MMWR™
Morbidity and Mortality Weekly Report
Weekly November 15, 2002 / Vol. 51 / No. 45

HIV Testing Among Pregnant Women — United States and Canada, 1998–2001

Since 1994, the availability of increasingly effective antiretroviral drugs for both the prevention of perinatal human immunodeficiency virus (HIV) transmission and maternal treatment has resulted in a greater emphasis on prenatal HIV testing and substantial increases in prenatal testing rates. In 2000, preliminary data indicated that 766 (93%) of 824 HIV-infected women in 25 states knew their HIV status before delivery (CDC, unpublished data, 2002). However, an estimated 280–370 perinatal HIV transmissions continue to occur in the United States each year (*1*). The primary strategy to prevent perinatal HIV transmission is to maximize prenatal HIV testing of pregnant women. States and Canadian provinces have implemented three different prenatal HIV-testing approaches. To assess their effectiveness, CDC reviewed prenatal HIV-antibody testing rates associated with these approaches. Medical record data suggest that the "opt-in" voluntary testing approach is associated with lower testing rates than either the "opt-out" voluntary testing approach or the mandatory newborn HIV testing approach.

Under the opt-in approach, women typically are provided pre-HIV test counseling and must consent specifically to an HIV-antibody test. Under the opt-out approach, women are notified that an HIV test will be included in a standard battery of prenatal tests and procedures and that they may refuse testing (*2*). Under mandatory newborn HIV testing, newborns are tested for HIV, with or without the mother's consent, if the mother's HIV status is unknown at delivery.

Three methods were used to estimate prenatal testing rates among all women who delivered, regardless of whether they received prenatal care. First, eight U.S. areas that participated during 1998–1999 in CDC's Active Bacterial Core Surveillance/Emerging Infections Program (ABC) Network assessed HIV testing during prenatal care and ≤2 days before delivery by reviewing a stratified random sample of labor and delivery records and prenatal records forwarded to birthing hospitals (*3*); in collaboration with CDC, network staff received a sample of records from all birthing hospitals in the surveillance areas and weighted testing rates to represent all live-born infants in those areas. Second, public health investigators in each of the five Canadian provinces tallied the number of HIV tests among pregnant women that were submitted to provincial laboratories and divided the total by an estimate of all live and stillborn births in each province during the same year. Third, CDC analyzed weighted data collected in 1999 by interviewers in nine states for CDC's Pregnancy Risk Assessment Monitoring System (PRAMS) (an ongoing, population-based survey conducted in 32 states and New York City among women who have given birth during the preceding 2–6 months [*4*]), who had asked women if they had been tested for HIV during pregnancy. Data on state prenatal HIV-testing policies were obtained from the American College of Obstetricians and Gynecologists (*5*).

HIV-testing rates varied depending on which approach to testing was used. Rates for states using the opt-in approach to prenatal HIV testing included in the ABC Network ranged from 25% to 69% (Table 1), testing rates in Canada ranged from 54% to 83% (Table 2), and rates derived from PRAMS data ranged from 61% to 81% (Table 3). Two U.S. states (Arkansas and Tennessee) and two Canadian provinces (Alberta, and Newfoundland and Labrador) reported using

INSIDE

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

SUGGESTED CITATION
Centers for Disease Control and Prevention. [Article Title]. MMWR 2002;51:[inclusive page numbers].

an opt-out prenatal HIV-testing policy. ABC Network data indicated that Tennessee had a testing rate of 85% (Table 1). Canada's population-based data indicated a 98% testing rate in Alberta and a 94% testing rate in Newfoundland and Labrador (Table 2). PRAMS interview data indicated a 71% testing rate in Arkansas (Table 3), compared with a 57% testing rate early in 1997 before the law was implemented (Arkansas Department of Health, personal communication, 2002). Two states (New York and Connecticut) require HIV testing of newborns whose mothers were not tested during pregnancy. In New York, an ABC Network review of medical records in seven counties in the Rochester area indicated that the proportion of pregnant women who received a prenatal HIV test increased from 52% of 438 charts during January 1998–July 1999 to 83% of 112 charts during August–December 1999 after New York required that newborn HIV testing results be made available within 48 hours of specimen collection (Table 1). PRAMS data for 1999 indicated that the proportion of women statewide who reported having received an HIV test during pregnancy increased from 69% of 758 women during January–July to 93% of 502 during August–December (Table 3). In separate, statewide analyses of prenatal testing reported on newborn metabolic screening forms from all live-born infants, New York reported prenatal HIV-testing rates of 89% in 2000 and 93% in 2001 (New York State Department of Health, personal communication, 2002). In Connecticut, an ABC Network review of 668 charts indicated a testing rate of 31% during January 1998–September 1999, compared with 81% of 93 charts reviewed during October–December 1999 after enactment of the mandatory newborn testing law (Table 1).

Reported by: *A Roome, PhD, J Hadler MD, Connecticut Dept of Public Health. G Birkhead, MD, AIDS Institute, New York State Dept of Health. S King, MD, The Hospital for Sick Children, Toronto; C Archibald, MD, Health Canada. S Schrag, DPhil, Active Bacterial Core Surveillance/Emerging Infections Program Network, Div of Bacterial and Mycotic Diseases, National Center for Infectious Diseases; A Lansky, PhD, Pregnancy Risk Assessment Monitoring System, Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion; S Sansom, PhD, M Fowler, MD, I Onorato, MD, J Anderson, PhD, Div of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, CDC.*

Editorial Note: Prenatal HIV testing affords the best opportunity for the prevention of perinatal HIV transmission. On the basis of clinical trial data, perinatal HIV-transmission rates among HIV-infected women who begin antiretroviral treatment during pregnancy are as low as ≤2% (*6*), compared with 12%–13% early transmission rates among women who do not begin preventive treatment until labor and delivery or after birth (*7*) and 25% among women who receive no preventive treatment (*8*).

TABLE 1. Number of medical charts reviewed and percentage of charts with a documented prenatal HIV test for pregnant women, by testing approach and area — Active Bacterial Core Surveillance/Emerging Infections Program Network, eight states, 1998–1999

State	Testing approach	No. charts reviewed	% with HIV test*	(95% CI†)
Tennessee (five counties)	Opt-out§	623	85%	(82.1%–88.5%)
New York (seven counties in the Rochester area)	Mandatory newborn testing¶ without expedited testing requirement**	438	52%	(47.3%–57.1%)
	Mandatory newborn testing; results returned within 48 hours††	112	83%	(75.0%–91.5%)
Connecticut	Opt-in§§	668	31%	(27.0%–34.3%)
	Mandatory newborn testing; results within 48 hours¶¶	93	81%	(72.3%–88.7%)
Maryland	Opt-in	665	69%	(65.4%–72.8%)
Georgia (20 counties in the Atlanta area)	Opt-in	866	66%	(61.8%–69.6%)
Minnesota (seven counties in the Minneapolis/St. Paul area)	Opt-in	605	62%	(57.5%–65.8%)
California (three counties in the San Francisco area)	Opt-in	575	39%	(34.5%–42.4%)
Oregon (three counties in the Portland area)	Opt-in	498	25%	(21.5%–29.1%)

* Percentages are weighted to reflect all live-born infants and account for sample weights and design.
† Confidence interval.
§ Pregnant women are informed that a human immunodeficiency virus (HIV) test is being conducted as a standard part of prenatal care and that they may refuse it.
¶ Infants are tested for HIV antibodies if the mother was not tested during prenatal care or at delivery. Mother's consent is not required. Neither Connecticut nor New York have data on numbers of newborn infants tested under these laws.
** Policy in effect until August 1999.
†† Policy in effect beginning August 1999.
§§ Pregnant women are required to consent specifically to an HIV test.
¶¶ Policy in effect beginning October 1999.

TABLE 2. Number of women delivering and percentage receiving prenatal HIV testing, by testing approach, year, and province — Canada, 1999–2001

Province	Year	Testing approach	No.	(%)*
Alberta	2000	Opt-out†	37,963	(98)
Newfoundland and Labrador	2001	Opt-out	4,770	(94)
Quebec	1999	Opt-in§	73,781	(83)
British Columbia	1999	Opt-in	41,739	(80)
Ontario	2001	Opt-in	129,758	(54)

* Canadian prenatal human immunodeficiency virus (HIV) testing rates are based on all live-born infants in each province for the year.
† Pregnant women are informed that an HIV test is being conducted as a standard part of prenatal care and that they may refuse it.
§ Pregnant women are required to consent specifically to an HIV test.

Among the three prenatal HIV testing approaches assessed in this report, opt-out voluntary testing and the mandatory testing of newborns appear to be associated with the highest testing rates. On the basis of the chart-review methodology, prenatal testing rates were higher in Tennessee, which uses the opt-out approach, than rates in states using the opt-in approach and similar to rates achieved with mandatory newborn testing in New York during the same time period. A similar trend was observed among Canadian provinces. In New York and Connecticut, mandatory HIV testing of newborns was associated with increases in prenatal testing rates. On the basis of PRAMS data, three of seven states using the opt-in approach achieved lower prenatal HIV-testing rates than states using the opt-out or mandatory newborn testing approaches.

Increases in prenatal HIV-testing rates were noted in states that shifted from an opt-in approach to either an opt-out or mandatory newborn testing approach and were probably associated with a greater likelihood that woman were offered HIV testing during prenatal care. Data from the Perinatal Guidelines Project indicated that the majority of women will accept HIV testing if it is recommended by their health-care provider (*9*). Perinatal HIV experts and professional organizations have advocated streamlining prenatal HIV pre-test counseling and consent procedures to reduce barriers to the offer of testing by health-care providers (*1,2,10*).

