aged ≥ 65 years, the

* Conditions ascertained by BRFSS that are indicated for vaccination include asthma (indicated for influenza vaccine) and diabetes (indicated for influenza and pneumococcal vaccines).

TABLE 1. Percentage of persons aged ≥65 years who reported receiving influenza vaccine during the preceding year and receiving pneumococcal vaccine ever, by area — Behavioral Risk Factor Surveillance System, United States, 2003

Area	Influenza vaccination among adults aged ≥65 years			Pneumococcal vaccination among adults aged ≥65 years		
	%	(95% CI)*	% change†	%	(95% CI)	% change
Alabama	70.2	(±3.6)	5.4§	61.4	(±4.0)	3.0
Alaska	66.5	(±7.4)	-3.0	59.6	(±8.3)	-0.2
Arizona	68.9	(±4.5)	-0.9	65.5	(±4.8)	-2.5
Arkansas	71.0	(±3.2)	1.9	61.9	(±3.4)	3.1
California	72.5	(±3.8)	1.0	65.2	(±4.1)	-1.5
Colorado	74.2	(±3.9)	0.9	69.1	(±4.1)	0.9
Connecticut	74.3	(±3.0)	2.9	64.5	(±3.3)	0.0
Delaware	70.0	(±4.1)	-1.6	67.4	(±4.3)	3.1
District of Columbia	63.0	(±6.2)	4.4	50.1	(±6.7)	2.2
Florida	65.9	(±3.7)	9.0§	64.5	(±3.8)	7.3§
Georgia	67.0	(±3.3)	7.7§	60.5	(±3.5)	3.3
Hawaii	71.6	(±3.1)	-2.3	44.5	(±3.4)	-15.0§
Idaho	70.3	(±3.3)	5.2§	67.2	(±3.4)	9.8§
Illinois	63.3	(±4.2)	2.2	56.7	(±4.3)	0.0
Indiana	66.1	(±3.0)	-0.2	61.5	(±3.2)	0.3
Iowa	77.5	(±2.6)	4.0	71.4	(±2.9)	5.2§
Kansas	70.8	(±3.0)	2.1	60.3	(±3.3)	-1.8
Kentucky	69.1	(±2.9)	3.3	59.6	(±3.3)	3.0
Louisiana	68.3	(±3.3)	11.0§	64.2	(±3.4)	7.9§
Maine	74.8	(±4.3)	1.0	64.8	(±4.7)	-1.9
Maryland	68.4	(±4.2)	2.5	62.0	(±4.3)	-1.4
Massachusetts	74.9	(±2.9)	2.4	69.4	(±3.1)	6.0§
Michigan	67.5	(±3.6)	-0.2	62.7	(±3.8)	-0.3
Minnesota	80.3	(±2.8)	3.7	73.0	(±3.3)	2.6
Mississippi	69.0	(±3.2)	6.0§	61.8	(±3.5)	2.8
Missouri	69.9	(±3.7)	1.3	61.1	(±3.9)	0.3
Montana	72.8	(±3.8)	5.1	69.1	(±4.0)	1.8
Nebraska	73.6	(±2.7)	5.4§	64.8	(±2.9)	3.5
Nevada	60.0	(±5.9)	-0.4	63.2	(±6.0)	-1.8
New Hampshire	73.9	(±3.2)	1.6	69.3	(±3.3)	5.5§
New Jersey	67.2	(±2.2)	-1.9	62.4	(±2.3)	-0.7
New Mexico	72.4	(±2.8)	5.8§	63.9	(±3.1)	1.2
New York	68.0	(±3.4)	3.4	61.7	(±3.5)	-0.7
North Carolina	68.8	(±2.9)	0.6	66.6	(±2.9)	3.6
North Dakota	73.0	(±3.5)	-0.9	71.2	(±3.6)	-1.3
Ohio	68.0	(±4.2)	1.4	64.7	(±4.5)	1.0
Oklahoma	75.8	(±2.1)	3.1	68.6	(±2.3)	3.1
Oregon	70.5	(±3.3)	2.5	71.7	(±3.4)	6.7§
Pennsylvania	69.2	(±3.4)	-1.4	66.1	(±3.6)	2.6
Rhode Island	76.2	(±3.3)	2.5	69.3	(±3.6)	1.7
South Carolina	69.3	(±3.0)	-0.1	63.0	(±3.2)	-1.8
South Dakota	77.9	(±2.4)	3.8§	63.7	(±2.8)	7.0§
Tennessee	69.1	(±4.5)	-2.6	60.8	(±4.8)	-0.6
Texas	67.7	(±3.0)	6.7§	62.0	(±3.2)	5.1§
Utah	74.8	(±4.2)	3.7	66.2	(±4.8)	1.2
Vermont	74.1	(±3.0)	0.5	66.1	(±3.4)	-0.2
Virginia	69.6	(±3.7)	4.3	65.2	(±3.9)	4.4
Washington	73.4	(±1.7)	8.3§	68.6	(±1.8)	5.6§
West Virginia	69.1	(±3.5)	3.3	63.8	(±3.6)	2.7
Wisconsin	72.1	(±3.6)	-1.9	66.7	(±3.8)	-3.9
Wyoming	72.6	(±3.4)	1.9	70.4	(±3.5)	2.2
Guam	59.7	(±13.5)	15.6	37.0	(±13.1)	10.0
Puerto Rico	40.2	(±4.1)	4.8	32.9	(±4.0)	7.8§
U.S. Virgin Islands	34.9	(±7.6)	2.7	31.6	(±7.6)	1.2
Median	69.9			64.2		
Range	34.9–80.3			31.6–73.0		

* Confidence interval.

† Change in vaccination coverage from 2002 to 2003.

§ Statistically significant at p<0.05.

proportion reporting ever having received pneumococcal vaccine ranged from 31.6% (USVI) to 73.0% (Minnesota), with a median of 64.2%. Compared with 2002, a total of 41 and 38 states/areas experienced increases in influenza and pneumococcal coverage among those aged ≥ 65 years, respectively; 11 of these increases were statistically significant for each vaccine.

Among adults aged 18–64 years with asthma or diabetes, substantial variation in vaccination coverage by area also was observed. For respondents with asthma, median influenza coverage was 34.0% and ranged from 22.5% (Puerto Rico) to 46.6% (Wyoming) (Table 2). Influenza vaccination rates among persons with asthma were higher among persons aged 50–64 years (median: 53.4%; range: 27.6%–74.9%) than among persons aged 18–49 years (median: 27.7%; range: 16.6%–41.1%). For respondents with diabetes, median influenza coverage was 49.0% and ranged from 26.5% (Puerto Rico) to 62.4% (South Dakota); the median pneumococcal coverage was 37.1% and ranged from 19.5% (Puerto Rico) to 58.2% (Montana). For persons with diabetes, vaccination rates were higher among those aged 50–64 years (for influenza, median: 56.5%; range: 23.7%–73.1% and for pneumococcal, median: 42.6%; range: 19.7%–68.1%) than among persons aged 18–49 years (for influenza, median: 37.8%; range: 22.2%–59.9% and for pneumococcal, median: 28.3%; range: 13.3%–56.7%).

Reported by: *BH Bardenheier, MPH, MA, PM Wortley, MD, Immunization Svcs Div; G Euler, DrPH, Epidemiology and Surveillance Div, National Immunization Program, CDC.*

Editorial Note: The findings in this report indicate an increase in influenza and pneumococcal vaccination coverage for the majority of areas from 2002 to 2003 among adults aged ≥ 65 years; however, coverage among persons indicated for these vaccinations remains below the national health objectives for 2010. In addition, almost half of the states reported $>50\%$ influenza coverage levels for participants aged 18–64 years with diabetes; however, the median coverage level of influenza vaccination among participants with asthma and the median coverage level of pneumococcal vaccines among participants with diabetes were below the 2010 target of 60% for noninstitutionalized adults at high risk. Among respondents with asthma and diabetes, those aged 18–49 years had substantially lower vaccination coverage than those aged 50–64 years.

Lack of awareness of the need for vaccination is common among adults aged <65 years with high-risk conditions, such as diabetes or asthma. In a 2003 survey, approximately 75% of unvaccinated persons aged 18–64 years with diabetes reported that they were unaware of the need for influenza vaccine (CDC, unpublished data, 2003). Although use of

preventive health services by adults with diabetes has increased since 1995 (3), a substantial proportion of generalist and subspecialist physicians did not strongly recommend influenza and pneumococcal vaccinations to their patients who are elderly or at high risk (4). Low vaccination rates among persons with high-risk conditions might reflect the challenge of targeting patients for vaccinations on the basis of high-risk conditions instead of age (1). Although a majority of patients seen by subspecialists might be those who most need vaccination, subspecialists might not perceive the provision of preventive services as their role. Primary care physicians and subspecialists should work together to ensure that persons at high risk receive appropriate vaccinations. In addition, strategies to increase awareness among young adults of the need for vaccinations could be emphasized by diabetes- and asthma-care programs (3,5). The Diabetes Quality Improvement Project, a collaborative effort between public and private organizations to improve preventive care for persons with diabetes, has been ongoing since 1995 (6); this effort is one possible reason for the higher influenza vaccination rates among those with diabetes compared with those with asthma.

The findings in this report are subject to at least three limitations. First, vaccination status (influenza and pneumococcal) was based on self-report and not validated. The validity of self-reported pneumococcal vaccination is lower than that of influenza vaccination (7). Second, the median BRFSS response rate (53.2%) in this survey was low. BRFSS results have been compared with results from the National Health Interview Survey (NHIS), a household-based, face-to-face interview survey with higher response rates. Comparisons demonstrate similar trends and subgroup differences; however, BRFSS vaccination estimates are consistently higher than NHIS estimates (8). Finally, because BRFSS does not systematically assess other medical conditions for which influenza and pneumococcal vaccines are recommended, vaccine coverage for all persons with high-risk conditions was not examined.

The variation in influenza and pneumococcal vaccination coverage observed among areas suggests that vaccination coverage can be improved. Previous studies have indicated that organizational changes, such as nurse standing orders, combined with teamwork and collaboration, are effective intervention measures for increasing adult vaccination services (9). Effective measures to promote the use of such measures are needed for vaccination rates to increase.

Because of the 2004 influenza vaccine shortage, vaccine providers have been asked to direct available inactivated influenza vaccine to persons with chronic conditions, such as diabetes and asthma, and other priority groups. Further analysis of influenza vaccine coverage data will be needed to assess

TABLE 2. Percentage of persons aged 18–64 years with asthma or diabetes who reported receiving influenza vaccine during the preceding year and persons aged 18–64 years with diabetes reporting receiving pneumococcal vaccine ever, by area — Behavioral Risk Factor Surveillance System, United States, 2003

Area	Influenza vaccination among adults aged 18–64 years with asthma		Influenza vaccination among adults aged 18–64 years with diabetes		Pneumococcal vaccination among adults aged 18–64 years with diabetes	
	%	(95% CI)*	%	(95% CI)	%	(95% CI)
Alabama	33.8	(25.7–41.8)	47.4	(39.4–55.4)	34.8	(26.9–42.7)
Alaska	38.7	(29.0–48.3)	50.4	(34.9–65.9)	41.2	(25.3–57.0)
Arizona	33.9	(24.5–43.4)	54.4	(41.8–66.9)	33.8	(22.0–45.6)
Arkansas	40.2	(33.5–46.8)	45.2	(37.8–52.6)	30.7	(23.8–37.7)
California	28.7	(22.9–34.5)	40.2	(31.9–48.5)	29.5	(21.7–37.3)
Colorado	39.0	(32.5–45.5)	52.7	(43.2–62.2)	41.2	(31.2–51.2)
Connecticut	39.9	(34.4–45.4)	54.8	(46.3–63.3)	33.5	(25.0–42.0)
Delaware	34.8	(27.5–42.0)	44.0	(35.2–52.8)	27.9	(20.5–35.2)
District of Columbia	24.7	(16.8–32.7)	41.8	(28.8–54.7)	—†	
Florida	28.8	(20.1–37.6)	43.4	(34.0–52.7)	43.7	(34.2–53.3)
Georgia	31.6	(24.0–39.2)	38.2	(31.9–44.4)	26.2	(21.0–31.5)
Hawaii	42.0	(33.8–50.1)	57.5	(48.6–66.3)	26.4	(18.3–34.4)
Idaho	31.3	(25.2–37.4)	54.6	(45.9–63.4)	38.6	(30.2–47.0)
Illinois	32.4	(26.1–38.7)	38.1	(29.8–46.4)	29.4	(21.3–37.5)
Indiana	33.7	(28.4–39.0)	46.6	(40.0–53.2)	40.5	(34.0–47.1)
Iowa	31.3	(24.3–38.3)	62.2	(54.3–70.1)	48.5	(40.2–56.9)
Kansas	30.4	(24.2–36.6)	49.8	(41.4–58.2)	33.9	(25.9–42.0)
Kentucky	29.7	(24.1–35.2)	46.6	(40.0–53.3)	33.8	(27.6–40.0)
Louisiana	36.6	(29.7–43.6)	40.9	(34.4–47.4)	31.6	(25.6–37.7)
Maine	39.3	(31.4–47.3)	49.0	(38.4–59.7)	35.0	(24.9–45.2)
Maryland	38.4	(30.7–46.0)	46.6	(37.6–55.6)	38.0	(28.9–47.0)
Massachusetts	36.8	(31.9–41.6)	49.7	(42.2–57.3)	39.1	(31.5–46.8)
Michigan	34.3	(27.8–40.9)	42.1	(34.6–49.7)	38.0	(30.4–45.5)
Minnesota	40.1	(32.4–47.8)	56.3	(47.2–65.4)	33.6	(25.1–42.2)
Mississippi	30.4	(23.5–37.4)	39.8	(33.6–46.1)	22.6	(17.0–28.3)
Missouri	31.9	(24.4–39.5)	48.6	(39.0–58.1)	35.2	(26.2–44.2)
Montana	46.6	(38.4–54.8)	58.8	(48.7–69.0)	58.2	(47.7–68.7)
Nebraska	43.1	(36.6–45.1)	57.0	(48.8–65.2)	37.7	(29.7–45.8)
Nevada	27.8	(18.6–37.1)	29.0	(17.7–40.3)	40.0	(26.4–53.6)
New Hampshire	36.8	(31.0–42.6)	61.9	(54.2–69.6)	50.6	(42.6–58.7)
New Jersey	31.6	(27.4–35.8)	41.9	(36.4–47.4)	29.6	(24.6–34.6)
New Mexico	39.7	(33.2–46.1)	61.3	(53.4–69.2)	46.1	(37.6–54.6)
New York	38.6	(32.9–44.3)	53.5	(45.7–61.4)	43.6	(35.5–51.7)
North Carolina	34.0	(27.9–40.1)	46.1	(39.7–52.4)	38.3	(31.9–44.7)
North Dakota	38.8	(30.6–46.9)	56.3	(45.4–67.3)	36.4	(26.1–46.7)
Ohio	30.4	(23.3–37.5)	38.0	(29.6–46.5)	41.8	(32.3–51.2)
Oklahoma	38.0	(32.8–43.3)	53.9	(48.1–59.6)	41.3	(35.6–46.9)
Oregon	34.4	(28.2–40.7)	54.5	(45.3–63.6)	48.4	(38.9–57.9)
Pennsylvania	33.6	(26.5–40.6)	59.3	(50.7–67.9)	37.1	(28.2–45.9)
Rhode Island	42.0	(35.7–48.3)	58.9	(49.4–68.3)	46.6	(37.2–56.0)
South Carolina	38.9	(32.4–45.4)	52.1	(45.9–58.2)	34.9	(29.1–40.8)
South Dakota	45.8	(37.6–54.0)	62.4	(54.9–69.9)	37.7	(30.1–45.3)
Tennessee	32.8	(24.9–40.8)	47.4	(38.6–56.1)	28.1	(21.0–35.3)
Texas	31.9	(25.8–37.9)	40.8	(34.9–46.7)	29.2	(23.5–34.8)
Utah	30.9	(23.4–38.3)	53.1	(42.5–63.7)	53.4	(42.6–64.1)
Vermont	30.7	(24.5–36.9)	56.0	(47.2–64.7)	40.7	(31.8–49.6)
Virginia	32.9	(25.5–40.2)	45.1	(37.1–53.0)	34.8	(27.0–42.5)
Washington	36.5	(33.4–39.7)	50.5	(46.2–54.8)	43.8	(39.4–48.1)
West Virginia	37.5	(30.5–44.5)	52.4	(44.8–60.0)	40.3	(32.9–47.7)
Wisconsin	34.3	(27.2–41.3)	58.0	(47.9–68.2)	55.5	(45.3–65.8)
Wyoming	46.6	(39.2–54.0)	47.3	(38.6–56.0)	46.0	(37.2–54.9)
Guam	—		—		—	
Puerto Rico	22.5	(17.3–27.8)	26.5	(20.3–32.7)	19.5	(13.9–25.1)
U.S. Virgin Islands	—		28.2	(18.7–37.7)	—	
Median	34.0		49.0		37.1	
Range	22.5–46.6		26.5–62.4		19.5–58.2	

* Confidence interval.