The findings in this report are subject to at least seven limitations. First, testing results for each strategy are for all women, and the proportion of HIV-positive women who accepted testing under each strategy is not known. Second, among women who did not receive prenatal testing, the proportion of women who were not tested because they did not seek prenatal care is unknown. Third, among women who did not receive prenatal testing, the proportion of women who were tested at labor and delivery or whose infants were tested at birth is not known. Fourth, maternal self-reported data from

TABLE 3. Percentage of women who responded that they had, had not, or did not know if they had received an HIV test during their most recent pregnancy, by testing approach and state — Pregnancy Risk Assessment Monitoring Survey, United States, 1999

State	Testing approach	No.	Percentage		
			Yes	No	Don't know
Florida	Opt-in*	1,990	81%	13%	6%
New York†	Mandatory newborn testing (1/99–7/99)	758	69%	28%	3%
	Mandatory newborn testing; results within 48 hours of delivery (8/99–12/99)	502	93%	6%	1%
North Carolina	Opt-in	1,770	75%	20%	5%
Illinois	Opt-in	1,994	72%	17%	10%
Colorado	Opt-in	2,039	72%	21%	8%
Arkansas	Opt-out§	1,892	71%	13%	16%
West Virginia	Opt-in	1,327	67%	22%	11%
Oklahoma	Opt-in	1,980	62%	25%	13%
Ohio	Opt-in	1,589	61%	25%	4%

* Pregnant women are required to consent specifically to a human immunodeficiency virus (HIV) test.
† Excludes New York City.
§ Pregnant women are informed that an HIV test is being conducted as a standard part of prenatal care and that they may refuse it.

PRAMS collected 2–6 months after delivery might be subject to recall bias. Fifth, PRAMS data do not indicate whether a prenatal-care provider was aware of the woman's HIV status. Sixth, among the women interviewed in PRAMS, up to 16% (in Arkansas) indicated they did not know if they had been tested. Finally, chart abstraction can document only prenatal HIV testing recorded in maternal medical records; without such documentation, clinicians might not be aware of the need to offer effective perinatal interventions to infected women and their HIV-exposed infants.

This report emphasizes the need for better data to assess perinatal HIV testing rates in the United States. Ongoing, randomized reviews of prenatal, labor/delivery, and pediatric charts, with a sampling framework ensuring that the sample is representative of the population of women delivering, might provide the most valid approach to assessing a state's progress on perinatal HIV testing and prevention. CDC is working with states with high HIV prevalence rates among women of childbearing age and high numbers of pediatric AIDS cases to ensure standardized monitoring of prenatal testing rates. The data suggest that jurisdictions that use an opt-in approach and that have low prenatal HIV-testing rates should reevaluate their approach.

References

1. CDC. Revised recommendations for HIV screening of pregnant women. MMWR 2001;50(No. RR-19).
2. Institute of Medicine. Reducing the Odds: Preventing Perinatal Transmission of HIV in the United States. Washington, DC: National Academy Press, 1998.
3. Schrag SJ, Zell ER, Lynfield R, et al. A population-based comparison of strategies to prevent early-onset group B streptococcal disease in neonates. N Engl J Med 2002;347:233–9.
4. CDC. Prevalence of selected maternal behaviors and experiences, Pregnancy Risk Assessment Monitoring System (PRAMS). In: CDC surveillance summaries (April 26). MMWR 2002;51(No. SS-2).
5. American College of Obstetricians and Gynecologists. Survey of state laws on HIV and pregnant women, 1999–2000. Moore KG, ed. Washington, DC: American College of Obstetricians and Gynecologists, 2000.
6. Dorenbaum A, Cunningham CK, Gelber RD, et al. Two-dose intrapartum/newborn nevirapine and standard antiretroviral therapy to reduce perinatal HIV transmission: a randomized trial. JAMA 2002;288:189–98
7. Guay LA, Musoke P, Fleming T, et al. Intrapartum and neonatal single-dose nevirapine compared with zidovudine for prevention of mother-to-child transmission of HIV-1 in Kampala, Uganda: HIVNET 012 randomised trial. Lancet 1999;354:795–802.
8. Connor EM, Sperling RS, Gelber R, et al. Reduction of maternal-infant transmission of human immunodeficiency virus type 1 with zidovudine treatment. N Engl J Med 1994; 331:1173–80.
9. Fernandez MI, Wilson TE, Ethier KA, et al. Acceptance of HIV testing during prenatal care. Public Health Rep 2000;115:460–8.
10. American College of Obstetricians and Gynecologists. Joint statement of ACOG/AAP on human immunodeficiency virus screening. ACOG statement of policy. Washington, DC: American College of Obstetricians and Gynecologists, 1999.

Influenza Outbreak — Madagascar, July–August 2002

In mid-July 2002, Madagascar health authorities were notified of a substantial number of deaths attributed to acute respiratory illness (ARI) in the village of Sahafata (population: 2,160), located in the rural highlands of Fianarantsoa Province, southeastern Madagascar (Figure 1). This region is approximately 450 km (280 miles) south of the capital Antananarivo. The Madagascar Ministry of Health (MOH) and the Institut Pasteur, Madagascar (IPM) initiated an investigation, which found an attack rate of 70% for ARI, with 27 deaths in Sahafata. Pharyngeal swab specimens were collected from ill persons for viral culture. Of the four influenza A viruses that were isolated at IPM, two were identified

FIGURE 1. A remote village in Madagascar's Fianarantsoa Province, one of many areas reporting an outbreak of influenza-like illness during July–August 2002

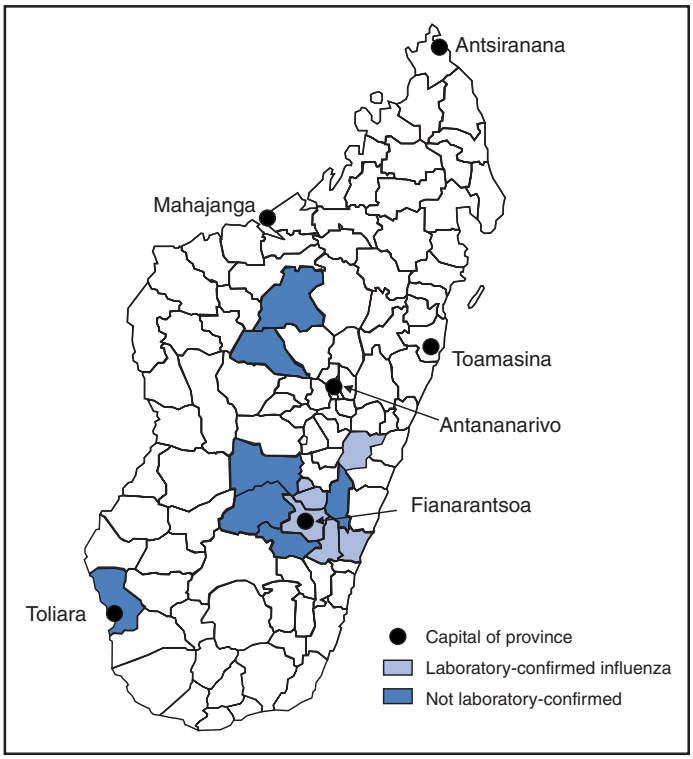
Photo/Tim Uyeki

as type A (H3N2) viruses. In late July, health authorities investigated a similar outbreak in Ikongo District, Fianarantsoa Province. In August, MOH requested assistance from the World Health Organization (WHO) and CDC in investigating the outbreak. In response, an international team of experts from CDC; Institut de Veille Sanitaire, France; Institut Pasteur, France; and WHO was mobilized from the Global Outbreak Alert and Response Network; the team arrived in Madagascar on August 14. This report summarizes the preliminary epidemiologic and virologic findings, which suggest that the outbreak was attributable to influenza A (H3N2) viruses. Further surveillance and research about the epidemiology of influenza in Madagascar is planned.

Nationwide surveillance for influenza-like illness (ILI) cases implemented by MOH suggested that the outbreak peaked during the week of August 22. As of September 19, the outbreak appeared to be over, with 30,304 cumulative cases and 754 deaths reported from 13 of 111 health districts and four of six provinces (Figure 2); approximately 85% of cases were reported from Fianarantsoa Province. The majority of illnesses occurred in rural areas, and 95% of deaths occurred away from health facilities and could not be investigated. No standardized case definition was used, and the degree of overreporting or underreporting of ILI cases is uncertain.

Field investigations were conducted in three highland districts of Fianarantsoa Province in which high numbers of cases and deaths had been reported. The investigations' objectives were to confirm the etiology of the outbreak and to make recommendations based on the epidemiologic findings. An analysis of ARI data from 1999–2002 collected at health centers indicated that ARI cases in highland districts peaked each

FIGURE 2. Districts reporting cases of influenza-like illness — Madagascar, July–August 2002



year during the winter months of May–September. The peaks in ARI cases coincided with peaks of mortality from all causes and from respiratory conditions such as pneumonia during 1999–2002. In Ikongo District (estimated 2002 population: 161,494) of Fianarantsoa Province, the numbers of ARI cases evaluated at health centers and deaths from all causes that occurred during July–August were substantially higher than those that occurred during identical periods in previous years. However, the ratio of deaths to ARI cases appeared to be similar to proportions recorded during previous years. In three communes of Ikongo District (estimated 2002 population: 58,037), 54% of the reported deaths attributed to ARI that occurred during July–August were among children aged <5 years, but the highest mortality rate was among persons aged ≥60 years. A survey of a remote village (population: 750) in Ikongo District indicated an ARI attack rate of 67% and an estimated case-fatality ratio of 2%. In contrast, no unusually high morbidity or mortality was reported among the population of Fianarantsoa Province's capital city or in Antananarivo (estimated 2002 population: 1.25 million), where morbidity and virologic surveillance for influenza is conducted all year by IPM.

During July 19–August 22, a total of 152 respiratory specimens were collected for viral isolation from ill persons in three areas of Fianarantsoa Province (Sahafata, Ikongo, and

Manandriana) where outbreaks occurred. The international team also used rapid influenza-antigen tests to test specimens in the field. Influenza A viruses were isolated from specimens collected from ill persons in each area that was investigated; 27 influenza isolates were characterized antigenically at IPM and confirmed by the WHO Collaborating Centre for Reference and Research on Influenza, London, United Kingdom; all isolates were A/Panama/2007/99-like (H3N2) viruses. The A (H3N2) component of both the 2002 Southern Hemisphere and 2002–03 Northern Hemisphere influenza vaccines are well matched to the outbreak strain.