† Number of respondents too small for meaningful analysis.

the impact of this shortage on influenza vaccine coverage and efforts to redirect vaccine to persons at greatest risk for influenza complications. Ensuring adequate amounts of influenza vaccine is critical if vaccination rates of persons at high risk are to continue improving. Pneumococcal vaccine supplies appear to be adequate to meet expected demand. Pneumococcal vaccination should be encouraged for populations at high risk, both to reduce the risk for invasive pneumococcal disease itself and to reduce complications of influenza infection.

References

1. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2004;53(No. RR-6).
2. US Department of Health and Human Services. Healthy People 2010, 2nd ed. With understanding and improving health and objectives for improving health (2 vols.). Washington, DC: US Department of Health and Human Services; November 2000.
3. CDC. Preventive-care practices among persons with diabetes—United States, 1995 and 2001. MMWR 2002;51:965–9.
4. Nichol KL, Zimmerman R. Generalist and subspecialist physicians' knowledge, attitudes, and practices regarding influenza and pneumococcal vaccinations for elderly and other high-risk patients: a nationwide survey. Arch Intern Med 2001;161:2702–8.
5. Task Force on Community Preventive Services. Recommendations regarding interventions to improve vaccination coverage in children, adolescents, and adults. Am J Prev Med 2000;18:92–6.
6. Fleming BB, Greenfield S, Engelgau MM, Pogach LM, Clauser SB, Parrott MA. The Diabetes Quality Improvement Project: moving science into health policy to gain an edge on the diabetes epidemic. Diabetes Care 2001;24:1815–20.
7. MacDonald R, Baken L, Nelson A, Nichol KL. Validation of self-report of influenza and pneumococcal vaccination status in elderly outpatients. Am J Prev Med 1999;16:173–7.
8. Nelson DE, Powell-Griner E, Town M, Kovar MG. A comparison of national estimates from the National Health Interview Survey and the Behavioral Risk Factor Surveillance System. Am J Public Health 2003;93:1335–41.
9. Stone EG, Morton SC, Hulscher ME, et al. Interventions that increase use of adult immunization and cancer screening services: a meta-analysis. Ann Intern Med 2002;136:641–51.

Influenza Vaccination and Self-Reported Reasons for Not Receiving Influenza Vaccination Among Medicare Beneficiaries Aged ≥ 65 years — United States, 1991–2002

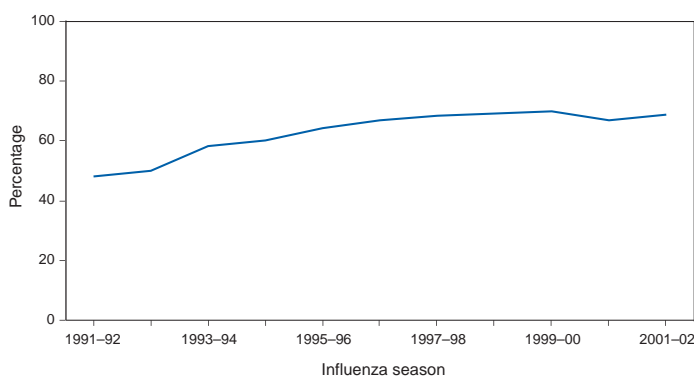
Annual influenza vaccination of the U.S. elderly population has been demonstrated as safe and effective in reducing the risks of illness, hospitalization, and death (1). The Medicare Current Beneficiary Survey (MCBS) has measured annual influenza vaccination rates since 1991; the latest data

available are for the 2001–02 influenza season. Since 1996, self-reported reasons for not receiving influenza vaccine also have been measured. During 1991–2002, MCBS indicated a steady upward trend in vaccination coverage among Medicare beneficiaries, with the exception of the 2000–01 influenza season, when vaccine distribution was delayed. The most frequently cited reasons for not receiving influenza vaccine were 1) not knowing that influenza vaccination was needed and 2) concerns that vaccination might cause influenza or side effects. During the 2000–01 influenza season, vaccine shortage or unavailability was noted for the first time as an important reason for nonvaccination. Further efforts are needed to educate the elderly regarding the benefits of influenza vaccination and to address any concerns regarding the safety of the vaccine.

MCBS is a nationally representative survey of the Medicare population, conducted by the Centers for Medicare & Medicaid Services (CMS). Beneficiaries sampled from Medicare enrollment files (or appropriate proxies) are interviewed in person. Primary sampling units (PSUs) consist of persons in 107 geographic areas chosen to represent the nation; beneficiaries residing in these PSUs are selected by systematic random sampling within age strata. Data for this report were analyzed by using statistical software to account for sampling weights in calculating point estimates of proportions; analyses were restricted to Medicare beneficiaries aged ≥ 65 years who resided in a noninstitutional setting.

Each year, MCBS asks respondents, “Did you have a flu shot for last winter?” The percentage reporting receipt of influenza vaccination increased each influenza season from 1991–92 through 1999–2000, and especially in 1993–94 (Figure 1), when influenza vaccination first became a Medicare benefit. However, during the 2000–01 influenza season, the vaccination rate declined instead of maintaining an annual increase; 67.0% (20.5 million of 30.6 million

FIGURE 1. Percentage of Medicare beneficiaries aged ≥ 65 years who reported influenza vaccination, by influenza season — United States, 1991–2002



a•ware: *adj*

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



know what matters.



Medicare beneficiaries aged ≥ 65 years living in the community) reported receiving the vaccine, compared with a record high of 70.0% (21.2 million out of 30.3 million) in 1999–00. For the 2001–02 influenza season, 68.8% (21.3 million of 31.0 million) reported receiving influenza vaccine.

The MCBS also asks about reasons for not getting influenza vaccination. The question asked is “Why didn’t you get a flu shot for last winter?” Respondents are free to give any reason or reasons, with open-ended responses recorded by interviewers into prespecified categories. This question was omitted for the 1999–00 influenza season.

The leading reasons for nonvaccination reported for 1997–98, 1998–99, 2000–01, and 2001–02 were not knowing that influenza vaccination was needed and concerns that vaccination might cause influenza or side effects (Figure 2). In 2000–01, for the first time, one of the leading reasons was that vaccine was unavailable or in short supply. For the 2000–01 season,

12.7% of unvaccinated respondents reported vaccine unavailability as a reason for not receiving influenza vaccine. This equates to approximately 1.25 million persons, or 4.2% of the total elderly Medicare population living in the community, which amounts to roughly the difference between the expected annual increase and the actual decline for 2000–01 in self-reported influenza vaccination. By contrast, during the 2001–02 influenza season, an estimated 7.5% of unvaccinated respondents (approximately 707,000 persons, or 2.3% of the total elderly Medicare population living in the community) reported vaccine unavailability as a reason for nonvaccination.

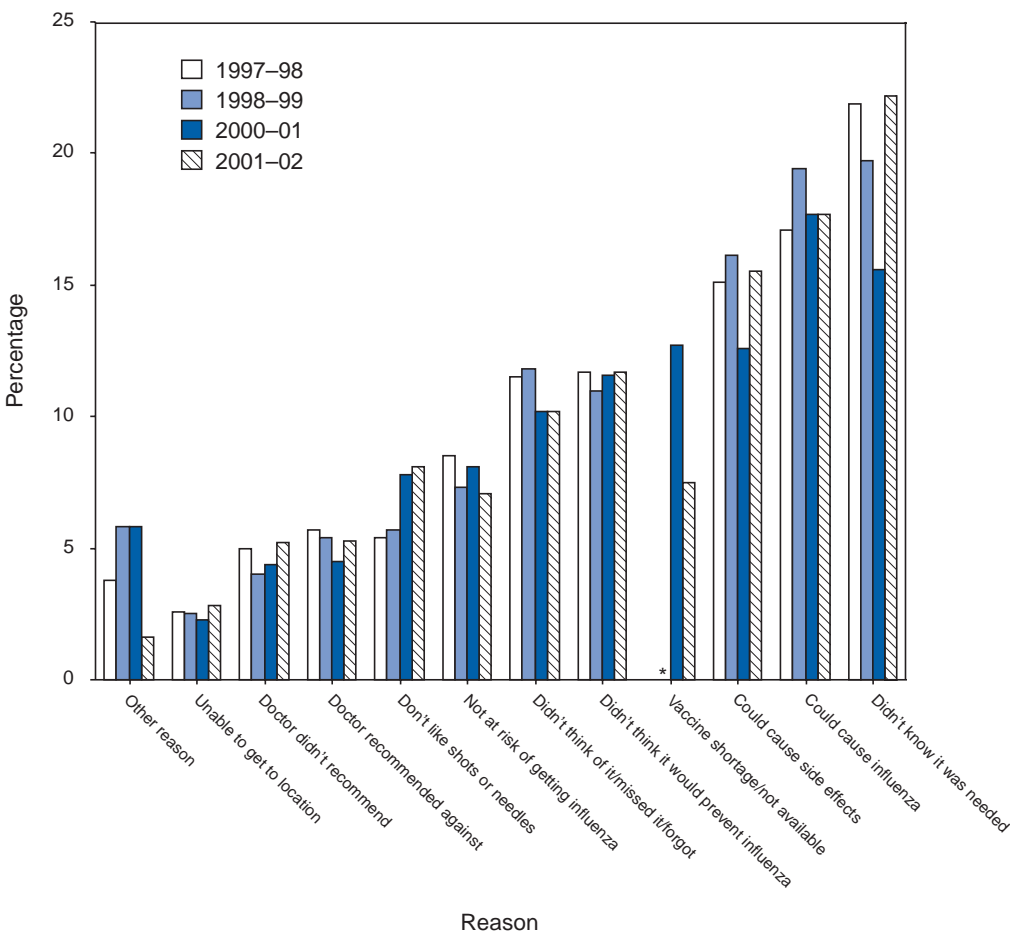
Reported by: GS Adler, MPhil, Office of Research, Development, and Information, Centers for Medicare & Medicaid Svcs. CA Winston, PhD, Immunization Svcs Div, National Immunization Program, CDC.

Editorial Note: For the 2000–01 influenza season, production delays created shortages of influenza vaccine, especially at the beginning of the vaccination period (i.e., October and

November), when demand was greatest (2). Delays in vaccine production continued for the 2001–02 influenza season but were considered less severe (3). The 2000–01 decline and subsequent rebound of vaccination coverage in 2001–02 was observed by other government health surveys (4–6). However, the self-reported MCBS data establish an association between vaccine shortages and reduced vaccination rates among the Medicare population aged ≥ 65 years, one of the groups at high risk for influenza complications.

The findings in this report are subject to at least two limitations. First, vaccination status during the preceding influenza season is self-reported and subject to recall and social desirability bias. Second, the results are subject to survivor bias (i.e., persons who died could not be interviewed about their vaccination status the previous winter). Finally, participant reasons for nonvaccination are categorized during the interview, rather than recorded verbatim. Although “other” reasons are captured as

FIGURE 2. Percentage of Medicare beneficiaries aged ≥ 65 years who reported reasons for not receiving influenza vaccination, by reason — United States, 1997–98, 1998–99, 2000–01, and 2001–02 influenza seasons



* Not listed as a reason before 2000–01 influenza season.

a category and reviewed for retrospective categorizing of responses, interviewer coding might result in misclassification or in a different distribution of reasons than would be obtained by providing respondents a list of answers from which to choose.

Consequences from the vaccine shortage in 2000–01 were limited because of the mildness of the influenza virus that season (7). CDC has previously estimated that for each 1 million elderly persons vaccinated, approximately 900 deaths and 1,300 hospitalizations are prevented (8). Influenza vaccination rates are used as indicators of progress toward achieving the national health objectives for 2010. CMS, together with CDC, has conducted a long-term, structured campaign to promote the benefits of vaccination to Medicare beneficiaries and to improve provider performance. These efforts have resulted in large increases in vaccination during the preceding decade. However, even the strongest efforts of government agencies to promote vaccination are subject to the constraints of limited vaccine supply. During the current influenza vaccine shortage, vaccine is prioritized for populations at high risk, including the elderly.

During 1997–2002, other reasons for nonvaccination were cited more often than reduced availability of vaccine. The most common reasons for nonvaccination were lack of knowledge about the need for vaccination and misconceptions about influenza vaccination and disease or side effects (9). These reasons remain important modifiers of elderly Medicare beneficiaries' behavior and can be further addressed through communications about influenza vaccination. Evidence-based strategies should be developed and used to 1) educate the public and vaccination providers regarding the benefit of influenza vaccine for the elderly and 2) address concerns about the safety and efficacy of the vaccine.