Reported by: *L Rasoazanamiarina, MD, A Lamina, MD, Ministry of Health; M Andrianarivelo, MD, G Razafitrimo, Institut Pasteur; A Ndikuyeze, MD, B Andriamahefazafy, MD, World Health Organization, Antananarivo, Madagascar. C Paquet, MD, International Health Dept, I Bonmarin, MD, Infectious Diseases Dept, Institut de Veille Sanitaire, Saint-Maurice, France. J Manuguerra, PhD, Molecular Genetics Unit for Respiratory Viruses, National Reference Center for Influenza, Institut Pasteur, Paris, France. B Koumare, PhD, World Health Organization Regional Office for Africa, Brazzaville, Congo. N Shindo, MD, K Stohr, PhD, K Ait-Ikhlef, Dept of Communicable Disease Surveillance and Response, World Health Organization, Geneva, Switzerland. T Uyeki, MD, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.*

Editorial Note: The epidemiologic and virologic data suggest that the large outbreak described in this report was attributable to influenza A/Panama/2007/99-like (H3N2) viruses, which have been in circulation worldwide for several years. Influenza outbreaks in remote regions have been reported rarely (*1–4*). Several factors might have contributed to the widespread ARI morbidity and unusually high mortality reported from rural highland regions during this outbreak. In remote villages, crowded living conditions during an unusually cold and wet winter might have facilitated person-to-person transmission of influenza among highly susceptible populations. Fianarantsoa Province is one of the poorest regions of Madagascar; malnutrition is prevalent, and access to health care is poor. These factors might have been exacerbated further by civil unrest during December 2001–June 2002.

This outbreak illustrates several important lessons for controlling influenza outbreaks in developing countries and for global pandemic influenza planning. Because the outbreak occurred primarily in remote areas, awareness of the outbreak and response by health authorities were delayed. Although influenza surveillance is conducted in Antananarivo by IPM's WHO-recognized National Influenza Center, no data were available for the most affected areas. In Madagascar, as in many developing countries, efforts to assess and control the outbreak were complicated by at least seven factors: 1) malnutrition, 2) poor access to health care in remote areas, 3) difficulties in reaching rural populations, 4) limited communicable disease surveillance, 5) shortages of antibiotics to treat secondary bacterial complications, 6) the unavailability of influenza vaccine, and 7) lack of awareness about influenza. In addition, limited influenza surveillance has prevented an understanding of the epidemiology and impact of influenza in many developing countries, especially in Africa (*5*). In response to this outbreak, the team recommended expanding influenza surveillance, educating the public and health-care providers about influenza, improving access to health care in rural areas, and ensuring that adequate supplies of antibiotics are available at health-care centers to treat bacterial complications of influenza. Influenza vaccination was not recommended because the outbreak was already widespread in August, and the ability to distribute vaccine in remote areas was extremely limited. Members of the international team plan to return to Madagascar to assist MOH to better characterize the outbreak.

Acknowledgments

This report is based on contributions by R Migliani, MD, M Ratsitorahina, PhD, P Grosjean, N Rasolofonirina, MD, L Rabarijaona, MD, Institut Pasteur, Antananarivo; D Rabdrianasolo, MD, C Ravaonjanahary, PhD, M Ratolojanahary, MD, Ministry of Health; J Rasamizanaaka, MD, H Ravokatsoa, MD, L Razafilahy, Dept of Public Health, Fianarantsoa Province; B Tanjaka, MD, Ikongo District; P Rakotoarisoa, MD, Manadriana District; E Raharilalao, MD, Anjoma, Nadihizana District, Madagascar. C Bouchier, PhD, V Lorin, Institut Pasteur, Paris, France. A Hay, PhD, World Health Organization Collaborating Center for Reference and Research on Influenza, London, United Kingdom. R Arthur, PhD, M Ryan, MD, World Health Organization Global Alert and Response Team, Communicable Disease Surveillance and Response Dept, Geneva, Switzerland. S Harper, MD, K Fukuda, MD, J LeDuc, PhD, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

References

1. World Health Organization. Acute respiratory infection, Afghanistan. Wkly Epidemiol Rec 1999;74:65.
2. Corwin AL, Simanjuntak CH, Ingkokkusumo G, et al. Impact of epidemic influenza A-like acute respiratory illness in a remote jungle highland population in Irian Jaya, Indonesia. Clin Infect Dis 1998;26:880–8.
3. Canil KA, Pratt RD, Sungu MS, et al. An outbreak of influenza A in the highlands of Papua New Guinea. Southeast Asian J Trop Med Public Health 1984;15:265–9.
4. Tangkanakul W, Tharmaphornpilas P, Thawatsupha P, et al. An outbreak of influenza A virus in a hilltribe village of Mae Hong Song Province, Thailand, 1997. J Med Assoc Thai 2000;83:1005–10.
5. Schoub BD, McAnerney JM, Besselaar TG. Regional perspectives on influenza surveillance in Africa. Vaccine 2002;20:S45–S46.

Influenza and Pneumococcal Vaccination Levels Among Persons Aged ≥65 Years — United States, 2001

Two vaccine-preventable diseases, influenza and pneumococcal disease, contribute to the mortality of older persons in the United States. Influenza caused an average of 20,000 deaths per year during influenza epidemics in the United States from 1969 to 1996; persons aged ≥65 years accounted for approximately 90% of these deaths (*1*). Pneumococcal disease caused approximately 3,400 deaths among persons aged ≥65 years in the United States in 1998 (*2*). National health objectives for 2010 include increasing influenza and pneumococcal vaccination levels to ≥90% among persons aged ≥65 years (objective nos. 14.29a and 14.29b, respectively) (*3*). To assess progress toward achieving these objectives, CDC analyzed data from the 2001 Behavioral Risk Factor Surveillance System (BRFSS). This report summarizes the results, which indicate that the estimated point prevalences of influenza and pneumococcal vaccination were <80% among persons aged ≥65 years in all reporting areas. Influenza vaccination levels during 2000–2001 decreased from 1998–1999 levels in 27 of 52 reporting areas; pneumococcal vaccination prevalence increased a median of 7 percentage points from 1999 to 2001. Continued efforts are needed to increase the proportion of older adults who receive influenza and pneumococcal vaccines; health-care providers should offer pneumococcal vaccine all year and should continue to offer influenza vaccine during December and throughout the influenza season, even after influenza activity has been documented in the community.

BRFSS is a state-based, random-digit–dialed telephone survey of the noninstitutionalized civilian U.S. population aged ≥18 years. The survey is conducted in all 50 states, the District of Columbia, and three U.S. territories. Questions about influenza vaccination ("During the past 12 months, have you had a flu shot?") and pneumococcal vaccination ("Have you ever had a pneumonia vaccination?") were asked in all reporting areas in odd-numbered years starting in 1993. The response rate (CASRO method) was >60% in 10 of the 54 reporting areas (median: 51.1%; range: 33.3%–81.5%). Response rates for persons aged ≥65 years were not available. In 2001, the sample included 39,910 respondents aged ≥65 years. Respondents who reported an unknown influenza (0.3%) or pneumococcal (2.6%) vaccination status were excluded from the analysis. Overall vaccination levels were estimated for the 50 states and the District of Columbia; data for Guam, Puerto Rico, and the Virgin Islands were reported in area-specific results only. Data were weighted by age, sex, and, in some areas, by race/ethnicity to reflect each area's estimated adult population. SUDAAN was used to calculate point estimates and 95% confidence intervals (CIs) and to conduct multivariable logistic regression to calculate odds ratios and test associations of vaccination status with age, race/ethnicity, sex, education level, geographic region, self-reported health, diabetes status, smoking status, and asthma history.

During 2001, a total of 64.9% (95% CI=64.0%–65.8%) of respondents aged ≥65 years reported having received an influenza vaccination during the preceding year (Table 1), compared with 66.9% (95% CI=66.0%–67.8%) in 1999 (*4*). Previous analyses have indicated percentage point increases of 7.7%, 7.4%, and 1.5% from 1993 to 1995, 1995 to 1997, and 1997 to 1999, respectively (*4*). Estimated influenza vaccination levels exceeded 60% in 48 of 54 reporting areas; in 34 of these areas, 95% CIs exceeded 60% (Table 2). Vaccination prevalence ranged from 36.8% (Puerto Rico) to 79.0% (Hawaii). Of the 52 areas for which data were available for both 1999 and 2001, the median percentage point difference from 1999 to 2001 was –0.9 (range: –9.6–6.5).

The proportion of respondents reporting having ever received pneumococcal vaccination increased 5.9 percentage points, from 54.1% (95% CI=53.2%–55.1%) in 1999 to 60.0% (95% CI=59.2%–60.8%) in 2001 (Table 1). Previous analyses indicated percentage point increases of 6.9%, 9.8%, and 8.7% from 1993 to 1995, 1995 to 1997, and 1997 to 1999, respectively (*4*). Of the 52 reporting areas for which data were available for both 1999 and 2001, the proportion of respondents reporting having ever received pneumococcal vaccination increased in 51 areas (Table 2). Estimated pneumococcal vaccination levels exceeded 60% in 32 reporting areas, and 95% CIs exceeded 60% in 18 of these areas. Vaccination prevalence ranged from 24.1% (Puerto Rico) to 70.9% (Oregon).

Receipt of one vaccine was associated with receipt of the other vaccine. A total of 10.5% of respondents reported pneumococcal vaccination only, and 15.4% reported recent influenza vaccination only; 49.3% reported both, and 24.7% reported having received neither.

The estimated percentages of non-Hispanic blacks and Hispanics having received influenza (non-Hispanic black=48.1% and Hispanic=55.2%) and pneumococcal vaccination (non-Hispanic black=39.4% and Hispanic=41.6%) were less than those for non-Hispanic whites having received influenza (67.1%) and pneumococcal vaccination (63.5%) (Table 1). After accounting for variations in age, sex, education level, self-reported health, diabetes status, geographic region, smoking status, and asthma history by logistic regression, the disparity in vaccination coverage between non-Hispanic whites and non-Hispanic blacks and Hispanics remained statistically significant (Table 3).

TABLE 1. Percentage of persons aged ≥65 years who reported receiving influenza vaccine during the preceding year or pneumococcal vaccine ever, by selected characteristics — Behavioral Risk Factor Surveillance System (BRFSS), United States, 2001

	Influenza			Pneumococcal		
Characteristic	%	(95% CI*)	% point difference 1999 to 2001	%	(95% CI)	% point difference 1999 to 2001
Age group (yrs)						
65–74	62.1	(61.0–63.2)	–1.3	55.9	(54.8–57.0)	6.0
≥75	69.1	(67.8–70.2)	–3.4	66.1	(64.8–67.4)	5.2
Race/Ethnicity						
White, non-Hispanic	67.1	(66.4–68.0)	–1.8	63.5	(62.6–64.4)	6.6
Black, non-Hispanic	48.1	(44.6–51.6)	0.0	39.4	(36.0–43.0)	3.1
Hispanic	55.2	(49.0–61.4)	–3.4	41.6	(35.8–47.4)	7.0
Other†	65.7	(58.4–73.0)	–2.5	45.1	(37.8–52.4)	–6.6
Sex						
Men	66.6	(65.2–68.0)	–1.5	58.7	(57.2–60.2)	5.2
Women	63.7	(62.6–64.8)	–2.4	60.9	(59.8–62.0)	6.3
Region§						
New England	70.4	(68.8–72.0)	1.4	64.0	(62.4–65.6)	8.8
Mid Atlantic	63.3	(60.8–65.8)	–0.6	57.7	(55.2–60.4)	5.9
Northeast Central	63.9	(61.8–65.8)	–4.1	59.3	(57.2–61.4)	5.6
Northwest Central	69.7	(68.0–71.4)	2.1	61.1	(59.2–62.8)	6.6
Southern Atlantic	60.8	(59.0–62.4)	–2.4	59.9	(58.2–61.6)	5.7
Southeast Central	64.0	(61.8–66.2)	–1.6	56.7	(54.4–59.0)	3.6
Southwest Central	62.5	(60.4–64.8)	–5.9	58.0	(55.8–60.2)	5.3
Mountain	67.9	(65.8–70.2)	–3.2	66.0	(63.8–68.4)	8.1
Pacific	69.9	(66.6–73.2)	–1.1	61.8	(58.2–65.2)	5.1
Education level						
<High school	58.3	(56.2–60.4)	–2.2	53.3	(51.2–55.4)	6.4
High school graduate	64.1	(62.8–65.4)	–1.8	60.2	(58.8–61.6)	6.4
>High school	68.8	(67.6–70.0)	–2.7	63.1	(61.8–64.4)	4.4
Self-reported health						
Excellent	57.6	(54.6–60.6)	–3.6	50.9	(48.0–53.8)	6.2
Very good	64.0	(62.4–65.6)	–3.4	57.0	(55.4–58.8)	2.6
Good	66.6	(65.2–68.0)	–0.8	61.9	(60.4–63.4)	6.7
Fair	66.0	(64.2–67.8)	–2.5	63.2	(61.4–65.2)	6.7
Poor	69.3	(67.0–71.8)	0.0	66.9	(64.4–69.4)	9.0
Diabetes¶						
Yes	70.6	(68.8–72.6)	–1.9	66.1	(64.0–68.2)	6.8
No	63.9	(63.0–64.8)	–2.1	58.9	(58.0–59.8)	5.6
Asthma**						
Yes	70.7	(67.8–73.6)	NA††	72.7	(69.6–75.6)	NA††
No	64.3	(63.4–65.2)	NA††	58.7	(57.8–59.6)	NA††
Smoking status						
Ever smoked	66.3	(65.2–67.4)	–1.5	62.6	(61.4–63.6)	6.8
Never smoked	63.6	(62.4–64.8)	–2.6	57.4	(56.2–58.8)	4.7
Total	**64.9**	**(64.0–65.8)**	**–2.0**	**60.0**	**(59.2–60.8)**	**5.9**

* Confidence interval.
† Numbers for other racial/ethnic groups were too small for meaningful analysis.
§ *New England*=Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *Mid Atlantic*=New Jersey, New York, and Pennsylvania; *Northeast Central*=Illinois, Indiana, Michigan, Ohio, and Wisconsin; *Northwest Central*=Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota; *Southern Atlantic*=Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; *Southeast Central*=Alabama, Kentucky, Mississippi, and Tennessee; *Southwest Central*=Arkansas, Louisiana, Oklahoma, and Texas; *Mountain*=Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; *Pacific*=Alaska, California, Hawaii, Oregon, and Washington.
¶ Based on response to the question, "Have you ever been told by a doctor that you have diabetes?"
** Based on response to the question, "Have you ever been told by a doctor, nurse, or other health professional that you had asthma?"
†† Not available. Questions about asthma were not included on the core section of the 1999 BRFSS.

TABLE 2. Percentage of persons aged ≥65 years who reported receiving influenza vaccine during the preceding year or pneumococcal vaccine ever, by reporting area — Behavioral Risk Factor Surveillance System (BRFSS), United States, 2001

	Influenza			Pneumococcal		
Reporting area	%	(95% CI*)	% point difference 1999 to 2001	%	(95% CI)	% point difference 1999 to 2001
Alabama	65.9	(61.6–70.2)	1.3	60.3	(55.8–64.8)	6.4
Alaska	62.8	(54.0–71.4)	3.0	65.3	(56.8–74.0)	21.6
Arizona	61.8	(56.8–66.8)	–9.5	65.6	(60.8–70.6)	12.2
Arkansas	63.2	(59.0–67.4)	–4.0	59.0	(54.6–63.4)	8.9
California	68.9	(64.6–73.4)	–3.3	59.6	(55.0–64.2)	2.6
Colorado	77.4	(72.0–82.6)	2.6	68.6	(62.6–74.6)	5.9
Connecticut	69.1	(66.2–71.8)	4.3	63.3	(60.4–66.2)	14.3
Delaware	67.6	(63.6–71.8)	–0.1	68.9	(64.8–73.2)	2.4
District of Columbia	55.5	(49.0–62.0)	–0.4	49.0	(42.4–55.6)	13.7
Florida	54.9	(51.6–58.2)	–8.4	58.1	(54.8–61.4)	4.5
Georgia	62.2	(58.0–66.6)	5.3	57.9	(53.4–62.4)	8.2
Guam	39.5	(25.6–53.4)	NA†	33.1	(19.4–46.6)	NA†
Hawaii	79.0	(75.4–82.4)	4.9	63.7	(59.2–68.2)	7.9
Idaho	65.1	(61.6–68.6)	–3.9	60.3	(56.6–64.0)	5.1
Illinois	62.2	(57.0–67.4)	–5.3	56.7	(51.2–62.0)	9.3
Indiana	65.7	(62.0–69.4)	–0.4	60.2	(56.4–64.2)	8.6
Iowa	72.8	(69.4–76.2)	3.2	65.9	(62.2–69.6)	4.6
Kansas	68.5	(65.2–71.8)	1.5	62.9	(59.4–66.4)	7.8
Kentucky	60.9	(57.4–64.4)	–7.4	55.1	(51.6–58.6)	3.1
Louisiana	56.1	(52.4–59.8)	–4.3	49.5	(45.8–53.2)	9.1
Maine	71.5	(67.2–75.8)	–2.2	65.0	(60.4–69.6)	7.7
Maryland	67.3	(63.0–71.6)	4.7	62.3	(57.8–66.8)	8.1
Massachusetts	70.6	(68.0–73.4)	1.3	63.5	(60.6–66.4)	6.8
Michigan	60.4	(56.4–64.6)	–9.6	56.6	(52.2–60.8)	–1.2
Minnesota	70.1	(66.6–73.6)	6.1	62.9	(59.2–66.6)	11.0
Mississippi	61.8	(57.4–66.2)	–1.0	55.7	(51.2–60.2)	5.3
Missouri	67.5	(63.2–71.6)	–0.9	56.0	(51.6–60.4)	3.2
Montana	73.1	(69.0–77.2)	0.2	67.9	(63.4–72.2)	6.7
Nebraska	70.1	(66.6–73.6)	0.9	61.2	(57.4–65.0)	6.3
Nevada	63.3	(57.2–69.4)	1.2	66.3	(60.2–72.6)	4.6
New Hampshire	69.4	(65.6–73.2)	4.3	62.7	(58.6–66.6)	2.3
New Jersey	64.5	(61.0–68.0)	–0.9	58.9	(55.2–62.6)	3.9
New Mexico	70.0	(66.4–73.6)	1.2	62.7	(58.8–66.6)	9.5
New York	62.5	(58.0–67.0)	–1.3	55.9	(51.2–60.6)	5.9
North Carolina	66.1	(62.2–70.0)	1.9	65.8	(61.8–69.6)	7.2
North Dakota	70.0	(65.4–74.6)	2.8	64.2	(59.4–69.0)	9.1
Ohio	63.4	(59.0–67.8)	–5.4	59.3	(54.8–63.8)	4.4
Oklahoma	72.7	(69.2–76.2)	0.8	66.1	(62.4–69.8)	12.4
Oregon	71.7	(67.4–76.0)	6.5	70.9	(66.4–75.2)	14.6
Pennsylvania	63.8	(60.0–67.4)	0.7	59.5	(55.6–63.2)	7.2
Puerto Rico	36.8	(32.6–41.0)	–3.5	24.1	(20.2–28.0)	2.3
Rhode Island	72.6	(69.0–76.2)	–3.2	67.0	(63.2–70.8)	10.1
South Carolina	66.2	(61.8–70.6)	–3.8	57.9	(53.2–62.6)	1.8
South Dakota	74.1	(71.4–76.6)	0.4	59.2	(56.2–62.2)	8.8
Tennessee	65.6	(61.0–70.2)	0.1	55.4	(50.6–60.2)	1.1
Texas	61.8	(58.6–65.0)	–8.1	58.0	(54.6–61.4)	2.2
Utah	68.7	(63.2–74.0)	–6.5	67.3	(62.4–72.4)	6.0
Vermont	71.5	(68.0–75.2)	–1.9	67.3	(63.4–71.2)	10.8
Virgin Islands	38.7	(31.4–46.0)	NA†	30.7	(23.8–37.6)	NA†
Virginia	65.3	(60.6–70.0)	–0.4	60.1	(55.2–65.0)	4.9
Washington	72.5	(69.0–76.0)	3.6	66.8	(63.0–70.6)	10.9
West Virginia	61.7	(57.8–65.4)	–1.2	61.3	(57.6–65.2)	7.0
Wisconsin	70.4	(66.2–74.6)	5.5	65.6	(61.0–70.0)	11.9
Wyoming	69.6	(65.4–73.8)	–4.2	68.4	(64.0–72.8)	6.9
Total	**64.9**	**(64.0–65.8)**	**–2.0**	**60.0**	**(59.2–60.8)**	**5.9**

* Confidence interval.
† Not available. Guam and Virgin Islands did not participate in the 1999 BRFSS.