References

1. US Preventive Services Task Force. Guide to clinical preventive services. 2nd ed. Washington, DC: US Department of Health and Human Services; 1996.
2. US General Accounting Office. Flu vaccine: supply problems heighten need to ensure access for high-risk people (report GAO-01-624). Washington, DC: US General Accounting Office; 2001.
3. Fukuda K, O'Mara D, Singleton J. How the delayed distribution of influenza vaccine created shortages in 2000 and 2001. *Pharmacy and Therapeutics* 2002;27:235–42.
4. CDC. Influenza and pneumococcal vaccination levels among persons aged ≥ 65 years—United States, 2001. *MMWR* 2002;51:1019–24.
5. National Center for Health Statistics. Early release: Figure 4.1. Percent of adults aged 18 years and over who had received an influenza shot during the past 12 months, by age group and quarter, 1997–2004. Hyattsville, MD: US Department of Health and Human Services, CDC; 2004. Available at http://www.cdc.gov/nchs/data/nhis/earlyrelease/200409_04.pdf.
6. CDC. Influenza vaccination coverage among adults aged ≥ 50 years and pneumococcal vaccination coverage among persons aged ≥ 65 years—United States, 2002. *MMWR* 2003;52:987–92.
7. CDC. Update: influenza activity—United States and worldwide, 2000–01 season, and composition of the 2001–02 influenza vaccine. *MMWR* 2001;50:466–70.
8. CDC. Updated recommendations from the Advisory Committee on Immunization Practices in response to delays in supply of influenza vaccine for the 2000–01 season. *MMWR* 2000;49:888.
9. CDC. Reasons reported by Medicare beneficiaries for not receiving influenza and pneumococcal vaccinations—United States, 1996. *MMWR* 1999;48:886–90.

Acute Hepatitis B Among Children and Adolescents — United States, 1990–2002

Since the 1991 adoption of a comprehensive strategy to eliminate hepatitis B virus (HBV) transmission in the United States (1), the incidence of acute hepatitis B cases has declined steadily. Declines have been greatest among children born after the 1991 recommendations for universal infant hepatitis B vaccination were implemented. In 1995, the elimination strategy was expanded to include routine vaccination of all adolescents aged 11–12 years and, in 1999, to include children aged ≤ 18 years who had not been vaccinated previously (2). To describe the epidemiology of acute hepatitis B in children and adolescents in the United States, CDC analyzed notifiable disease surveillance data collected during 1990–2002 and data collected during 2001–2002 through enhanced surveillance of reported cases of acute hepatitis B in children born after 1990. This report summarizes the results of that analysis, which indicated that the rate of acute hepatitis B in children and adolescents decreased 89% during 1990–2002 and that racial disparities in hepatitis B incidence have narrowed. Many confirmed cases in persons born after 1990 occurred among international adoptees and other children born outside the United States. Continued implementation of the hepatitis B elimination strategy and accurate surveillance data to monitor the impact of vaccination are necessary to sustain the decline of acute hepatitis B among children.

Cases of acute hepatitis B were reported weekly to CDC by all 50 states and the District of Columbia. Acute hepatitis B rates were calculated per 100,000 population by using population denominators from the U.S. Census Bureau. Acute hepatitis B was defined as an acute illness with 1) discrete onset of symptoms and jaundice or elevated serum aminotransferase levels and 2) laboratory evidence of either IgM antibody to hepatitis B core antigen (IgM anti-HBc) or hepatitis B surface antigen (HBsAg). Since March 2001, CDC has conducted enhanced hepatitis B surveillance, contacting states to confirm all reported cases of acute hepatitis B in persons born after 1990. State surveillance staff members were asked to verify

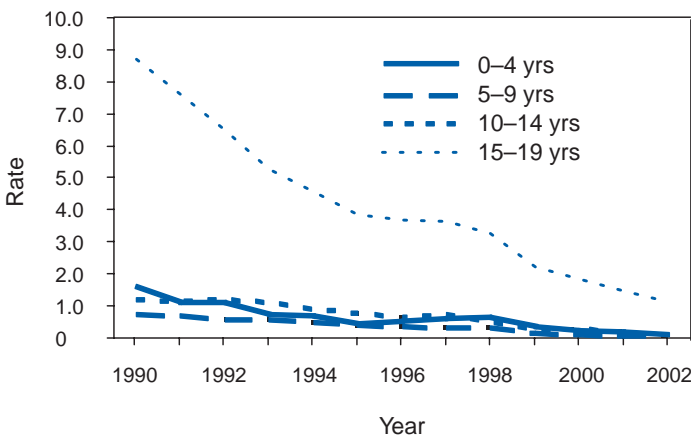
each of the items in the case definition and provide information regarding vaccination history and country of birth. If errors were identified during this process, states were asked to correct the information in an updated submission to CDC.

National Surveillance

During 1990–2002, a total of 13,829 cases of acute hepatitis B were reported in the United States among persons aged ≤19 years. The incidence of reported cases declined steadily during this period, from 3.03 per 100,000 population in 1990 to 0.34 in 2002, representing a decline of 89%. The incidence among adolescents aged 15–19 years was consistently higher than the incidence among younger age groups (Figure 1), ranging from 8.69 per 100,000 population in 1990 to 1.13 in 2002. Children and adolescents in all age groups experienced steep declines in incidence during 1990–2002; incidence declined 94% among children aged 0–4 years, 92% among children aged 5–9 years, 93% among those aged 10–14 years, and 87% among adolescents aged 15–19 years.

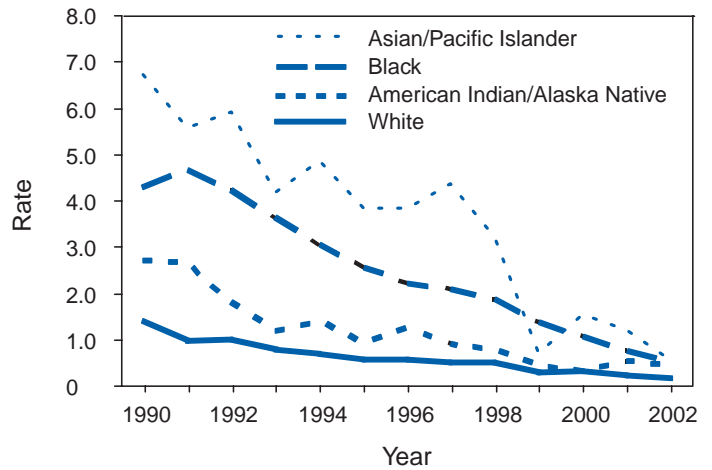
Among children and adolescents aged ≤19 years in 1990, incidence per 100,000 population was highest among Asian/Pacific Islanders (A/PIs) (6.74) and blacks (4.29); whites had the lowest race-specific incidence (1.39). Differences in incidence between whites and A/PIs and between whites and blacks were 5.34 and 2.90, respectively. From 1990 to 2002, rates declined 92% among A/PIs, 88% among whites, 88% among blacks, and 84% among American Indians/Alaskan Natives (AI/ANs) (Figure 2). In 2002, the highest incidence per 100,000 population was among A/PIs (0.55), followed by blacks (0.51), AI/ANs (0.43), and whites (0.16); since 1990, differences in incidence between whites and A/PIs and whites and blacks declined by 93% and 88%, respectively.

FIGURE 1. Rate* of acute hepatitis B in children and adolescents, by age group and year — United States, 1990–2002



* Per 100,000 population.

FIGURE 2. Rate* of acute hepatitis B in persons aged ≤19 years, by race and year — United States, 1990–2002



* Per 100,000 population.

Case Investigations

Follow-up investigations conducted by CDC and state and local health departments verified 19 case reports from 2001 and 2002 as cases of acute hepatitis B among children born after 1990 (Table). Of the verified case reports, 12 (60%) involved males, eight (42%) involved children aged <2 years, and 11 (58%) involved children born in the United States. Seven (37%) reported race as A/PI, five (26%) as white, four (21%) as black, and three (16%) as unknown. Eight (42%)

TABLE. Acute hepatitis B cases* among U.S. residents born after 1990, by year and selected characteristics — United States, 2001–2002

Reporting year	Age	Race	Birth country or continent	International adoptee
2001	8 yrs	White	United States	No
	1 yr	Asian/Pacific Islander (A/PI)	United States	No
	7 yrs	A/PI	Asia	No
	1 yr	A/PI	United States	No
	5 yrs	A/PI	China	Yes
	8 yrs	White	Bulgaria	Yes
	5 yrs	White	United States	No
	9 yrs	A/PI	United States	No
	10 mos	Unknown	Russia	Yes
	1 yr	A/PI	Phillipines	Yes
	5 yrs	White	United States	No
	9 mos	White	Ukraine	Yes
2002	10 mos	Black	United States	No
	5 yrs	Black	United States	No
	7 yrs	Black	United States	No
	9 mos	A/PI	Vietnam	Yes
	1 yr	Unknown	Tanzania	Unknown
9 yrs	Black	United States	No	
11 yrs	Unknown	United States	No	

* Confirmed by follow-up investigation.

cases were reported in children born outside the United States, including six international adoptees (32%). Receipt of ≥ 1 dose of hepatitis B vaccine was confirmed in three (16%) cases. Vaccination status was unknown for 12 cases (63%).

Reported by: *State and local health departments. C Shepard, MD, L Finelli, DrPH, B Bell, MD, J Miller, MPH, Div of Viral Hepatitis, National Center for Infectious Diseases, CDC.*

Editorial Note: The incidence of acute hepatitis B cases in U.S. children and adolescents decreased during the era of universal childhood vaccination. This decline coincided with an increase in hepatitis B vaccination coverage among children aged 19–35 months, from 16% in 1992 to 90% in 2002, and among adolescents aged 13–15, from nearly 0 in 1992 to 67% in 2002 (3,4).

Declines in incidence were observed for children of all races, including A/PIs, whose rates historically have been higher than the national average. Because of the disproportionate burden of hepatitis B in A/PI communities, A/PI children were among the first groups for whom hepatitis B vaccination was recommended (3). The reduction of the disparity between A/PIs and other children is consistent with recent observations noting a decline in seroprevalence of HBV infection and successful implementation of routine hepatitis B vaccination among Asians who have recently immigrated to the United States (5). However, of the 11 verified cases during 2001–02 of acute hepatitis B among children born in the United States, three (27%) involved A/PIs (Table). Although the national origins of these children's household members are unknown, the substantial proportion of A/PIs suggests that horizontal transmission of HBV among first-generation Asians might be a persistent problem (6).

The higher incidence among older adolescents (aged 15–19 years) likely is attributable to their having been born before universal infant hepatitis B vaccination was recommended in 1991. Incidence among older adolescents is expected to decline further as the vaccinated cohort ages and as 1999 recommendations to vaccinate all previously unvaccinated persons aged 0–18 years are fully implemented. The expected decline in rates among adolescents also might be augmented by laws in 32 states requiring proof of hepatitis B vaccination before entry into middle school (7).

Follow-up information obtained through surveillance of reported cases suggests that children born outside the United States, especially international adoptees, represent a substantial proportion of cases. Cases of acute hepatitis B among international adoptees might result from undervaccination and increased risk for exposure while living in areas with high prevalence of chronic HBV infection. International adoptees are

exempt from U.S. regulations* that bar entry to immigrants without documentation of hepatitis B vaccination. Studies have demonstrated that international adoptees exhibit low rates of protective titers of antibodies to vaccine-preventable diseases upon arrival in the United States, including adoptees with written evidence of age-appropriate vaccination provided by the birth country (8,9). Appropriate evaluation and remediation of the immunization status of international adoptees has been promoted through national guidelines (10); however, the extent to which these guidelines have been implemented is unknown.

Despite the decline in acute hepatitis B cases among children in the United States, the presence of confirmed cases highlights the importance of infant vaccination and timely completion of the 3-dose vaccination series. The vaccination series should be started at birth, preferably before the newborn is discharged from the hospital. Infants born to women who are HBsAg positive or who have not had prenatal HBsAg testing should receive the first dose of hepatitis B vaccine within 12 hours of birth (1). Beginning the vaccination series at birth decreases the risk for perinatal HBV transmission and predicts successful completion of the series.

Although enhanced surveillance data from verified case reports suggest that international adoptees and other children born outside the United States might particularly benefit from future prevention efforts, many case reports lacked risk factor information. As the incidence of acute hepatitis B among children and adolescents declines, accurate surveillance data become increasingly important to monitor the effect of immunization recommendations. Continued efforts of local, state, and national surveillance staff to improve data quality are critical to eliminating HBV transmission in the United States.

*U.S. Code title 8, chapter 12, subchapter II, Part II, §1182, (a)(1)(C).

References

1. CDC. Hepatitis B virus: a comprehensive strategy for eliminating transmission in the United States through universal childhood vaccination: recommendations of the Immunization Practices Advisory Committee (ACIP). *MMWR* 1991;40(No. RR-13).
2. CDC. Update: recommendations to prevent hepatitis B virus transmission—United States. *MMWR* 1999;48:33–4.
3. CDC. Achievements in public health: hepatitis B vaccination, United States, 1982–2002. *MMWR* 2002;51:549–52,563.
4. CDC. National immunization survey. Atlanta, GA: US Department of Health and Human Services, CDC; 2004. Available at <http://www.cdc.gov/nip/coverage/#NIS>.
5. Fiore A, Neeman R, Lee S, et al. Seroprevalence of hepatitis B virus (HBV) infection among Asian immigrants and their US-born children in Georgia. In: Abstracts of the 41st Annual Meeting of the Infectious Diseases Society of America, San Diego, CA; October 2003.
6. Franks AL, Berg CJ, Kane MA, et al. Hepatitis B virus infection among children born in the United States to southeast Asian refugees. *N Engl J Med* 1989;321:1301–5.

7. Immunization Action Coalition. Hepatitis B prevention mandates. St. Paul, MN: Immunization Action Coalition; 2004. Available at <http://www.immunize.org/laws/hepb.htm>.
8. Miller LC. Internationally adopted children—immunization status. *Pediatrics* 1999;103:1078.
9. Hostetter MK. Infectious diseases in internationally adopted children: findings in children from China, Russia, and Eastern Europe. *Adv Pediatr Infect Dis* 1999;14:147–61.
10. CDC. General recommendations on immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Family Physicians (AAF). *MMWR* 2002;51(No. RR-2):19–21.

Blood Mercury Levels in Young Children and Childbearing-Aged Women — United States, 1999–2002

Exposure to high levels of mercury (Hg) can cause neurologic and kidney disorders (1–3). Because methylated Hg (methyl-Hg) in the aquatic environment accumulates in animal tissues up the food chain, persons in the United States can be exposed by eating freshwater fish, seafood, and shellfish. Exposure of childbearing-aged women is of particular concern because of the potential adverse neurologic effects of Hg in fetuses. To determine levels of total blood Hg in childbearing-aged women and in children aged 1–5 years in the United States, CDC's National Health and Nutrition Examination Survey (NHANES) began measuring blood Hg levels in these populations in 1999. This report summarizes NHANES results for 1999–2002 and updates previously published information (4,5). The findings confirmed that blood Hg levels in young children and women of childbearing age usually are below levels of concern. However, approximately 6% of childbearing-aged women had levels at or above a reference dose, an estimated level assumed to be without appreciable harm ($\geq 5.8 \mu\text{g/L}$). Women who are pregnant or who intend to become pregnant should follow federal and state advisories on consumption of fish.