TABLE 3. Odds ratios (ORs) and corresponding p values determined by logistic regression for persons aged ≥65 years who reported receiving influenza vaccine during the preceding year or pneumococcal vaccine ever, by selected characteristics — Behavioral Risk Factor Surveillance System, United States, 2001

	Influenza			Pneumococcal		
Characteristic	**OR**	**(95% CI*)**	**p-value**	**OR**	**(95% CI)**	**p-value**
Age group (yrs)						
65–74†	1.00			1.00		
≥75	1.40	(1.29–1.50)	<0.0001	1.52	(1.41–1.64)	<0.0001
Race/Ethnicity						
White, non-Hispanic†	1.00			1.00		
Black, non-Hispanic	0.50	(0.43–0.59)	<0.0001	0.39	(0.33–0.45)	<0.0001
Hispanic	0.63	(0.50–0.79)	0.0001	0.42	(0.34–0.54)	<0.0001
Other§	0.86	(0.62–1.19)	0.3606	0.44	(0.32–0.59)	<0.0001
Sex						
Men†	1.00			1.00		
Women	0.89	(0.82–0.96)	0.0049	1.15	(1.06–1.24)	0.0006
Region¶						
New England†	1.00			1.00		
Mid Atlantic	0.80	(0.70–0.91)	0.0008	0.86	(0.75–0.98)	0.0230
Northeast Central	0.78	(0.70–0.88)	0.0001	0.87	(0.77–0.98)	0.0214
Northwest Central	0.98	(0.87–1.10)	0.7111	0.90	(0.80–1.00)	0.0462
Southern Atlantic	0.71	(0.64–0.80)	<0.0001	0.96	(0.86–1.07)	0.4887
Southeast Central	0.84	(0.74–0.95)	0.0067	0.82	(0.73–0.94)	0.0028
Southwest Central	0.77	(0.68–0.88)	0.0001	0.90	(0.79–1.02)	0.0890
Mountain	0.90	(0.79–1.02)	0.1106	1.16	(1.02–1.32)	0.0259
Pacific	1.07	(0.91–1.26)	0.4300	1.08	(0.93–1.26)	0.3224
Education level						
<High school†	1.00			1.00		
High school graduate	1.26	(1.14–1.40)	<0.0001	1.30	(1.17–1.45)	<0.0001
>High school	1.58	(1.41–1.76)	<0.0001	1.51	(1.36–1.68)	<0.0001
Self-reported health						
Excellent†	1.00			1.00		
Very good	1.32	(1.16–1.51)	<0.0001	1.27	(1.12–1.44)	0.0002
Good	1.51	(1.32–1.72)	<0.0001	1.61	(1.42–1.82)	<0.0001
Fair	1.52	(1.31–1.77)	<0.0001	1.72	(1.49–1.97)	<0.0001
Poor	1.81	(1.52–2.16)	<0.0001	2.02	(1.71–2.40)	<0.0001
Diabetes**						
Yes	1.40	(1.25–1.56)	<0.0001	1.38	(1.23–1.54)	<0.0001
No†	1.00			1.00		
Asthma††						
Yes	1.40	(1.21–1.61)	<0.0001	1.86	(1.61–2.16)	<0.0001
No†	1.00			1.00		
Smoking status						
Ever smoked	1.05	(0.97–1.14)	0.2003	1.22	(1.13–1.32)	<0.0001
Never smoked†	1.00			1.00		

* Confidence interval.
† Reference level for characteristic.
§ Numbers for other racial/ethnic groups were too small for meaningful analysis.
¶ *New England*=Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *Mid Atlantic*=New Jersey, New York, and Pennsylvania; *Northeast Central*=Illinois, Indiana, Michigan, Ohio, and Wisconsin; *Northwest Central*=Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota; *Southern Atlantic*=Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; *Southeast Central*=Alabama, Kentucky, Mississippi, and Tennessee; *Southwest Central*=Arkansas, Louisiana, Oklahoma, and Texas; *Mountain*=Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; *Pacific*=Alaska, California, Hawaii, Oregon, and Washington.
** Based on response to the question, "Have you ever been told by a doctor that you have diabetes?"
†† Based on response to the question, "Have you ever been told by a doctor, nurse, or other health professional that you had asthma?"

The association between vaccination status and additional variables was examined by multivariable logistic regression (Table 3). Persons aged ≥75 years were more likely to report influenza or pneumococcal vaccination than persons aged 65–74 years. Men were more likely than women to report influenza vaccination and less likely to report pneumococcal vaccination. Persons with diabetes or asthma were significantly more likely to report influenza and pneumococcal vaccination, compared with those who did not have diabetes or asthma. Coverage with both vaccines increased as education level increased and as self-reported health declined. Pneumococcal vaccination coverage was higher among smokers than among nonsmokers.

Reported by: *A MacNeil, MPH, Association of Schools of Public Health, Atlanta, Georgia. JA Singleton, MS, JS Moran, MD, Epidemiology and Surveillance Div, National Immunization Program, CDC.*

Editorial Note: The findings in this report indicate that the estimated prevalences of influenza and pneumococcal vaccinations were <80% among persons ≥65 years in all reporting areas. National influenza vaccination coverage for persons aged ≥65 years increased linearly during 1993–1997, leveled off by 1999, and decreased during 1999–2001. The 2001 coverage is slightly below coverage reported in 1997. The decrease in influenza vaccine coverage might be due, in part, to delays in influenza vaccine distribution during the 2000–01 influenza season and the less severe distribution delays during the 2001–02 season (*5*).

Pneumococcal vaccination coverage among persons aged ≥65 years increased linearly during 1993–2001 and was significantly above 60% in 18 states in 2001. The number of states with point prevalence estimates of ≥60% increased from eight in 1999 to 32 in 2001. However, coverage in all 54 reporting areas remained <90% and must increase substantially to meet the national health objective for 2010.

Previous reports have noted racial/ethnic disparities in adult vaccine coverage (*4*). In the 2001 BRFSS, non-Hispanic blacks and Hispanics had substantially lower coverage than non-Hispanic whites. After adjusting for known potential confounding factors measured by BRFSS (e.g., education level but not direct measures of access to care, which were not available), the odds of members of these populations receiving influenza or pneumococcal vaccine remained substantially lower. These gaps were greatest for pneumococcal vaccine. In comparison with influenza vaccine, which is recommended annually, a single dose of pneumococcal vaccine is needed for persons aged ≥65 years. Strategies for addressing these disparities will be investigated by CDC's Racial and Ethnic Adult Disparities Immunization Initiative (READII) through 2-year demonstration projects in Chicago, Illinois; Milwaukee, Wisconsin; a rural area of Mississippi; Rochester, New York; and San Antonio, Texas. Local and state health departments in these areas will work with community partners, CDC, and other federal agencies to identify and implement effective ways to improve influenza and pneumococcal vaccination levels among older non-Hispanic blacks and Hispanics.

Health-care providers should assess the vaccination status of their patients and offer indicated vaccines. Annual influenza vaccination provides such an opportunity; persons reporting recent influenza vaccination were 2.5 times more likely to report having received pneumococcal vaccine than were persons who did not report recent influenza vaccination. Administration of influenza and pneumococcal vaccine simultaneously does not increase the incidence or severity of adverse reactions (*6*). Nevertheless, approximately one fourth of persons reporting recent influenza vaccination did not report having ever received pneumococcal vaccine.

The findings in this report are subject to at least three limitations. First, receipt of influenza or pneumococcal vaccination 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 BRFSS excludes persons without telephones or those with only cellular telephones. Third, the BRFSS response rate was >60% in 10 of the 54 reporting areas.

To assess possible selection bias resulting from the two latter limitations, comparisons were made between national estimates of vaccination coverage from BRFSS and the National Health Interview Survey (NHIS). NHIS data are collected through household, face-to-face interviews and usually have higher response rates (e.g., 72.1% in 2000). Estimated influenza vaccination levels for persons aged ≥65 years in 1997, 1999, and 2001 were 63.2%, 65.7%, and 63.0%, respectively, from NHIS and 65.5%, 66.9%, and 64.9%, respectively, from BRFSS. For the same years, estimated pneumococcal vaccination levels were 42.4%, 49.7%, and 53.8%, respectively, from NHIS and 45.4%, 54.1%, and 60.0%, respectively, from BRFSS. National BRFSS vaccination estimates show similar trends and subgroup differences as NHIS estimates but are consistently slightly higher than NHIS estimates. Previous analysis has documented that NHIS respondents living in households without telephones were less likely to report being vaccinated than those living in households with telephones (*4*), but this accounts for only a small portion of the differences observed between NHIS and BRFSS estimates.