NHANES is a continuous survey of the health and nutritional status of the civilian, noninstitutionalized U.S. population; data are released and reported in 2-year cycles (6). Each participant undergoes a household interview and a physical examination. During the physical examination, blood is collected by venipuncture from all persons aged ≥ 1 year. For this analysis, whole-blood specimens were analyzed for total and inorganic Hg for children aged 1–5 years and women aged 16–49 years by automated, cold-vapor atomic absorption spectrophotometry in CDC's inorganic toxicology laboratory. The analytic method detection limit was $0.14 \mu\text{g/L}$ (ppb) for total Hg and $0.4 \mu\text{g/L}$ (ppb) for inorganic Hg (7). Blood Hg levels

less than the limit of detection were assigned a value equal to the detection limit divided by the square root of 2 for the calculation of geometric mean (GM) values.

During 1999–2002, the GMs of total blood Hg concentrations for all childbearing-aged women and for children aged 1–5 years were $0.92 \mu\text{g/L}$ and $0.33 \mu\text{g/L}$, respectively; the 95th percentiles of blood Hg for women and children were $6.04 \mu\text{g/L}$ and $2.21 \mu\text{g/L}$, respectively (Table 1). The percentage of all women aged 16–49 years with Hg levels $\geq 5.8 \mu\text{g/L}$ (the Environmental Protection Agency's [EPA] Reference Dose [RfD]) was 5.66% (95% confidence interval [CI] = 4.04–7.95) (Table 2).

Among children aged 1–5 years, the estimated percentage who had blood Hg levels $\geq 5.8 \mu\text{g/L}$ during 1999–2002 could not be reported because the observed percentage was too low for the given sample size to calculate a statistically reliable national population estimate. Almost all inorganic blood Hg levels were undetectable, indicating that total blood Hg greater than or equal to the EPA RfD mostly reflected exposure to organic Hg (especially methyl-Hg).

Reported by: *RL Jones, PhD, T Sinks, PhD, SE Schober, PhD, M Pickett, MPH, National Center for Environmental Health; National Center for Health Statistics, CDC.*

Editorial Note: This report updates NHANES 1999–2000 estimates of blood Hg levels (5), the first nationally representative estimates of U.S. women's and children's exposures to Hg based on biologic measures. The findings indicate that blood Hg levels in young children and childbearing-aged women usually are below levels of concern.

Among childbearing-aged women, for the 4-year period 1999–2002, estimates of the GM of blood Hg and the proportion with levels $\geq 5.8 \mu\text{g/L}$ were lower than estimates for the 2-year period 1999–2000, reflecting apparent declines in these values for the 2-year period 2001–2002. However, when these differences were evaluated by comparing estimates for the two 2-year periods, the declines were not statistically significant: the GM of blood Hg for 2001–2002 was $0.83 \mu\text{g/L}$ (CI = 0.73–0.93), compared with $1.02 \mu\text{g/L}$ (CI = 0.80–1.24) for 1999–2000, and the percentage of women with blood Hg levels $\geq 5.8 \mu\text{g/L}$ was 3.9% in 2001–2002 (CI = 2.40–6.43), compared with 7.8% in 1999–2000 (CI = 4.70–12.83). At least 2 more years of data are needed to best determine whether Hg exposure has declined among women of childbearing age in the United States.

Although NHANES data are released and often analyzed as 2-year periods, the estimates of blood Hg levels for 1999–2002 are the most reliable estimates of current exposure. The 4-year period provides greater geographic coverage, and estimates and sample errors are more stable, thus reducing vari-

TABLE 1. Geometric means (GMs) and selected percentiles of total blood mercury (Hg) concentrations ($\mu\text{g/L}$) for women aged 16–49 years and children aged 1–5 years, by selected variables — National Health and Nutrition Examination Survey, United States, 1999–2002

Variable	No.	GM	(95% CI)*	Selected percentile (95% CI)					
				5th	(95% CI)	10th	(95% CI)	25th	(95% CI)
Women									
Race/Ethnicity									
Mexican American	1,106	0.74	(0.64–0.84)	0.10	(0.08–0.15)	0.17	(0.12–0.23)	0.34	(0.27–0.45)
White, non-Hispanic	1,377	0.87	(0.76–0.99)	0.09	(0.08–0.10)	0.15	(0.13–0.18)	0.37	(0.34–0.45)
Black, non-Hispanic	794	1.18	(1.00–1.36)	0.17	(0.12–0.25)	0.30	(0.24–0.38)	0.60	(0.55–0.73)
Age group (yrs)									
16–29	2,004	0.68	(0.60–0.76)	0.08	(0.07–0.09)	0.11	(0.09–0.14)	0.29	(0.25–0.37)
30–49	1,633	1.10	(0.97–1.24)	0.13	(0.10–0.16)	0.24	(0.20–0.29)	0.52	(0.45–0.60)
Pregnancy status									
Pregnant	629	0.75	(0.60–0.90)	0.08	(... [†] –0.10)	0.10	(0.08–0.20)	0.32	(0.24–0.44)
Not pregnant	2,978	0.94	(0.84–1.04)	0.10	(0.09–0.11)	0.18	(0.15–0.21)	0.41	(0.38–0.47)
Total	3,637	0.92	(0.82–1.02)	0.09	(0.09–0.11)	0.17	(0.15–0.20)	0.40	(0.36–0.47)
Children									
Race/Ethnicity									
Mexican American	526	0.35	(0.30–0.40)	...		0.08	(...–0.09)	0.13	(0.10–0.16)
White, non-Hispanic	447	0.29	(0.24–0.33)	...		0.07	(...–0.08)	0.09	(0.09–0.10)
Black, non-Hispanic	424	0.50	(0.44–0.57)	0.08	(...–0.10)	0.10	(0.09–0.13)	0.22	(0.18–0.26)
Total	1,577	0.33	(0.30–0.37)	...		0.07	(...–0.08)	0.10	(0.09–0.12)

* Confidence interval.

[†] Below the limits of detection.**TABLE 1. (Continued) Geometric means (GMs) and selected percentiles of total blood mercury (Hg) concentrations ($\mu\text{g/L}$) for women aged 16–49 years and children aged 1–5 years, by selected variables — National Health and Nutrition Examination Survey, United States, 1999–2002**

Variable	Selected percentile (95% CI)							
	50th	(95% CI)	75th	(95% CI)	90th	(95% CI)	95th	(95% CI)
Women								
Race/Ethnicity								
Mexican American	0.73	(0.67–0.83)	1.27	(1.16–1.48)	2.38	(2.05–2.95)	3.60	(3.03–6.48)
White, non-Hispanic	0.81	(0.76–0.92)	1.69	(1.51–2.15)	3.73	(2.84–5.14)	6.17	(4.64–9.30)
Black, non-Hispanic	1.15	(1.05–1.41)	2.12	(1.86–2.70)	3.89	(3.24–5.03)	5.54	(4.27–11.08)
Age group (yrs)								
16–29	0.64	(0.55–0.77)	1.34	(1.24–1.54)	2.58	(2.28–3.13)	3.87	(3.32–7.80)
30–49	1.02	(0.91–1.19)	2.10	(1.79–2.69)	4.56	(3.74–5.76)	6.97	(5.73–11.62)
Pregnancy status								
Pregnant	0.73	(0.63–0.97)	1.50	(1.38–1.90)	3.11	(2.14–4.79)	4.86	(3.00–8.02)
Not pregnant	0.88	(0.80–1.00)	1.83	(1.65–2.11)	3.93	(3.26–4.93)	6.11	(5.12–10.90)
Total	0.86	(0.80–0.98)	1.81	(1.62–2.16)	3.89	(3.20–4.88)	6.04	(5.08–10.74)
Children								
Race/Ethnicity								
Mexican American	0.28	(0.24–0.33)	0.63	(0.56–0.81)	1.36	(1.05–1.57)	1.85	(1.60–2.66)
White, non-Hispanic	0.20	(0.17–0.25)	0.49	(0.38–0.63)	1.15	(0.80–1.49)	1.78	(1.18–2.69)
Black, non-Hispanic	0.47	(0.40–0.58)	0.88	(0.78–1.02)	1.54	(1.31–2.04)	2.37	(1.75–3.64)
Total	0.26	(0.23–0.29)	0.61	(0.56–0.70)	1.29	(1.08–1.69)	2.21	(1.80–3.66)

ability caused by differing exposures to Hg across survey site locations. Accordingly, the National Center for Health Statistics advises users of these data that the most reliable estimates of current exposure are obtained when the 1999–2002 data are analyzed together (6).

The EPA RfD is based on measures of Hg in cord blood and is a level assumed to be without appreciable harm. The RfD was determined by applying an uncertainty factor of 10 to a dose (58 $\mu\text{g/L}$) that was the lower 95% confidence limit of a dose associated with an increased proportion of abnor-

TABLE 2. Percentage of women aged 16–49 years with blood mercury (Hg) levels $\geq 5.8 \mu\text{g/L}$, by race/ethnicity — National Health and Nutrition Examination Survey, United States, 1999–2002

Race/Ethnicity	No.	% with Hg levels $\geq 5.8 \mu\text{g/L}$ (95% CI*)	
Mexican American	1,106	1.70	(1.04–2.79)
White, non-Hispanic	1,377	5.77	(3.71–8.97)
Black, non-Hispanic	794	4.82	(2.55–9.11)
Total	3,637	5.66	(4.04–7.95)

* Confidence interval.

mal scores on the Boston Naming Test for children exposed in utero (2). All women and children in the 1999–2002 NHANES survey period had blood Hg levels below $58 \mu\text{g/L}$. The harm to a fetus from levels of exposure as measured by cord blood levels between $5.8 \mu\text{g/L}$ and $58 \mu\text{g/L}$ is uncertain.

The findings in this report are subject to at least two limitations. First, NHANES does not include an adequate sampling of women (e.g., sport fishers) who might eat large amounts of fish to characterize the distribution of total blood Hg in this group. Second, the ratio of Hg in cord to maternal blood (i.e., equivalent to NHANES measures) is uncertain (2,8). Therefore, NHANES values might not be directly comparable to the EPA RfD, which is based on cord blood Hg levels.

Fish are an important part of a diet, high in protein and nutrients and low in saturated fatty acids and cholesterol. The short-term strategy to reduce Hg exposure is to eat fish with low Hg levels and avoid or reduce consumption of fish with high Hg levels. Because exposure to methyl-Hg can harm fetuses, the Food and Drug Administration (FDA) advises that women who are or might become pregnant not eat shark, swordfish, king mackerel, and tile fish (9). In addition, EPA and the Agency for Toxic Substances and Disease Registry have established daily consumption levels of Hg considered to be without harm (1). State-based fish advisories and bans identify fish species contaminated by Hg and their locations and provide safety advice (10). The NHANES program continues to collect Hg measurements in human tissue to monitor the effectiveness of efforts to reduce Hg exposure in the U.S. population.

References

- Agency for Toxic Substances and Disease Registry. Toxicological profile for mercury. Atlanta, GA: US Department of Health and Human Services, Agency for Toxic Substances and Disease Registry; March 1999.
- National Academy of Sciences. Toxicologic effects of methylmercury. Washington, DC: National Research Council; 2000.
- Clarkson N. Current concepts: the toxicology of mercury—current exposures and clinical manifestations [Review]. *N Engl J Med* 2003;349:1731–7.
- CDC. Blood and hair mercury levels in young children and women of childbearing age—United States, 1999. *MMWR* 2000;50:140–3.
- Schober S, Sinks T, Jones R, et al. Blood mercury levels in US children and women of childbearing age, 1999–2000. *JAMA* 2003;289:1667–74.
- National Center for Health Statistics. NHANES analytic guidelines, June 2004. Atlanta, GA: US Department of Health and Human Services, National Center for Health Statistics; 2004. Available at http://www.cdc.gov/nchs/data/nhanes/nhanes_general_guidelines_june_04.pdf.
- Chen HP, Paschal DC, Miller DT, Morrow J. Determination of total and inorganic mercury in whole blood by on-line digestion with flow injection. *Atomic Spectroscopy* 1998;19:176–9.
- Stern A, Smith A. An assessment of the cord blood:maternal blood methylmercury ratio: implications for risk assessment. *Environ Health Perspect* 2003;111:1465–70.
- US Department of Health and Human Services, US Environmental Protection Agency. What you need to know about mercury in fish and shellfish. 2004 EPA and FDA advice for: women who might become pregnant, women who are pregnant, nursing mothers, young children. Washington, DC: US Department of Health and Human Services, US Environmental Protection Agency; 2004. Available at <http://www.cfsan.fda.gov/~dms/admeHg3.html>.
- US Environmental Protection Agency. State fish advisories. Washington, DC: US Environmental Protection Agency; 2004. Available at <http://www.epa.gov/ost/fish/states.htm>.

Outbreak of Histoplasmosis Among Industrial Plant Workers — Nebraska, 2004

In February 2004, the Nebraska Health and Human Services System (NHHSS) notified CDC about an outbreak of histoplasmosis among workers at a local agricultural processing plant (plant A). Three workers at the plant had acute, febrile, respiratory illness; two had serologic evidence of histoplasmosis. NHHSS and CDC conducted an investigation to determine the source of transmission and the extent of the outbreak. This report summarizes the findings of that investigation, which confirmed occupationally acquired histoplasmosis. Additional measures might be necessary to minimize risk for histoplasmosis among persons who work in the agricultural industry in areas where it is endemic.

Plant A is located in an area with historically low endemicity for histoplasmosis. However, in September 2003, NHHSS had investigated an outbreak of histoplasmosis at plant A related to excavation of soil and repair of an underground outdoor pipe. Approximately 3 months later, on January 2, 2004, the excavated soil (i.e., spoil pile) was moved, under standard protocol and appropriate precautions, to an off-site landfill. None of the plant workers with suspected histoplasmosis in the 2004 outbreak had participated in removal of the spoil pile, nor had they been implicated in the 2003 outbreak.