The optimal time to administer influenza vaccination is during October–November. However, influenza vaccination should continue into December and later because many persons at high risk for influenza-related complications,

household members of these persons, health-care workers, and other persons who want to decrease their risk for influenza remain unvaccinated by the end of November (*1*). Current projections indicate that 93 million doses of influenza vaccine will be available during the 2002–03 influenza season, and several million doses remain available for purchase. To maximize coverage among target groups and overall use, physicians should offer influenza vaccine throughout the influenza season. Influenza activity peaked in January or later in 21 of the preceding 25 influenza seasons (*1*). During influenza season and all year, pneumococcal vaccination also should be offered to persons aged ≥65 years and others at high risk who have not been vaccinated or whose vaccination status is unknown. Physicians can improve coverage by using strategies such as improved record keeping, standing orders, reminder/recall systems, and offering vaccinations to hospitalized patients before discharge (*8,9*). Additional information about influenza and pneumococcal vaccination is available at http://www.cdc.gov/nip.

Acknowledgment

This report is based on data contributed by state BRFSS coordinators.

References

1. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices. MMWR 2002;51(No. RR-3).
2. Robinson KA, Baughman W, Rothrock G, et al. Epidemiology of invasive *Streptococcus pneumoniae* infections in the United States, 1995–1998: opportunities for prevention in the conjugate vaccine era. JAMA 2001;285:1729–35.
3. U.S. 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: U.S. Department of Health and Human Services, 2000.
4. CDC. Influenza and pneumococcal vaccination levels among adults aged ≥65 years—United States, 1999. MMWR 2001;50:532–7.
5. Fukuda K, O'Mara D, Singleton J. Part 4: How the delayed distribution of influenza vaccine created shortages in 2000 and 2001. Pharmacy and Therapeutics 2002;27:235–42.
6. CDC. General recommendation on immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Family Physicians (AAFP). MMWR 2002;51(No. RR-2).
7. MacDonald R, Baken L, Nelson A, Nichol K. Validation of self-report of influenza and pneumococcal vaccination status in elderly outpatients. Am J Prev Med 1999;16:173–7.
8. Mieczkowski A, Wilson S. Adult pneumococcal vaccination: a review of physician and patient barriers. Vaccine 2002;20:1383–92.
9. Task Force on Community Preventive Services. Recommendations regarding interventions to improve vaccination coverage in children, adolescents, and adults. Am J Prev Med 2000;18(suppl 1):S92–S96.

Notice to Readers

Use of Anthrax Vaccine in Response to Terrorism: Supplemental Recommendations of the Advisory Committee on Immunization Practices

In December 2000, the Advisory Committee on Immunization Practices (ACIP) released its recommendations for using anthrax vaccine in the United States (*1*). Because of recent terrorist attacks involving the intentional exposure of U.S. civilians to *Bacillus anthracis* spores and concerns that the current anthrax vaccine supply is limited, ACIP developed supplemental recommendations on using anthrax vaccine in response to terrorism. These recommendations supplement the previous ACIP statement in three areas: use of anthrax vaccine for pre-exposure vaccination in the U.S. civilian population, the prevention of anthrax by postexposure prophylaxis (PEP), and recommendations for additional research related to using antimicrobial agents and anthrax vaccine for preventing anthrax.

Use of Anthrax Vaccine for Pre-Exposure Vaccination

In December 2001, the U.S. Department of Health and Human Services obtained a limited supply of anthrax vaccine (BioThrax [formerly Anthrax Vaccine Adsorbed (AVA)], BioPort, Lansing, Michigan), allowing ACIP to reconsider using anthrax vaccine in the U.S. civilian population. ACIP reaffirms that pre-exposure use of anthrax vaccine should be based on a quantifiable risk for exposure (*1*). ACIP recommends that groups at risk for repeated exposures to *B. anthracis* spores should be given priority for pre-exposure vaccination. Groups at risk for repeated exposure include laboratory personnel handling environmental specimens (especially powders) and performing confirmatory testing for *B. anthracis* in the U.S. Laboratory Response Network (LRN) for Bioterrorism Level B laboratories or above, workers who will be making repeated entries into known *B. anthracis*-spore–contaminated areas after a terrorist attack (*2*), and workers in other settings in which repeated exposure to aerosolized *B. anthracis* spores might occur. Laboratory workers using standard Biosafety Level 2 practices in the routine processing of clinical samples or environmental swabs (Level A laboratories [*3*]) are not considered by ACIP to be at increased risk for exposure to *B. anthracis* spores.

For persons not at risk for repeated exposures to aerosolized *B. anthracis* spores through their occupation, pre-exposure vaccination with anthrax vaccine is not recommended. For the general population, prevention of morbidity and mortality

associated with anthrax will depend on public vigilance, early detection and diagnosis, appropriate treatment, and PEP.

Prevention of Anthrax by PEP

Because of a potential preventive benefit of combined antimicrobial PEP and vaccine and the availability of a limited supply of anthrax vaccine for civilian use, ACIP endorses CDC making anthrax vaccine available in a 3-dose regimen (0, 2, 4 weeks) in combination with antimicrobial PEP under an Investigational New Drug (IND) application with the Food and Drug Administration for unvaccinated persons at risk for inhalational anthrax. However, anthrax vaccine is not licensed for postexposure use in preventing anthrax.

Use of anthrax vaccine for PEP could have additional benefits, including reducing the need for long-term antimicrobial therapy with its associated problems of nonadherence and possible adverse events. After the anthrax-related terrorist attacks in 2001, approximately 10,000 persons were recommended to receive a 60-day regimen of antimicrobial prophylaxis for suspected or confirmed exposure to *B. anthracis* spores, but adherence to the recommended 60-day antibiotic regimens was as low as 42% (*4*). In addition, because studies of the 2001 terrorist attacks suggest that some persons might be exposed to *B. anthracis* spores in excess of those studied in animal models, the effectiveness of antimicrobial prophylaxis in such persons is unclear (*4*). However, no cases of anthrax have been detected among persons recommended to take antimicrobial prophylaxis after the terrorist attacks of 2001.

The provision of anthrax vaccine for PEP under an IND application should provide an opportunity to reduce the risk to the greatest extent possible with current medical knowledge and might provide data to support developing additional recommendations for preventing anthrax. To better document the immunogenicity of anthrax vaccine in the postexposure setting, ACIP encouraged CDC to obtain serologic testing on a subset of vaccinees.

ACIP recommended previously that if antimicrobial therapy is used alone for postexposure prevention of anthrax, at least a 30-day course of treatment should be provided. Previous recommendations noted that longer courses (42–60 days) might be indicated. On the basis of limited data from both unintentional human exposures and animal studies (*5*–*7*), ACIP now recommends that the duration of postexposure antimicrobial prophylaxis should be 60 days if used alone for PEP of unvaccinated exposed persons.

Data are insufficient to clarify the duration of antimicrobial use in combination with vaccine for PEP against anthrax. Antibody titers among vaccinated persons peak at 14 days after the third dose (*8*). If antimicrobial prophylaxis is administered in combination with postexposure vaccination, it might be prudent to continue antibiotics until 7–14 days after the third vaccine dose.

Few data exist about the effectiveness of postexposure antimicrobial prophylaxis among exposed persons who have been partially or fully vaccinated. In the only human clinical trial of anthrax vaccine, cases occurred among participants who had received <4 doses (*9*). Recognizing these limited data, but considering a potential undefined benefit, ACIP recommends that persons who have been partially or fully vaccinated receive at least a 30-day course of antimicrobial PEP and continue with the licensed vaccination regimen. Antimicrobial PEP is not needed for vaccinated persons working in Biosafety Level 3 laboratories under recommended conditions (*10*) nor for vaccinated persons (six vaccinations according to the current label) wearing appropriate personal protective equipment (PPE) while working in contaminated environments in which inhalational exposure to *B. anthracis* spores is a risk, unless their respiratory protection is disrupted.

Additional Considerations

For most occupational settings, recommendations about anthrax vaccine and antimicrobial PEP might be implemented in combination with use of appropriate PPE (*2*). In addition to receiving PEP for preventing anthrax, potentially exposed persons should be observed for signs of febrile illness. CDC has published guidelines on clinical evaluation of persons with possible anthrax, including antimicrobial treatment (*1*,*2*). Because the current vaccine supply is limited, ACIP recommends expanded and intensive efforts to improve anthrax vaccine production.

Recommendations for Additional Research

Because of the absence of data to guide public health recommendations in these critical areas, ACIP recommends studies on the safety and immunogenicity of anthrax vaccine for use in children, additional studies on the safety of anthrax vaccine during human pregnancy, and reproductive toxicology studies on anthrax vaccine in laboratory animals. To strengthen public health recommendations for PEP, ACIP recommends expanded animal studies to evaluate further the effectiveness of antimicrobial prophylaxis with and without anthrax vaccine, define the optimal duration of antimicrobial PEP for the prevention of inhalational anthrax, and evaluate alternative antimicrobial PEP regimens. Additional research also should be directed toward developing an improved vaccine for preventing anthrax and new therapeutic strategies, including use of antitoxin (e.g., hyperimmune globulin) for treating anthrax.

References

1. CDC. Use of anthrax vaccine in the United States: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2000;49(No. RR-15).
2. CDC. Occupational health guidelines for remediation workers at *Bacillus anthracis*–contaminated sites—United States, 2001–2002. MMWR 2002;51;786–9.
3. CDC. Biological and chemical terrorism: strategic plan for preparedness and response: recommendations of the CDC Strategic Planning Workgroup. MMWR 2000;49(No. RR-4).
4. Shepard CW, Soriano-Gabarro M, Zell ER, et al. Antimicrobial postexposure prophylaxis for anthrax: adverse events and adherence. Emerg Infect Dis 2002;8:1124–32.
5. Meselson M, Guillemin J, Hugh-Jones M, et al. 1994. The Sverdlosk anthrax outbreak of 1979. Science 1994;226:1202–7.
6. Friedlander AM, Welkos SL, Pitt ML, et al. Postexposure prophylaxis against experimental inhalation anthrax. J Infect Dis 1993;167:1239–42.
7. Henderson DW, Peacock S, Belton FC. Observations on the prophylaxis of experimental pulmonary anthrax in the monkey. J Hyg 1956;54:28–36.
8. Pittman PR, Kim-Ahn G, Pifat DY, et al. Anthrax vaccine: immunogenicity and safety of a dose-reduction, route-change comparison study in humans. Vaccine 2002;20:1412–20.
9. Brachman PS, Gold H, Plotkin SA, Fekety FR, Werrin M, Ingraham NR. Evaluation of human anthrax vaccine. Am J Public Health 1962;52:632–45.
10. CDC. Biosafety in microbial and biomedical laboratories, 5th ed. In: Richmond JY, McKinney RW, eds. Washington, DC: U.S. Department of Health and Human Services, CDC, 2001.