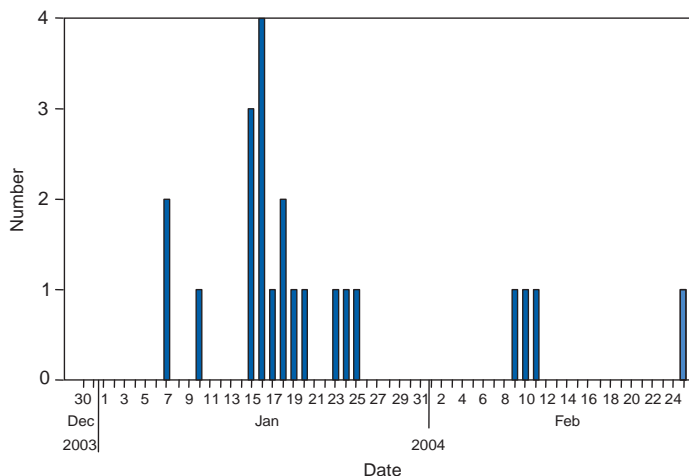
To identify workers with symptomatic acute pulmonary histoplasmosis acquired during the 2004 outbreak, a cohort

study was conducted among plant workers. To better identify risk factors for disease, a nested case-control study was performed among workers who had laboratory testing for histoplasmosis. For the cohort study, all workers were instructed by plant safety managers to complete a self-administered, web-based questionnaire in late February 2004. A clinical case of histoplasmosis was defined as fever plus at least one of the following four symptoms in a plant A worker reported since January 1, 2004: headache, cough, chest pain, or shortness of breath. Workers whose symptoms were consistent with the clinical case definition had histoplasmosis serology testing performed. A laboratory-confirmed case was defined as the presence of a complement fixation (CF) titer $\geq 1:32$ and/or the presence of an H or M band by immunodiffusion test from a single serum sample obtained from a plant A worker, drawn at least 6 weeks after onset of illness. Controls for the case-control study were randomly selected from workers without any symptoms of histoplasmosis identified during the cohort study. These workers were asked to have a serum sample drawn for histoplasmosis testing and were found to have no serologic evidence of recent *Histoplasma capsulatum* infection.

Of 979 plant workers, 724 (74%) completed the cohort questionnaire; 108 (16%) had symptoms consistent with the clinical case definition. The most commonly reported symptoms were headache (93%), cough (77%), and shortness of breath (44%). No workers were hospitalized. Symptomatic workers (clinical cases) were as likely as asymptomatic workers (nonclinical cases) to report working outside, seeing bird droppings, and performing grounds work. Symptomatic workers were more likely to have worked in building complex X (the complex in closest proximity to the spoil pile) than asymptomatic workers (44 [41%] versus 141 [23%]; risk ratio = 2.0; $p < 0.001$). Building complex X was not located in an area known to be heavily contaminated with bird droppings.

Of the 108 symptomatic workers, 90 (83%) had sera available for testing; 25 (28%) had laboratory-confirmed histoplasmosis. Analysis of 22 workers with laboratory-confirmed histoplasmosis with specified dates of symptom onset indicated a cluster of cases during mid-January (Figure). Workers with laboratory-confirmed histoplasmosis were further categorized as clustered cases ($n = 18$) (symptom onset during January 7–25) and outlying cases (all others, $n = 4$). For the case-control study, the 22 workers with laboratory-confirmed histoplasmosis were compared with 31 unmatched controls. Workers categorized as clustered cases were more likely to have worked in building complex X than controls (12 [67%] versus eight [26%]; odds ratio [OR] = 5.8; 95% confidence interval [CI] = 1.6–20.4); no specific activities, dates reporting to work, or relative amount of outside activity

FIGURE. Number* of laboratory-confirmed cases of histoplasmosis among plant A workers, by date of symptom onset — Nebraska, January 7–February 25, 2004



* $n = 22$.

during days of any reported soil disruptions (i.e., December 30, January 2, and January 15) were associated with increased risk for acquiring histoplasmosis. In contrast, workers categorized as outlying cases were as likely to work in building complex X as controls (one [25%] versus eight [26%]; OR = 1.0; $p = 1.0$); no specific occupation was associated with workers with outlying case status.

Reported by: T Safranek, MD, B Beecham, MPH, Nebraska Health and Human Svcs System. B King, MPH, G Burr, National Institute for Occupational Safety and Health; M Lamias, Office of the Director/Office of Informatics; S Fridkin, MD, J Morgan, MD, M Lindsley, ScD, DW Warnock, PhD, Div of Bacterial and Mycotic Diseases, National Center for Infectious Diseases; A Macedo de Oliveira, MD, S Shetty, MD, EIS officers, CDC.

Editorial Note: The findings in this report confirm that an outbreak of occupationally acquired histoplasmosis occurred among at least 25 workers from plant A in January 2004. Histoplasmosis usually is an acute, self-limited respiratory illness with an incubation period of 1–2 weeks after inhalation of *H. capsulatum* spores (1). Previous occupation-related outbreaks of histoplasmosis occurred among workers in a paper factory and courthouse and among bridge workers (2–4), in which disruption of bird or bat droppings, known sources of transmission for *H. capsulatum* spores, had occurred. As in previous outbreaks, this investigation identified cases clustered in time and location. The majority of patients reported illness onset in mid-January, suggesting a point-source exposure in early January. In addition, workers with laboratory-confirmed infection and onset of illness in mid-January were more likely to work at building complex X than controls, supporting the hypothesis of a common source of exposure.

The likely source of this outbreak was the disruption of the spoil pile from the 2003 outbreak. The spoil pile was known to be contaminated with *H. capsulatum*; the workers closest in proximity to it worked at building complex X, and the timing until symptom onset for workers categorized as clustered cases was consistent with histoplasmosis. However, implication of the spoil pile as the source of the outbreak was surprising for several reasons. First, building complex X was approximately 950 feet from the spoil pile. Second, appropriate precautions were taken during removal of the spoil pile (e.g., limiting the number of workers in the area, using appropriate personal protective equipment [PPE], soaking the spoil pile with water before manipulation, and using both a plastic liner and a tarp to cover the soil once it was transferred to a dumpster).

Onset of illness after the mid-January period indicates that some illness might not be associated with the point-source exposure at the plant, but rather might reflect ongoing low-level exposure to *H. capsulatum* either through other work-related or nonwork-related activities. Further investigation will be necessary to identify all activities placing workers at increased risk for disease.

This outbreak underscores the highly infectious nature of *H. capsulatum* spores and the need to protect workers when engaging in work-related activities involving exposure to *H. capsulatum*. In particular, these data suggest that manipulation of soil known to be contaminated with *H. capsulatum* can pose a risk to persons who are not engaged in the activity directly but who might be hundreds of feet away. In addition to following CDC guidelines for the prevention of histoplasmosis among workers (5), the recommendations given to prevent further outbreaks of histoplasmosis at this site included assigning job activities according to three levels of risk: higher, lower, and minimal/no risk. Activities identified as higher risk include those involved in disturbing soil obviously contaminated with bird droppings or in disturbing accumulations of bird droppings. The level of PPE required for these activities includes the use of disposable coveralls such as Tyvek®, rubber boots over normal work shoes, and a respirator providing a higher level of protection, such as a powered air-purifying respirator with high-efficiency particulate air (HEPA) filters or a full-facepiece respirator with HEPA filter. For lower-risk activities (e.g., those disturbing soil that has not been contaminated by bird droppings or during the changing of air filters from buildings or equipment), the level of PPE might be decreased to a NIOSH-certified N-95 filtering facepiece respirator. For activities designated as minimal risk (e.g., those in which no soil or bird droppings are disturbed), no respiratory protection is required, but N-95 filtering facepiece respirators should be available on a voluntary-use basis.

References

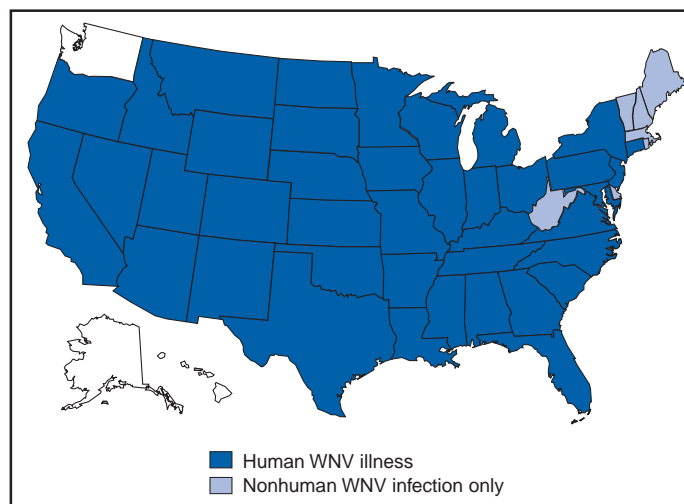
1. Lehan PH, Furculow ML. Epidemic histoplasmosis. *J Chronic Dis* 1957;5:489–503.
2. Stobierski MG, Hospedales CJ, Hall WN, et al. Outbreak of histoplasmosis among employees in a paper factory—Michigan, 1993. *J Clin Microbiol* 1996;34:1220–3.
3. Dean AG, Bates JH, Sorrels TC, et al. An outbreak of histoplasmosis at an Arkansas courthouse, with five cases of probable reinfection. *Am J Epidemiol* 1978;108:36–46.
4. Sorley DL, Levin ML, Warren JW, Flynn JP, Gerstenblith J. Bat-associated histoplasmosis in Maryland bridge workers. *Am J Med* 1979;67:623–6.
5. Lenhart SW, Schafer MP, Singal M, et al. Histoplasmosis: protecting workers at risk. US Department of Health and Human Services, CDC, National Institute for Occupational Safety and Health; 1997. Publication No. 97-146.

West Nile Virus Activity — United States, October 27–November 2, 2004

During October 27–November 2, a total of 10 cases of human West Nile virus (WNV) illness were reported from eight states (Arizona, Georgia, Iowa, Michigan, New Mexico, Ohio, Oklahoma, and Pennsylvania).

During 2004, 40 states and the District of Columbia (DC) have reported 2,241 cases of human WNV illness to CDC through ArboNET (Figure and Table). Of these, 710 (32%) cases were reported in California, 381 (17%) in Arizona, and 276 (12%) in Colorado. A total of 1,295 (59%) of the 2,211 cases for which such data were available occurred in males; the median age of patients was 52 years (range: 1 month–

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



* As of 3 a.m., Mountain Standard Time, November 2, 2004.

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

Area	Neuro-invasive disease [†]	West Nile fever [§]	Other clinical/unspecified [¶]	Total reported to CDC**	Deaths
Alabama	13	0	0	13	0
Arizona	128	70	183	381	10
Arkansas	12	9	1	22	0
California	143	248	319	710	20
Colorado	39	237	0	276	3
Connecticut	0	1	0	1	0
District of Columbia	1	0	0	1	0
Florida	29	8	0	37	2
Georgia	11	6	0	17	0
Idaho	0	0	2	2	0
Illinois	28	27	1	56	2
Indiana	5	0	2	7	1
Iowa	11	7	4	22	2
Kansas	18	25	0	43	2
Kentucky	1	6	0	7	0
Louisiana	68	17	0	85	7
Maryland	6	5	1	12	0
Michigan	10	1	0	11	0
Minnesota	13	20	0	33	2
Mississippi	23	5	2	30	3
Missouri	25	9	2	36	1
Montana	2	3	1	6	0
Nebraska	4	26	0	30	0
Nevada	25	19	0	44	0
New Jersey	1	0	0	1	0
New Mexico	29	49	4	82	4
New York	3	3	0	6	0
North Carolina	3	0	0	3	0
North Dakota	2	18	0	20	1
Ohio	11	1	0	12	2
Oklahoma	10	6	0	16	1
Oregon	0	1	0	1	0
Pennsylvania	8	3	1	12	2
South Carolina	0	1	0	1	0
South Dakota	6	45	0	51	1
Tennessee	9	1	0	10	0
Texas	83	26	0	109	8
Utah	6	5	0	11	0
Virginia	4	0	1	5	1
Wisconsin	4	6	0	10	1
Wyoming	2	5	2	9	0
Total	796	919	526	2,241	76

* As of November 2, 2004.

[†] Cases with neurologic manifestations (i.e., West Nile meningitis, West Nile encephalitis, and West Nile myelitis).[§] Cases with no evidence of neuroinvasion.[¶] 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.

99 years). Date of illness onset ranged from April 23 to October 21; a total of 76 cases were fatal.

A total of 199 presumptive West Nile viremic blood donors (PVDs) have been reported to ArboNET in 2004. Of these, 73 (37%) were reported in California; 38 (19%) in Arizona; 16 in Texas; 15 in New Mexico; seven in Colorado; six each in Louisiana and Oklahoma; five in Nevada; four in Georgia

and Iowa; three each in Florida, Michigan, and South Dakota; two each in Minnesota, Mississippi, Missouri, and Wisconsin; and one each in Delaware, Kentucky, Nebraska, New Jersey, New York, North Dakota, Oregon, and Pennsylvania. Of the 199 PVDs, three persons aged 35, 69, and 77 years subsequently had neuroinvasive illness, and 46 persons (median age: 52 years; range: 17–73 years) subsequently had West Nile fever.

In addition, 5,441 dead corvids and 1,328 other dead birds with WNV infection have been reported from 45 states and New York City during 2004. WNV infections have been reported in horses in 37 states; one bat in Wisconsin; nine dogs in Nevada, New Mexico, and Wisconsin; six squirrels in Arizona and Wyoming; and 14 unidentified animal species in nine states (Arizona, Idaho, Illinois, Iowa, Kentucky, Missouri, Nevada, New York, and South Carolina). WNV seroconversions have been reported in 1,345 sentinel chicken flocks in 13 states (Alabama, Arizona, Arkansas, California, Delaware, Florida, Iowa, Louisiana, Nebraska, Nevada, Pennsylvania, South Dakota, and Utah) and in 25 wild hatchling birds in Missouri and Ohio. Four seropositive sentinel horses were reported in Minnesota and Puerto Rico. A total of 7,558 WNV-positive mosquito pools have been reported in 38 states, DC, and New York City.

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>.

Notice to Readers

National Epilepsy Awareness Month — November 2004

November is National Epilepsy Awareness Month. Epilepsy affects approximately 2.5 million persons in the United States and is characterized by unprovoked seizures. Persons with epilepsy often face physical and cognitive side effects of both seizures and treatment, social stigma, lost productivity, and decreased quality of life. The impact on children is especially burdensome as they transition from childhood to adulthood. Outside the medical community, epilepsy is a poorly understood condition, even among families and friends of affected persons.

To improve social acceptance and understanding of this disorder and to increase support for those with it, the Epilepsy Foundation (EF), in partnership with CDC, is enhancing its Entitled to Respect campaign. During November, the campaign will expand last year's focus on educating black youth, an underserved segment of the community, by providing outreach to black women of childbearing age and by building

new partnerships and improving services to affected children, adults, and families in the black community. Additional information about epilepsy and the campaign is available from EF, telephone 800-332-1000 or at <http://www.epilepsyfoundation.org>.

Notice to Readers

Annual Health Information and Technology Week

November 7–13, 2004, is Annual Health Information and Technology Week. During this week, approximately 44,000

students and professionals will celebrate Health Information Management (HIM) professions, which include quality-assurance managers to information-security officers in settings from managed care organizations to home health agencies in both the private and public sectors. The American Health Information Management Association represents the community of professionals engaged in HIM. This year's theme, Health Information: Powered by Professionals, reflects the work performed by HIM professions in obtaining a more secure and electronic health information environment.

@ once.

Need the latest CDC guidance on a crucial public health topic?

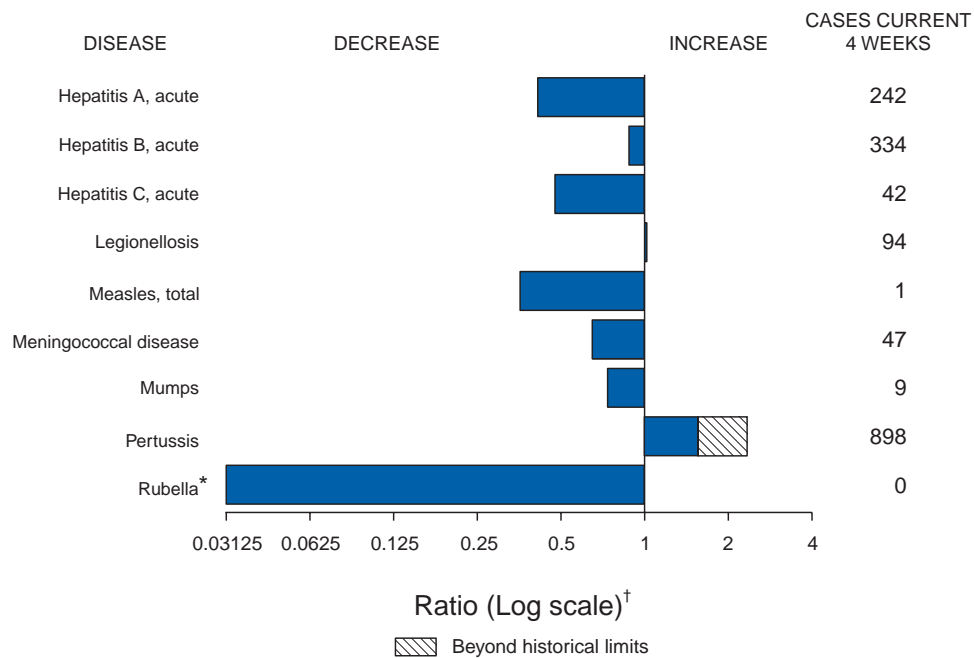
No problem—log on to cdc.gov/mmwr and quickly find the information you need. Browse the latest reports, research important health topics—even download ready-to-print copies—all free of charge.

Save time, get more. MMWR Online.

know what matters.



FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals October 30, 2004, with historical data



* No rubella cases were reported for the current 4-week period yielding a ratio for week 43 of zero (0).
 † Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary of provisional cases of selected notifiable diseases, United States, cumulative, week ending October 30, 2004 (43rd Week)*

	Cum. 2004	Cum. 2003		Cum. 2004	Cum. 2003
Anthrax	-	-	HIV infection, pediatric††	126	169
Botulism:	-	-	Influenza-associated pediatric mortality**	-	NA
foodborne	11	11	Measles, total	23††	51§§
infant	60	56	Mumps	162	177
other (wound & unspecified)	9	26	Plague	1	1
Brucellosis†	85	82	Poliomyelitis, paralytic	-	-
Chancroid	30	50	Psittacosis†	9	11
Cholera	4	1	Q fever†	60	56
Cyclosporiasis†	203	61	Rabies, human	3	2
Diphtheria	-	1	Rubella	10	7
Ehrlichiosis:	-	-	Rubella, congenital syndrome	-	1
human granulocytic (HGE)†	259	273	SARS-associated coronavirus disease† **	-	8
human monocytic (HME)†	237	221	Smallpox† ††	-	NA
human, other and unspecified	27	38	<i>Staphylococcus aureus</i> :	-	-
Encephalitis/Meningitis:	-	-	Vancomycin-intermediate (VISA)† ††	-	NA
California serogroup viral† §	74	106	Vancomycin-resistant (VRSA)† ††	1	NA
eastern equine† §	3	13	Streptococcal toxic-shock syndrome†	89	136
Powassan† §	-	-	Tetanus	14	16
St. Louis† §	7	40	Toxic-shock syndrome	106	103
western equine† §	-	-	Trichinosis	4	1
Hansen disease (leprosy)†	69	68	Tularemia†	74	74
Hantavirus pulmonary syndrome†	17	18	Yellow fever	-	-
Hemolytic uremic syndrome, postdiarrheal†	119	141			

-: No reported cases.
 * Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).
 † Not notifiable in all states.
 § Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).
 ¶ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update September 26, 2004.
 ** Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases.
 †† Of 23 cases reported, 10 were indigenous, and 13 were imported from another country.
 §§ Of 51 cases reported, 31 were indigenous, and 20 were imported from another country.
 ¶¶ Not previously notifiable.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending October 30, 2004, and October 25, 2003 (43rd Week)*

Reporting area	AIDS		Chlamydia [†]		Coccidiomycosis		Cryptosporidiosis		Encephalitis/Meningitis West Nile [§]	
	Cum. 2004 ^{††}	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	31,120	35,017	722,358	710,785	4,924	3,078	2,770	2,853	794	2,831
NEW ENGLAND	981	1,201	24,825	22,757	-	-	154	164	-	29
Maine	15	49	1,719	1,640	N	N	18	18	-	-
N.H.	37	34	1,450	1,300	-	-	29	18	-	2
Vt.	14	15	852	888	-	-	22	29	-	-
Mass.	343	517	11,052	9,008	-	-	54	72	-	12
R.I.	109	82	2,790	2,419	-	-	4	12	-	5
Conn.	463	504	6,962	7,502	N	N	27	15	-	10
MID. ATLANTIC	6,925	8,345	86,773	88,195	-	-	441	361	12	220
Upstate N.Y.	724	745	18,142	16,378	N	N	151	107	1	-
N.Y. City	3,949	4,488	26,412	28,552	-	-	85	104	2	56
N.J.	1,140	1,291	12,475	13,061	-	-	25	14	1	21
Pa.	1,112	1,821	29,744	30,204	N	N	180	136	8	143
E.N. CENTRAL	2,742	3,208	123,808	130,323	15	7	795	857	57	150
Ohio	525	641	30,828	35,970	N	N	200	128	11	84
Ind.	300	431	14,935	14,184	N	N	80	77	5	15
Ill.	1,290	1,472	32,970	39,621	-	-	69	86	28	30
Mich.	493	511	31,119	26,148	15	7	137	116	9	14
Wis.	134	153	13,956	14,400	-	-	309	450	4	7
W.N. CENTRAL	641	632	44,669	41,201	5	2	335	502	79	695
Minn.	152	123	8,123	8,878	N	N	115	129	13	48
Iowa	50	67	5,293	4,185	N	N	73	110	11	80
Mo.	277	305	17,427	15,036	3	1	56	41	25	39
N. Dak.	14	3	1,229	1,292	N	N	10	11	2	94
S. Dak.	8	8	2,136	2,126	-	-	33	36	6	151
Nebr.**	41	42	4,260	3,842	2	1	23	21	4	194
Kans.	99	84	6,201	5,842	N	N	25	154	18	89
S. ATLANTIC	9,492	9,954	143,838	133,512	-	5	465	313	54	182
Del.	121	191	2,436	2,483	N	N	-	4	-	12
Md.	1,252	1,271	15,744	13,399	-	5	15	20	6	48
D.C.	621	811	2,732	2,602	-	-	12	11	1	3
Va.	513	789	18,554	15,874	-	-	55	38	4	19
W. Va.	67	71	2,314	2,154	N	N	5	4	-	1
N.C.	482	887	24,286	21,168	N	N	70	43	3	16
S.C.**	535	664	17,050	12,002	-	-	15	8	-	2
Ga.	1,327	1,502	26,394	29,277	-	-	178	99	11	24
Fla.	4,574	3,768	34,328	34,553	N	N	115	86	29	57
E.S. CENTRAL	1,528	1,630	46,039	45,897	4	1	109	115	46	89
Ky.	187	141	4,728	6,727	N	N	39	21	1	11
Tenn.**	617	700	18,220	16,905	N	N	29	37	9	21
Ala.	360	389	9,382	11,964	-	-	20	47	13	25
Miss.	364	400	13,709	10,301	4	1	21	10	23	32
W.S. CENTRAL	3,581	3,463	88,435	86,866	2	-	66	97	172	593
Ark.	174	163	5,964	6,539	1	-	14	17	12	23
La.	719	519	18,539	16,280	1	-	3	4	68	89
Okla.	154	177	9,116	9,448	N	N	20	13	9	56
Tex.**	2,534	2,604	54,816	54,599	N	N	29	63	83	425
MOUNTAIN	1,178	1,272	39,926	40,164	3,174	1,939	143	119	231	871
Mont.	6	11	1,946	1,590	N	N	34	18	2	75
Idaho	15	21	2,277	2,057	N	N	24	26	-	-
Wyo.	16	5	876	809	2	1	3	4	2	92
Colo.	257	327	9,779	10,736	N	N	48	32	39	621
N. Mex.	152	96	4,333	6,160	20	9	11	10	29	74
Ariz.	437	535	13,330	11,056	3,067	1,889	17	5	128	7
Utah	53	52	3,002	3,083	33	8	4	17	6	-
Nev.	242	225	4,383	4,673	52	32	2	7	25	2
PACIFIC	4,052	5,312	124,045	121,870	1,724	1,124	262	325	143	2
Wash.	313	365	14,555	13,531	N	N	36	43	-	-
Oreg.	239	202	6,974	6,117	-	-	30	36	-	-
Calif.	3,357	4,642	95,226	94,610	1,724	1,124	194	245	143	2
Alaska	39	15	3,056	3,141	-	-	-	1	-	-
Hawaii	104	88	4,234	4,471	-	-	2	-	-	-
Guam	2	5	-	517	-	-	-	-	-	-
P.R.	595	851	2,701	2,182	N	N	N	N	-	-
V.I.	10	29	272	348	-	-	-	-	-	-
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).

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

[§] Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).