West Nile Virus Activity — United States, November 7–13, 2002

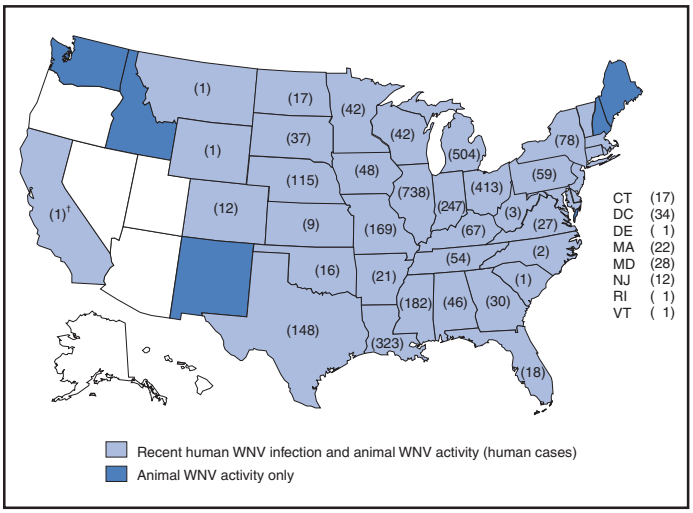
This report summarizes West Nile virus (WNV) surveillance data reported to CDC through ArboNET and by states and other jurisdictions as of 8 a.m. Mountain Standard Time, November 13, 2002.

During November 7–13, a total of 80 laboratory-positive human cases of WNV-associated illness were reported from Michigan (n=21), Illinois (n=19), the District of Columbia (n=seven), Alabama (n=five), Missouri (n=four), New York (n=four), Kansas (n=three), Maryland (n=three), Virginia (n=three), Wisconsin (n=three), Colorado (n=two), Louisiana (n=two), Tennessee (n=two), Montana (n=one), and New Jersey (n=one). During this period, Montana reported its first-ever human case of WNV infection. Also, during the same period, WNV infections were reported in 210 dead crows and 294 other dead birds. A total of 169 veterinary cases and 79 WNV-positive mosquito pools were reported.

During 2002, a total of 3,587 human cases with laboratory evidence of recent WNV infection have been reported from Illinois (n=738), Michigan (n=504), Ohio (n=413), Louisiana (n=323), Indiana (n=247), Mississippi (n=182), Missouri (n=169), Texas (n=148), Nebraska (n=115), New York (n=78), Kentucky (n=67), Pennsylvania (n=59), Tennessee (n=54), Iowa (n=48), Alabama (n=46), Minnesota (n=42), Wisconsin (n=42), South Dakota (n=37), the District of Columbia (n=34), Georgia (n=30), Maryland (n=28), Virginia (n=27), Massachusetts (n=22), Arkansas (n=21), Florida (n=18), Connecticut (n=17), North Dakota (n=17), Oklahoma (n=16), Colorado (n=12), New Jersey (n=12), Kansas (n=nine), West Virginia (n=three), North Carolina (n=two), California (n=one), Delaware (n=one), Montana (n=one), Rhode Island (n=one), South Carolina (n=one), Vermont (n=one), and Wyoming (n=one) (Figure). Among the 3,226 patients for whom data were available, the median age was 56 years (range: 1.5 months–99 years); 1,719 (54%) were male, and the dates of illness onset ranged from June 10 to October 21. A total of 196 human deaths have been reported. The median age of decedents was 78 years (range: 24–99 years); 119 (61%) deaths were among men. In addition, 7,522 dead crows and 5,730 other dead birds with WNV infection were reported from 42 states and the District of Columbia; 8,312 WNV infections in mammals (8,299 equines, three canines, and 10 other species) have been reported from 37 states (Alabama, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Wisconsin, and Wyoming). During 2002, WNV seroconversions have been reported in 366 sentinel chicken flocks from Florida, Iowa, Nebraska, North Carolina, Pennsylvania, Texas, and New York City; 4,906 WNV-positive mosquito pools have been reported from 27 states (Alabama, Arkansas, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Vermont, and Virginia), New York City, and the District of Columbia.

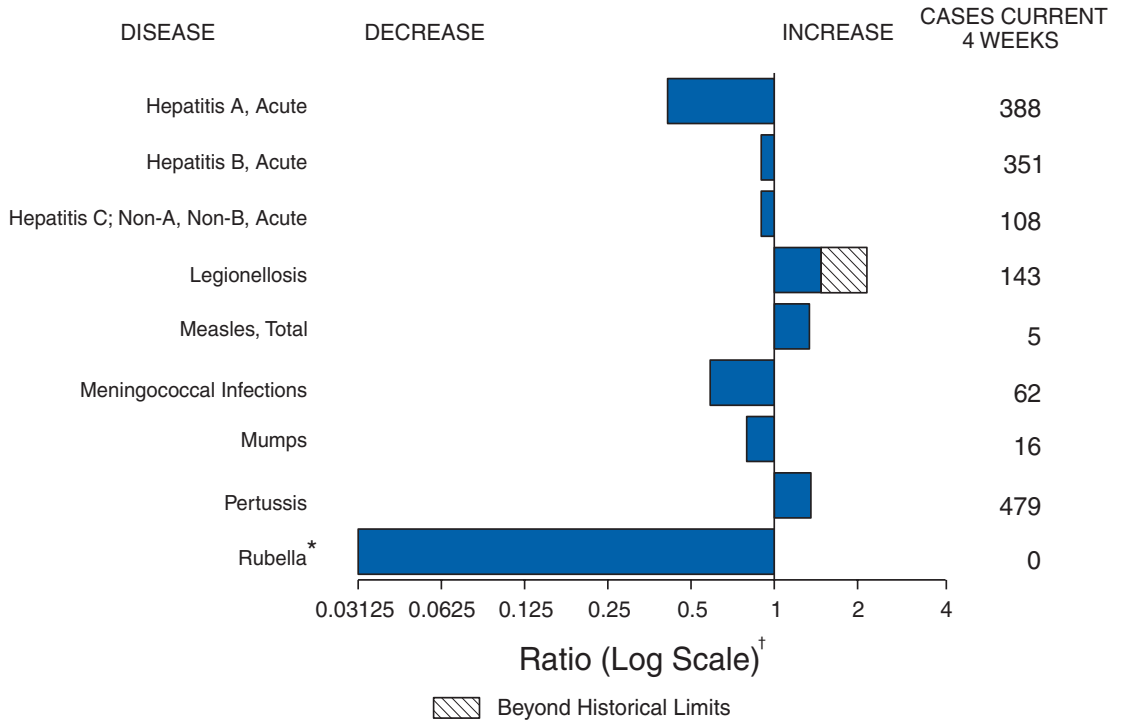
Additional information about WNV activity is available at http://www.cdc.gov/ncidod/dvbid/westnile/index.htm and http://www.cindi.usgs.gov/hazard/event/west_nile/west_nile.html.

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



*As of 8 a.m. Mountain Standard Time, November 13, 2002.
†California has reported human WNV activity only.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending November 9, 2002, with historical data



* No rubella cases were reported for the current 4-week period yielding a ratio for week 45 of zero (0).
† Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary of provisional cases of selected notifiable diseases, United States, cumulative, week ending November 9, 2002 (45th Week)*

		Cum. 2002	Cum. 2001		Cum. 2002	Cum. 2001
Anthrax		2	21	Encephalitis: West Nile†	1,311	52
Botulism:	foodborne	12	33	Hansen disease (leprosy)†	58	60
	infant	47	85	Hantavirus pulmonary syndrome†	13	7
	other (wound & unspecified)	25	15	Hemolytic uremic syndrome, postdiarrheal†	170	158
Brucellosis†		68	112	HIV infection, pediatric†§	116	172
Chancroid		61	31	Plague	-	2
Cholera		5	4	Poliomyelitis, paralytic	-	-
Cyclosporiasis†		156	140	Psittacosis†	18	17
Diphtheria		1	2	Q fever†	40	22
Ehrlichiosis:	human granulocytic (HGE)†	300	194	Rabies, human	2	1
	human monocytic (HME)†	155	101	Streptococcal toxic-shock syndrome†	71	68
	other and unspecified	9	5	Tetanus	21	27
Encephalitis:	California serogroup viral†	114	107	Toxic-shock syndrome	99	104
	eastern equine†	2	8	Trichinosis	12	21
	Powassan†	-	-	Tularemia†	54	120
	St. Louis†	8	76	Yellow fever	1	-
	western equine†	1	-			

-:No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).
† Not notifiable in all states.
§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP). Last update October 31, 2002.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending November 9, 2002, and November 10, 2001 (45th Week)*