^{††} Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update September 26, 2004.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 30, 2004, and October 25, 2003 (43rd 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	2,009	2,147	219	204	142	135	14,660	15,642	256,824	271,927
NEW ENGLAND	135	132	44	36	17	12	1,452	1,295	5,790	5,946
Maine	10	10	-	1	-	-	112	155	184	162
N.H.	18	17	5	3	-	-	37	32	107	101
Vt.	11	15	-	-	-	-	147	106	73	71
Mass.	56	57	13	8	17	12	620	657	2,610	2,357
R.I.	9	1	1	-	-	-	107	90	700	800
Conn.	31	32	25	24	-	-	429	255	2,116	2,455
MID. ATLANTIC	235	217	46	21	28	33	3,052	3,109	27,943	33,885
Upstate N.Y.	106	79	33	10	13	17	1,089	848	5,917	6,371
N.Y. City	32	7	-	-	-	-	799	1,011	8,421	11,191
N.J.	35	29	4	2	5	-	312	419	4,881	6,676
Pa.	62	102	9	9	10	16	852	831	8,724	9,647
E.N. CENTRAL	360	483	35	29	24	17	2,013	2,712	52,498	58,303
Ohio	85	95	10	15	18	17	689	751	15,922	18,979
Ind.	51	70	-	-	-	-	-	-	5,487	5,515
Ill.	49	111	1	2	1	-	338	794	14,383	17,845
Mich.	75	77	7	-	5	-	605	641	13,124	11,322
Wis.	100	130	17	12	-	-	381	526	3,582	4,642
W.N. CENTRAL	432	390	27	46	16	20	1,670	1,675	14,181	14,398
Minn.	106	119	15	20	1	1	626	599	2,479	2,508
Iowa	117	90	-	-	-	-	249	231	938	1,035
Mo.	67	73	11	13	7	1	420	429	7,470	7,191
N. Dak.	14	10	-	4	6	8	20	32	87	75
S. Dak.	31	25	-	4	-	-	50	69	239	182
Nebr.	60	43	1	5	-	-	117	124	861	1,284
Kans.	37	30	-	-	2	10	188	191	2,107	2,123
S. ATLANTIC	148	126	37	38	46	37	2,352	2,236	65,219	66,495
Del.	2	8	N	N	N	N	39	39	742	951
Md.	20	12	4	3	3	1	100	97	6,755	6,390
D.C.	1	1	-	-	-	-	57	41	2,061	2,052
Va.	35	33	16	11	-	-	449	287	7,406	7,404
W. Va.	2	4	-	-	-	-	32	35	769	723
N.C.	-	-	-	-	32	29	N	N	12,778	12,123
S.C.	7	2	-	-	-	-	51	123	8,343	7,052
Ga.	22	25	11	5	-	-	691	726	11,614	14,504
Fla.	59	41	6	19	11	7	933	888	14,751	15,296
E.S. CENTRAL	77	74	4	2	9	6	325	328	20,065	22,991
Ky.	24	24	2	2	6	6	N	N	2,156	3,002
Tenn.	31	32	2	-	3	-	159	150	6,887	7,013
Ala.	15	14	-	-	-	-	166	178	5,743	7,662
Miss.	7	4	-	-	-	-	-	-	5,279	5,314
W.S. CENTRAL	65	78	2	4	2	4	265	252	34,267	35,950
Ark.	14	9	1	-	-	-	103	128	2,995	3,473
La.	3	3	-	-	-	-	37	10	8,710	9,382
Okla.	17	25	-	-	-	-	125	114	3,879	3,893
Tex.	31	41	1	4	2	4	N	N	18,683	19,202
MOUNTAIN	211	269	23	24	-	6	1,272	1,322	8,660	8,621
Mont.	16	16	-	-	-	-	68	94	58	87
Idaho	46	68	15	15	-	-	163	167	79	61
Wyo.	8	2	1	-	-	-	21	20	54	36
Colo.	44	61	2	4	-	6	437	383	2,168	2,384
N. Mex.	9	10	2	4	-	-	59	43	603	987
Ariz.	21	29	N	N	N	N	143	203	3,233	3,045
Utah	46	60	2	-	-	-	279	292	467	321
Nev.	21	23	1	1	-	-	102	120	1,998	1,700
PACIFIC	346	378	1	4	-	-	2,259	2,713	28,201	25,338
Wash.	127	97	-	1	-	-	317	311	2,240	2,246
Oreg.	60	95	1	3	-	-	372	356	1,042	825
Calif.	148	175	-	-	-	-	1,431	1,899	23,468	20,823
Alaska	1	4	-	-	-	-	73	76	449	450
Hawaii	10	7	-	-	-	-	66	71	1,002	994
Guam	N	N	-	-	-	-	-	2	-	55
P.R.	-	1	-	-	-	-	103	234	202	234
V.I.	-	-	-	-	-	-	-	-	80	77
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 October 30, 2004, and October 25, 2003 (43rd 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.	Cum.
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	2004	2003
UNITED STATES	1,507	1,546	12	24	89	95	145	168	4,522	5,717
NEW ENGLAND	128	115	1	2	5	5	3	3	849	268
Maine	12	4	-	-	-	-	-	1	11	11
N.H.	16	12	-	1	2	-	-	-	20	15
Vt.	6	8	-	-	-	-	1	-	8	6
Mass.	51	54	1	1	-	5	2	1	728	151
R.I.	3	6	-	-	-	-	-	1	21	12
Conn.	40	31	-	-	3	-	-	-	61	73
MID. ATLANTIC	310	328	-	2	4	3	33	41	530	1,087
Upstate N.Y.	100	119	-	2	4	3	5	8	86	109
N.Y. City	62	57	-	-	-	-	12	11	207	383
N.J.	63	60	-	-	-	-	3	9	104	182
Pa.	85	92	-	-	-	-	13	13	133	413
E.N. CENTRAL	226	260	-	3	6	4	35	46	456	533
Ohio	86	62	-	-	2	-	15	11	40	99
Ind.	41	41	-	-	4	-	1	5	88	54
Ill.	50	94	-	-	-	-	11	20	158	161
Mich.	18	21	-	3	-	4	6	1	129	176
Wis.	31	42	-	-	-	-	2	9	41	43
W.N. CENTRAL	88	96	2	2	3	7	10	12	148	147
Minn.	40	40	1	2	3	7	1	2	32	37
Iowa	1	-	1	-	-	-	-	-	43	25
Mo.	28	36	-	-	-	-	6	9	37	47
N. Dak.	4	2	-	-	-	-	-	-	1	1
S. Dak.	-	1	-	-	-	-	-	-	3	-
Nebr.	8	2	-	-	-	-	1	-	10	12
Kans.	7	15	-	-	-	-	2	1	22	25
S. ATLANTIC	380	339	1	2	21	14	29	19	903	1,461
Del.	-	-	-	-	-	-	-	-	5	8
Md.	51	79	-	1	4	6	-	1	94	151
D.C.	-	1	-	-	-	-	-	-	7	33
Va.	35	45	-	-	-	-	1	5	115	85
W. Va.	15	14	-	-	1	-	3	-	6	13
N.C.	52	36	1	-	6	3	1	2	94	81
S.C.	4	6	-	-	-	-	-	2	24	35
Ga.	124	62	-	-	-	-	22	6	316	696
Fla.	99	96	-	1	10	5	2	3	242	359
E.S. CENTRAL	59	71	1	1	-	3	8	8	140	242
Ky.	5	6	-	-	-	2	-	-	29	28
Tenn.	38	42	-	-	-	1	6	5	80	176
Ala.	13	21	1	1	-	-	2	3	8	23
Miss.	3	2	-	-	-	-	-	-	23	15
W.S. CENTRAL	62	70	1	2	7	10	2	4	308	548
Ark.	3	6	-	-	-	1	1	-	56	27
La.	11	20	-	-	-	2	1	4	44	39
Okla.	47	41	-	-	7	7	-	-	19	17
Tex.	1	3	1	2	-	-	-	-	189	465
MOUNTAIN	167	139	4	6	25	22	18	16	388	402
Mont.	-	-	-	-	-	-	-	-	6	8
Idaho	5	4	-	-	-	-	2	1	19	13
Wyo.	1	1	-	-	1	-	-	-	5	1
Colo.	41	32	-	-	-	-	5	6	46	59
N. Mex.	34	16	1	-	7	4	5	1	19	19
Ariz.	61	64	-	6	12	9	2	4	235	223
Utah	13	12	2	-	2	5	3	4	46	34
Nev.	12	10	1	-	3	4	1	-	12	45
PACIFIC	87	128	2	4	18	27	7	19	800	1,029
Wash.	3	11	2	-	-	7	1	3	53	54
Oreg.	39	33	-	-	-	-	3	2	59	49
Calif.	33	55	-	4	18	20	1	9	662	906
Alaska	4	18	-	-	-	-	1	5	5	8
Hawaii	8	11	-	-	-	-	1	-	21	12
Guam	-	-	-	-	-	-	-	-	-	2
P.R.	-	1	-	-	-	-	-	1	21	66
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 October 30, 2004, and October 25, 2003 (43rd 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	5,224	5,816	714	874	1,506	1,766	520	568	14,726	17,441
NEW ENGLAND	301	304	10	7	52	99	33	43	2,260	3,309
Maine	2	1	-	-	-	2	7	6	53	137
N.H.	33	16	-	-	10	8	3	3	179	147
Vt.	5	4	5	7	5	5	2	1	45	40
Mass.	171	191	4	-	8	50	5	17	774	1,441
R.I.	5	12	-	-	14	13	1	-	183	466
Conn.	85	80	1	-	15	21	15	16	1,026	1,078
MID. ATLANTIC	999	629	126	104	426	523	125	116	9,802	11,635
Upstate N.Y.	79	76	14	13	88	129	41	29	3,338	3,858
N.Y. City	91	163	-	-	42	61	17	21	-	187
N.J.	582	153	-	-	76	76	20	22	2,635	2,665
Pa.	247	237	112	91	220	257	47	44	3,829	4,925
E.N. CENTRAL	463	433	99	127	405	362	84	74	790	862
Ohio	104	116	6	7	194	186	37	22	59	62
Ind.	38	33	7	8	66	25	16	6	16	20
Ill.	71	52	12	18	20	41	5	19	1	67
Mich.	227	191	74	89	118	93	23	18	28	6
Wis.	23	41	-	5	7	17	3	9	686	707
W.N. CENTRAL	260	269	42	191	43	61	14	15	493	333
Minn.	44	31	17	8	7	3	5	4	393	223
Iowa	13	10	-	1	5	9	1	-	42	48
Mo.	154	185	25	180	21	31	5	6	47	55
N. Dak.	4	2	-	-	2	1	-	-	-	-
S. Dak.	-	2	-	-	4	2	1	-	-	1
Nebr.	31	23	-	2	1	5	2	4	7	2
Kans.	14	16	-	-	3	10	-	1	4	4
S. ATLANTIC	1,630	1,677	143	131	323	450	96	113	1,192	1,055
Del.	28	8	-	-	12	24	N	N	137	185
Md.	135	105	14	7	67	114	14	23	690	619
D.C.	19	10	3	-	8	14	-	1	8	8
Va.	224	150	16	7	42	82	16	9	149	81
W. Va.	34	27	21	3	8	16	3	6	22	20
N.C.	138	132	11	11	29	36	21	16	105	91
S.C.	65	143	6	24	3	7	3	4	12	8
Ga.	572	568	17	13	39	32	16	28	13	10
Fla.	415	534	55	66	115	125	23	26	56	33
E.S. CENTRAL	380	385	86	68	82	93	21	27	44	56
Ky.	59	57	23	13	35	37	4	7	15	13
Tenn.	173	169	35	15	33	32	10	8	17	15
Ala.	62	80	4	5	11	19	5	10	3	8
Miss.	86	79	24	35	3	5	2	2	9	20
W.S. CENTRAL	251	928	105	143	56	63	26	46	34	88
Ark.	65	71	2	3	-	2	2	1	8	-
La.	53	108	60	94	4	1	3	3	4	6
Okla.	47	50	3	2	5	7	-	3	-	-
Tex.	86	699	40	44	47	53	21	39	22	82
MOUNTAIN	393	483	41	44	69	56	24	31	30	14
Mont.	2	14	2	2	2	4	-	2	-	-
Idaho	10	7	-	1	7	3	1	2	6	3
Wyo.	7	28	2	-	5	2	-	-	3	2
Colo.	48	68	8	10	17	9	12	9	3	-
N. Mex.	12	32	7	-	4	2	-	2	1	1
Ariz.	208	220	5	7	11	10	-	10	6	3
Utah	41	41	4	-	19	20	3	2	11	2
Nev.	65	73	13	24	4	6	8	4	-	3
PACIFIC	547	708	62	59	50	59	97	103	81	89
Wash.	45	63	19	17	10	8	9	7	13	3
Oreg.	98	94	14	12	N	N	5	4	30	14
Calif.	380	526	25	28	40	51	79	87	36	69
Alaska	14	4	-	-	-	-	-	-	2	3
Hawaii	10	21	4	2	-	-	4	5	N	N
Guam	-	9	-	5	-	-	-	-	-	-
P.R.	46	103	-	-	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 October 30, 2004, and October 25, 2003 (43rd 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	1,039	1,102	1,059	1,371	11,871	7,329	4,727	5,893	1,228	746
NEW ENGLAND	66	57	57	65	1,336	1,116	563	516	17	7
Maine	6	2	9	6	2	12	39	61	-	-
N.H.	5	6	5	3	69	82	25	23	-	-
Vt.	4	2	2	3	62	60	33	30	-	-
Mass.	33	27	32	40	1,160	892	244	181	14	7
R.I.	4	2	2	2	31	16	32	61	1	-
Conn.	14	18	7	11	12	54	190	160	2	-
MID. ATLANTIC	245	300	129	165	2,351	863	493	782	77	39
Upstate N.Y.	40	46	29	40	1,628	389	453	362	3	-
N.Y. City	112	163	23	38	128	120	11	6	19	13
N.J.	52	57	31	22	190	134	-	62	27	16
Pa.	41	34	46	65	405	220	29	352	28	10
E.N. CENTRAL	91	92	149	217	2,554	776	143	156	27	19
Ohio	27	17	60	52	485	229	69	50	15	8
Ind.	14	2	23	39	175	55	10	25	5	1
Ill.	22	40	12	62	319	68	46	23	2	5
Mich.	18	23	43	39	247	99	16	44	5	5
Wis.	10	10	11	25	1,328	325	2	14	-	-
W.N. CENTRAL	60	42	78	110	1,553	377	435	579	105	59
Minn.	25	20	22	25	302	141	81	31	-	1
Iowa	4	5	15	23	132	117	95	95	1	2
Mo.	17	5	18	43	251	69	51	39	88	47
N. Dak.	3	1	2	1	693	6	53	50	-	-
S. Dak.	1	2	2	1	30	3	10	120	4	5
Nebr.	3	-	4	6	40	8	53	92	12	3
Kans.	7	9	15	11	105	33	92	152	-	1
S. ATLANTIC	284	273	196	235	561	536	1,664	2,288	627	442
Del.	6	2	4	8	8	7	9	43	4	1
Md.	64	63	10	24	104	74	253	305	62	95
D.C.	11	13	4	5	3	2	-	-	-	1
Va.	43	33	17	23	170	87	410	449	30	28
W. Va.	1	4	5	5	18	16	56	77	4	5
N.C.	18	20	27	30	72	109	519	692	427	207
S.C.	9	4	11	21	42	113	125	205	17	32
Ga.	54	60	21	27	32	29	290	329	64	64
Fla.	78	74	97	92	112	99	2	188	19	9
E.S. CENTRAL	27	27	53	73	234	138	123	186	169	115
Ky.	4	8	9	16	57	44	20	33	2	1
Tenn.	7	5	15	19	135	63	36	97	89	62
Ala.	11	7	14	20	28	18	56	55	44	21
Miss.	5	7	15	18	14	13	11	1	34	31
W.S. CENTRAL	90	113	97	152	653	640	953	1,015	176	56
Ark.	7	4	15	13	63	43	45	25	98	-
La.	4	4	33	37	10	10	-	2	5	-
Okla.	7	4	9	14	33	72	95	175	71	42
Tex.	72	101	40	88	547	515	813	813	2	14
MOUNTAIN	40	37	57	70	1,246	807	196	165	25	8
Mont.	-	-	3	4	46	5	25	20	3	1
Idaho	1	1	7	6	35	69	7	15	4	2
Wyo.	-	1	3	2	28	124	6	6	4	2
Colo.	13	21	13	20	623	282	42	38	2	2
N. Mex.	3	2	7	8	126	62	4	5	2	-
Ariz.	11	7	12	21	194	118	101	62	2	-
Utah	7	4	5	1	156	113	8	14	8	1
Nev.	5	1	7	8	38	34	3	5	-	-
PACIFIC	136	161	243	284	1,383	2,076	157	206	5	1
Wash.	16	23	29	29	613	633	-	-	-	-
Oreg.	16	9	52	50	340	402	6	6	3	-
Calif.	100	122	153	186	399	981	143	191	2	1
Alaska	1	1	3	7	10	50	8	9	-	-
Hawaii	3	6	6	12	21	10	-	-	-	-
Guam	-	1	-	-	-	1	-	-	-	-
P.R.	-	2	5	9	6	2	52	65	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 October 30, 2004, and October 25, 2003 (43rd Week)*

Reporting area	Salmonellosis		Shigellosis		Streptococcal disease, invasive, group A		<i>Streptococcus pneumoniae</i> , 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	32,961	35,911	9,802	19,348	3,814	4,761	1,797	1,658	567	572
NEW ENGLAND	1,743	1,802	248	284	156	408	26	85	60	8
Maine	79	114	4	6	8	24	2	-	3	-
N.H.	123	127	8	7	17	28	-	-	N	N
Vt.	54	63	2	7	8	19	7	6	3	4
Mass.	989	1,049	156	191	106	181	N	N	47	N
R.I.	107	108	18	13	17	11	17	10	7	4
Conn.	391	341	60	60	-	145	-	69	U	U
MID. ATLANTIC	4,550	4,154	955	1,990	610	827	111	107	94	83
Upstate N.Y.	1,027	970	376	393	206	309	47	56	64	62
N.Y. City	1,016	1,147	308	343	83	125	U	U	U	U
N.J.	734	696	185	319	141	157	-	-	6	2
Pa.	1,773	1,341	86	935	180	236	64	51	24	19
E.N. CENTRAL	4,094	4,819	871	1,584	747	1,115	402	365	136	252
Ohio	1,103	1,165	148	262	199	263	280	236	67	79
Ind.	504	459	186	128	86	107	122	129	33	25
Ill.	1,073	1,711	251	861	159	283	-	-	-	101
Mich.	748	669	150	220	260	318	N	N	N	N
Wis.	666	815	136	113	43	144	N	N	36	47
W.N. CENTRAL	2,030	2,105	356	668	265	294	16	15	85	62
Minn.	522	465	61	89	130	141	-	-	55	43
Iowa	385	324	61	63	N	N	N	N	N	N
Mo.	519	785	131	319	54	66	11	11	12	3
N. Dak.	37	30	3	6	11	15	-	3	3	5
S. Dak.	112	101	10	16	16	21	5	1	-	-
Nebr.	130	144	22	84	14	24	-	-	6	5
Kans.	325	256	68	91	40	27	N	N	9	6
S. ATLANTIC	9,353	8,958	2,306	5,800	849	784	946	890	46	18
Del.	81	91	6	161	3	6	4	1	N	N
Md.	682	717	121	527	138	193	-	18	33	-
D.C.	52	35	32	66	9	8	5	-	3	7
Va.	1,047	896	141	383	65	91	N	N	N	N
W. Va.	189	114	6	-	22	31	94	61	10	11
N.C.	1,377	1,125	293	837	115	93	N	N	U	U
S.C.	765	642	275	413	37	38	69	124	N	N
Ga.	1,710	1,711	596	1,050	262	156	276	201	N	N
Fla.	3,450	3,627	836	2,363	198	168	498	485	N	N
E.S. CENTRAL	2,180	2,511	666	819	186	169	119	120	5	-
Ky.	294	344	60	114	54	41	26	16	N	N
Tenn.	520	646	323	268	132	128	92	104	N	N
Ala.	624	631	237	275	-	-	-	-	N	N
Miss.	742	890	46	162	-	-	1	-	5	-
W.S. CENTRAL	2,811	5,312	2,308	4,978	221	239	51	65	103	88
Ark.	480	701	67	97	16	6	8	20	8	7
La.	601	771	231	414	2	1	43	45	24	17
Okla.	352	409	399	722	56	74	N	N	36	44
Tex.	1,378	3,431	1,611	3,745	147	158	N	N	35	20
MOUNTAIN	2,036	1,859	698	1,034	442	393	33	7	38	61
Mont.	176	93	4	2	-	1	-	-	-	-
Idaho	135	154	13	28	8	18	N	N	N	N
Wyo.	48	71	5	6	8	2	10	6	-	-
Colo.	482	424	140	274	131	112	-	-	35	45
N. Mex.	229	228	108	212	70	96	5	-	-	11
Ariz.	614	547	338	410	184	132	N	N	N	N
Utah	209	186	43	42	38	30	16	1	3	5
Nev.	143	156	47	60	3	2	2	-	-	-
PACIFIC	4,164	4,391	1,394	2,191	338	532	93	4	-	-
Wash.	488	493	96	147	53	56	-	-	N	N
Oreg.	361	367	59	201	N	N	N	N	N	N
Calif.	2,945	3,291	1,191	1,796	183	366	N	N	N	N
Alaska	53	61	5	8	-	-	-	-	N	N
Hawaii	317	179	43	39	102	110	93	4	-	-
Guam	-	40	-	33	-	-	-	-	-	-
P.R.	225	548	8	25	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 October 30, 2004, and October 25, 2003 (43rd 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	6,081	5,778	277	362	8,583	10,375	239	308	14,685	13,494
NEW ENGLAND	158	174	5	1	291	354	19	26	607	2,686
Maine	2	7	-	-	-	19	-	-	180	755
N.H.	4	16	3	-	13	11	-	2	-	-
Vt.	-	1	-	-	-	9	-	-	427	595
Mass.	100	111	-	-	187	185	13	15	-	143
R.I.	21	19	1	-	29	43	1	2	-	5
Conn.	31	20	1	1	62	87	5	7	-	1,188
MID. ATLANTIC	778	712	39	56	1,689	1,826	54	72	76	33
Upstate N.Y.	83	33	4	9	216	233	9	12	-	-
N.Y. City	464	407	12	30	852	939	18	34	-	-
N.J.	126	142	22	17	343	360	13	21	-	-
Pa.	105	130	1	-	278	294	14	5	76	33
E.N. CENTRAL	672	758	50	63	954	945	17	32	4,648	4,543
Ohio	181	172	1	3	163	167	5	2	1,119	1,024
Ind.	46	38	8	12	109	110	-	4	-	-
Ill.	266	316	12	19	418	451	-	16	-	-
Mich.	152	217	29	28	193	165	10	10	3,137	2,784
Wis.	27	15	-	1	71	52	2	-	392	735
W.N. CENTRAL	128	128	5	4	354	380	9	6	130	48
Minn.	15	40	1	-	147	156	5	2	-	-
Iowa	5	8	-	-	29	26	-	2	N	N
Mo.	81	49	2	4	85	97	2	1	5	-
N. Dak.	-	2	-	-	3	-	-	-	82	48
S. Dak.	-	2	-	-	8	16	-	-	43	-
Nebr.	5	5	-	-	27	16	2	1	-	-
Kans.	22	22	2	-	55	69	-	-	-	-
S. ATLANTIC	1,581	1,520	43	74	1,565	2,080	40	44	1,904	1,815
Del.	8	6	1	-	-	23	-	-	4	26
Md.	290	259	7	12	195	201	11	9	-	1
D.C.	67	43	1	-	66	-	-	-	22	26
Va.	89	69	3	1	223	219	7	14	487	478
W. Va.	2	2	-	-	15	19	-	-	1,137	1,064
N.C.	161	128	10	16	233	261	6	7	N	N
S.C.	99	84	7	12	151	142	-	-	254	220
Ga.	270	403	1	13	11	427	6	5	-	-
Fla.	595	526	13	20	671	788	10	9	-	-
E. S. CENTRAL	336	264	18	11	444	567	7	5	-	-
Ky.	40	31	1	1	94	96	3	-	-	-
Tenn.	109	112	8	2	164	193	4	2	-	-
Ala.	142	99	7	6	153	185	-	3	-	-
Miss.	45	22	2	2	33	93	-	-	-	-
W. S. CENTRAL	1,010	769	43	63	842	1,520	19	30	5,247	3,880
Ark.	35	42	-	2	94	74	-	-	-	-
La.	237	137	-	1	-	-	-	-	46	16
Okla.	24	56	2	1	135	119	1	1	-	-
Tex.	714	534	41	59	613	1,327	18	29	5,201	3,864
MOUNTAIN	299	267	45	30	391	366	6	6	2,073	489
Mont.	-	-	-	-	4	5	-	-	-	-
Idaho	18	10	2	2	4	8	-	1	-	-
Wyo.	3	-	-	-	4	4	-	-	35	45
Colo.	36	29	-	3	85	83	1	3	1,599	-
N. Mex.	46	54	1	7	18	39	-	-	83	3
Ariz.	157	158	42	18	175	175	2	2	-	-
Utah	7	6	-	-	33	30	1	-	356	441
Nev.	32	10	-	-	68	22	2	-	-	-
PACIFIC	1,119	1,186	29	60	2,053	2,337	68	87	-	-
Wash.	110	64	-	-	191	198	6	3	-	-
Oreg.	24	39	-	-	71	90	2	4	-	-
Calif.	978	1,076	28	58	1,665	1,910	54	79	-	-
Alaska	1	1	-	-	32	47	-	-	-	-
Hawaii	6	6	1	2	94	92	6	1	-	-
Guam	-	1	-	-	-	48	-	-	-	121
P.R.	112	169	5	13	62	95	-	-	230	506
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 October 30, 2004 (43rd Week)

Reporting Area	All causes, by age (years)							P&I [†] Total	Reporting Area	All causes, by age (years)							P&I [†] Total
	All Ages	≥65	45-64	25-44	1-24	<1	All Ages			≥65	45-64	25-44	1-24	<1			
NEW ENGLAND	527	373	95	38	14	7	52	S. ATLANTIC	1,166	690	291	118	43	24	54		
Boston, Mass.	155	101	27	14	8	5	17	Atlanta, Ga.	133	65	41	13	11	3	2		
Bridgeport, Conn.	23	16	7	-	-	-	2	Baltimore, Md.	155	73	50	20	9	3	13		
Cambridge, Mass.	23	19	2	2	-	-	6	Charlotte, N.C.	102	67	19	9	3	4	7		
Fall River, Mass.	22	18	2	2	-	-	2	Jacksonville, Fla.	148	92	37	12	3	4	5		
Hartford, Conn.	60	43	12	4	1	-	1	Miami, Fla.	U	U	U	U	U	U	U		
Lowell, Mass.	25	18	6	1	-	-	1	Norfolk, Va.	49	35	10	2	2	-	5		
Lynn, Mass.	15	10	5	-	-	-	-	Richmond, Va.	58	33	19	5	1	-	3		
New Bedford, Mass.	20	18	1	1	-	-	2	Savannah, Ga.	60	40	13	6	1	-	4		
New Haven, Conn.	U	U	U	U	U	U	U	St. Petersburg, Fla.	72	51	11	6	3	1	2		
Providence, R.I.	52	35	8	7	2	-	6	Tampa, Fla.	175	103	47	20	4	1	9		
Somerville, Mass.	5	3	1	-	1	-	-	Washington, D.C.	200	121	40	25	6	8	4		
Springfield, Mass.	38	23	7	4	2	2	3	Wilmington, Del.	14	10	4	-	-	-	-		
Waterbury, Conn.	24	19	3	2	-	-	3	E.S. CENTRAL	890	581	216	40	26	27	55		
Worcester, Mass.	65	50	14	1	-	-	9	Birmingham, Ala.	182	130	34	8	5	5	18		
MID. ATLANTIC	2,060	1,428	421	130	36	44	100	Chattanooga, Tenn.	82	60	12	2	2	6	8		
Albany, N.Y.	52	35	12	5	-	-	2	Knoxville, Tenn.	100	70	20	4	4	2	1		
Allentown, Pa.	29	24	4	-	-	1	1	Lexington, Ky.	63	36	21	3	2	1	4		
Buffalo, N.Y.	62	48	9	2	-	3	4	Memphis, Tenn.	205	135	54	6	5	5	14		
Camden, N.J.	26	11	7	1	1	6	3	Mobile, Ala.	77	48	21	5	2	1	-		
Elizabeth, N.J.	14	9	2	2	1	-	-	Montgomery, Ala.	57	32	15	5	2	3	4		
Erie, Pa.	39	30	7	2	-	-	-	Nashville, Tenn.	124	70	39	7	4	4	6		
Jersey City, N.J.	37	27	4	5	1	-	-	W.S. CENTRAL	1,377	899	306	107	49	16	56		
New York City, N.Y.	1,087	760	232	60	16	19	43	Austin, Tex.	75	50	18	6	1	-	4		
Newark, N.J.	52	30	14	7	-	1	1	Baton Rouge, La.	U	U	U	U	U	U	U		
Paterson, N.J.	11	7	3	1	-	-	-	Corpus Christi, Tex.	46	29	9	1	5	2	5		
Philadelphia, Pa.	303	176	80	25	10	11	20	Dallas, Tex.	194	115	51	16	10	2	11		
Pittsburgh, Pa. [‡]	25	16	4	4	-	1	-	El Paso, Tex.	90	65	16	6	2	1	-		
Reading, Pa.	20	18	1	1	-	-	2	Ft. Worth, Tex.	127	85	27	9	3	3	4		
Rochester, N.Y.	129	102	16	6	3	2	8	Houston, Tex.	310	189	77	30	12	2	13		
Schenectady, N.Y.	24	20	3	1	-	-	2	Little Rock, Ark.	87	60	13	9	4	1	-		
Scranton, Pa.	18	15	2	1	-	-	1	New Orleans, La.	47	24	16	7	-	-	-		
Syracuse, N.Y.	74	55	12	3	4	-	12	San Antonio, Tex.	206	137	41	18	8	2	14		
Trenton, N.J.	22	18	2	2	-	-	-	Shreveport, La.	70	52	13	1	2	2	1		
Utica, N.Y.	20	13	6	1	-	-	-	Tulsa, Okla.	125	93	25	4	2	1	4		
Yonkers, N.Y.	16	14	1	1	-	-	1	MOUNTAIN	754	496	159	57	27	15	40		
E.N. CENTRAL	2,071	1,414	466	110	41	39	149	Albuquerque, N.M.	132	92	25	10	3	2	11		
Akron, Ohio	61	45	13	3	-	-	16	Boise, Idaho	38	28	5	2	1	2	3		
Canton, Ohio	33	22	9	1	-	1	4	Colo. Springs, Colo.	65	39	16	5	4	1	3		
Chicago, Ill.	362	237	81	24	8	11	21	Denver, Colo.	103	60	24	7	8	4	3		
Cincinnati, Ohio	83	56	20	3	2	2	5	Las Vegas, Nev.	235	150	58	19	4	4	5		
Cleveland, Ohio	237	170	53	9	4	1	14	Ogden, Utah	31	25	4	2	-	-	3		
Columbus, Ohio	197	139	42	9	1	6	17	Phoenix, Ariz.	U	U	U	U	U	U	U		
Dayton, Ohio	102	67	26	5	3	1	9	Pueblo, Colo.	37	28	8	1	-	-	2		
Detroit, Mich.	169	96	54	12	3	4	10	Salt Lake City, Utah	113	74	19	11	7	2	10		
Evansville, Ind.	47	35	6	4	2	-	-	Tucson, Ariz.	U	U	U	U	U	U	U		
Fort Wayne, Ind.	40	28	10	-	2	-	5	PACIFIC	1,766	1,212	376	101	40	36	151		
Gary, Ind.	19	6	7	5	1	-	-	Berkeley, Calif.	15	9	4	2	-	-	3		
Grand Rapids, Mich.	56	45	8	2	1	-	5	Fresno, Calif.	170	121	34	7	4	4	15		
Indianapolis, Ind.	197	131	41	12	6	7	10	Glendale, Calif.	6	6	-	-	-	-	1		
Lansing, Mich.	47	33	12	2	-	-	2	Honolulu, Hawaii	80	63	13	1	1	2	3		
Milwaukee, Wis.	114	76	27	5	2	4	9	Long Beach, Calif.	65	41	16	5	2	1	6		
Peoria, Ill.	50	38	11	1	-	-	5	Los Angeles, Calif.	379	270	70	25	6	8	37		
Rockford, Ill.	57	44	8	3	2	-	8	Pasadena, Calif.	15	12	1	1	1	-	1		
South Bend, Ind.	47	35	6	3	2	1	4	Portland, Oreg.	126	84	26	8	2	5	5		
Toledo, Ohio	88	63	21	4	-	-	3	Sacramento, Calif.	135	96	27	5	5	2	11		
Youngstown, Ohio	65	48	11	3	2	1	2	San Diego, Calif.	146	102	25	11	6	2	19		
W.N. CENTRAL	636	465	110	29	18	14	59	San Francisco, Calif.	104	70	25	7	1	1	17		
Des Moines, Iowa	56	42	10	-	3	1	6	San Jose, Calif.	201	126	56	12	5	2	14		
Duluth, Minn.	40	34	3	1	2	-	7	Santa Cruz, Calif.	27	18	6	2	-	1	4		
Kansas City, Kans.	29	19	6	3	1	-	2	Seattle, Wash.	143	93	35	10	3	2	5		
Kansas City, Mo.	89	56	21	3	4	5	5	Spokane, Wash.	57	32	17	3	1	4	9		
Lincoln, Nebr.	35	28	7	-	-	-	5	Tacoma, Wash.	97	69	21	2	3	2	1		
Minneapolis, Minn.	77	55	13	5	2	2	6	TOTAL	11,247 [†]	7,558	2,440	730	294	222	716		
Omaha, Nebr.	74	65	6	-	2	1	4										
St. Louis, Mo.	103	63	24	8	3	5	10										
St. Paul, Minn.	49	41	7	-	1	-	4										
Wichita, Kans.	84	62	13	9	-	-	10										

U: Unavailable. -:No reported cases.

* Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of ≥100,000. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

† Pneumonia and influenza.

‡ Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

§ Total includes unknown ages.

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

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to Editor, *MMWR* Series, Mailstop E-96, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone 888-232-3228.

All material in the *MMWR* Series is in the public domain and may be used and reprinted without permission; citation as to source, however, is appreciated.

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

Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

References to non-CDC sites on the Internet are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of these sites. URL addresses listed in *MMWR* were current as of the date of publication.