Reporting Area	AIDS		Chlamydia†		Cryptosporidiosis		*Escherichia coli, Enterohemorrhagic*			
							O157:H7		Shiga Toxin Positive, Serogroup non-O157	
	Cum. 2002§	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	24,713	34,080	661,928	667,886	2,512	3,402	3,137	2,832	145	138
NEW ENGLAND	1,011	1,268	23,198	21,070	165	135	246	226	32	38
Maine	23	40	1,428	1,173	10	18	36	25	5	1
N.H.	20	31	1,360	1,198	29	15	31	31	-	3
Vt.	8	13	815	527	31	31	12	13	1	1
Mass.	519	654	9,511	8,947	60	51	110	109	9	10
R.I.	71	84	2,338	2,555	19	4	13	13	-	1
Conn.	370	446	7,746	6,670	16	16	44	35	17	22
MID. ATLANTIC	5,619	8,977	73,490	72,580	298	307	212	212	-	-
Upstate N.Y.	404	1,168	14,708	12,251	120	91	157	137	-	-
N.Y. City	3,210	4,773	23,170	25,724	115	111	12	15	-	-
N.J.	925	1,509	10,290	11,934	10	18	43	60	-	-
Pa.	1,080	1,527	25,322	22,671	53	87	N	N	-	-
E.N. CENTRAL	2,494	2,499	111,777	124,101	803	1,490	766	729	17	11
Ohio	453	476	24,833	32,972	117	160	141	192	13	9
Ind.	347	306	14,349	13,507	50	74	67	77	1	-
Ill.	1,170	1,110	31,418	37,391	85	475	164	162	-	-
Mich.	398	457	27,375	25,873	109	173	132	87	3	2
Wis.	126	150	13,802	14,358	442	608	262	211	-	-
W.N. CENTRAL	421	718	36,887	34,028	383	491	477	458	35	37
Minn.	90	118	8,235	7,109	198	166	153	185	30	28
Iowa	54	80	4,761	4,296	42	80	115	75	-	-
Mo.	189	337	13,279	12,195	32	48	68	58	N	N
N. Dak.	1	2	740	878	20	13	15	19	-	2
S. Dak.	3	23	1,884	1,557	28	6	39	41	2	6
Nebr.	43	72	2,456	2,832	47	175	54	59	3	1
Kans.	41	86	5,532	5,161	16	3	33	21	-	-
S. ATLANTIC	7,537	10,268	128,393	128,857	312	338	316	221	35	31
Del.	131	217	2,309	2,434	3	6	7	4	-	1
Md.	1,066	1,517	14,339	13,344	21	36	25	28	-	-
D.C.	371	733	2,974	2,818	4	11	-	-	-	-
Va.	538	843	14,286	15,803	21	24	56	48	9	5
W. Va.	58	71	2,081	2,066	2	2	9	10	-	-
N.C.	555	778	21,423	18,468	32	27	102	46	-	-
S.C.	547	612	10,486	13,332	6	7	5	15	-	-
Ga.	1,160	1,232	25,731	28,156	133	148	53	41	10	9
Fla.	3,111	4,265	34,764	32,436	90	77	59	29	16	16
E.S. CENTRAL	1,128	1,532	40,925	43,046	109	44	98	126	-	-
Ky.	173	299	7,681	7,820	8	5	30	63	-	-
Tenn.	483	488	13,911	12,598	52	12	43	36	-	-
Ala.	197	378	11,034	12,206	42	13	18	16	-	-
Miss.	275	367	8,299	10,422	7	14	7	11	-	-
W.S. CENTRAL	2,696	3,435	92,369	93,127	36	120	63	180	-	-
Ark.	163	176	6,094	6,505	8	8	10	15	-	-
La.	693	699	16,704	16,053	5	7	2	7	-	-
Okla.	133	204	9,496	9,202	17	14	21	30	-	-
Tex.	1,707	2,356	60,075	61,367	6	91	30	128	-	-
MOUNTAIN	790	1,175	40,694	39,922	146	221	332	264	18	15
Mont.	8	15	1,928	1,570	5	36	28	20	-	-
Idaho	18	19	2,171	1,710	29	21	47	64	8	3
Wyo.	6	3	802	712	9	7	14	9	2	2
Colo.	157	262	11,790	11,476	51	39	86	84	4	6
N. Mex.	53	133	5,739	5,308	18	27	11	14	3	4
Ariz.	327	446	12,947	12,680	16	7	34	27	1	-
Utah	43	98	2,236	2,169	14	78	84	31	-	-
Nev.	178	199	3,081	4,297	4	6	28	15	-	-
PACIFIC	3,017	4,208	114,195	111,155	260	256	627	416	8	6
Wash.	302	427	12,796	11,738	43	U	133	115	-	-
Oreg.	216	177	5,894	6,416	38	51	219	64	8	6
Calif.	2,416	3,525	88,649	87,222	176	201	230	216	-	-
Alaska	17	19	3,121	2,273	1	1	7	4	-	-
Hawaii	66	60	3,735	3,506	2	3	38	17	-	-
Guam	2	11	-	354	-	-	N	N	-	-
P.R.	668	1,017	1,997	2,342	-	-	-	2	-	-
V.I.	66	2	125	130	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	138	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 year 2001 and 2002 are provisional and cumulative (year-to-date).

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

§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update October 31, 2002.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 9, 2002, and November 10, 2001 (45th Week)*

Reporting Area	*Escherichia coli Enterohemorrhagic* Shiga Toxin Positive, Not Serogrouped		Giardiasis	Gonorrhea		*Haemophilus influenzae*, Invasive All Ages, All Serotypes		*Haemophilus influenzae*, Invasive Age <5 Years Serotype B	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	34	17	14,638	279,054	309,633	1,271	1,261	21	21
NEW ENGLAND	1	1	1,468	6,496	5,989	90	93	-	1
Maine	-	-	185	115	118	1	2	-	-
N.H.	-	-	40	114	160	8	4	-	-
Vt.	1	1	124	81	57	7	3	-	-
Mass.	-	-	738	2,871	2,766	49	40	-	1
R.I.	-	-	138	776	729	10	5	-	-
Conn.	-	-	243	2,539	2,159	15	39	-	-
MID. ATLANTIC	-	3	3,114	33,652	36,697	230	194	4	3
Upstate N.Y.	-	-	1,080	7,519	7,401	103	67	2	-
N.Y. City	-	-	1,108	9,677	10,834	54	50	-	-
N.J.	-	-	306	5,724	7,079	48	42	-	-
Pa.	-	3	620	10,732	11,383	25	35	2	3
E.N. CENTRAL	11	6	2,849	54,350	65,165	186	235	3	2
Ohio	10	6	835	13,948	18,408	71	62	-	1
Ind.	-	-	-	6,189	6,006	37	43	1	-
Ill.	-	-	672	16,731	20,674	57	86	-	-
Mich.	1	-	816	12,480	14,802	14	13	2	-
Wis.	-	-	526	5,002	5,275	7	31	-	1
W.N. CENTRAL	-	3	1,774	14,423	14,568	57	64	1	1
Minn.	-	-	697	2,514	2,268	42	36	1	-
Iowa	-	-	279	1,117	1,146	1	-	-	-
Mo.	N	N	421	7,566	7,551	10	16	-	-
N. Dak.	-	3	27	42	41	-	7	-	-
S. Dak.	-	-	66	232	244	-	-	-	-
Nebr.	-	-	133	713	1,035	1	3	-	1
Kans.	-	-	151	2,239	2,283	3	2	-	-
S. ATLANTIC	1	-	2,528	72,503	80,266	325	312	4	1
Del.	-	-	47	1,376	1,491	-	-	-	-
Md.	-	-	104	7,658	7,961	78	74	2	-
D.C.	-	-	41	2,387	2,510	-	-	-	-
Va.	-	-	271	8,053	9,437	29	27	-	-
W. Va.	1	-	50	812	613	15	14	-	1
N.C.	-	-	-	13,823	14,762	30	44	-	-
S.C.	-	-	118	6,304	9,487	12	5	-	-
Ga.	-	-	774	14,223	15,533	82	85	-	-
Fla.	-	-	1,123	17,867	18,472	79	63	2	-
E.S. CENTRAL	8	3	324	23,545	27,862	59	67	1	-
Ky.	8	3	-	3,287	3,116	4	2	-	-
Tenn.	-	-	153	8,191	8,483	30	37	-	-
Ala.	-	-	171	7,118	9,447	16	26	1	-
Miss.	-	-	-	4,949	6,816	9	2	-	-
W.S. CENTRAL	1	-	208	41,424	45,623	57	50	2	2
Ark.	-	-	143	3,861	3,965	2	1	-	-
La.	-	-	3	10,295	10,962	8	9	-	-
Okla.	-	-	62	4,088	4,167	42	38	-	-
Tex.	1	-	-	23,180	26,529	5	2	2	2
MOUNTAIN	12	1	1,458	8,759	8,999	151	128	3	7
Mont.	-	-	78	95	88	-	-	-	-
Idaho	-	-	115	81	69	2	2	-	-
Wyo.	-	-	29	55	72	1	1	-	-
Colo.	12	1	483	2,959	2,752	31	35	-	-
N. Mex.	-	-	135	1,204	877	25	21	-	1
Ariz.	-	-	189	3,220	3,417	63	52	1	4
Utah	-	-	292	227	163	17	6	1	-
Nev.	-	-	137	918	1,561	12	11	1	2
PACIFIC	-	-	915	23,902	24,464	116	118	3	4
Wash.	-	-	353	2,504	2,606	3	5	2	-
Oreg.	-	-	386	755	995	57	33	-	-
Calif.	-	-	-	19,526	19,953	22	52	1	4
Alaska	-	-	96	516	370	1	6	-	-
Hawaii	-	-	80	601	540	33	22	-	-
Guam	-	-	-	-	44	-	-	-	-
P.R.	-	-	38	292	521	1	1	-	-
V.I.	-	-	-	31	23	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	1	13	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 9, 2002, and November 10, 2001 (45th Week)*

Reporting Area	*Haemophilus influenzae*, Invasive, Age <5 Years, Non-Serotype B		*Haemophilus influenzae*, Invasive, Age <5 Years, Unknown Serotype		Hepatitis (Viral, Acute), By Type, A		B		C; Non-A, Non-B	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	203	212	15	26	7,309	8,905	5,688	6,275	2,895	3,454
NEW ENGLAND	11	15	-	-	263	613	205	123	22	33
Maine	-	-	-	-	8	10	9	5	-	-
N.H.	-	1	-	-	11	15	20	13	-	-
Vt.	-	-	-	-	1	14	4	5	13	7
Mass.	8	7	-	-	126	299	112	30	9	26
R.I.	-	-	-	-	30	59	24	25	-	-
Conn.	3	7	-	-	87	216	36	45	-	-
MID. ATLANTIC	27	31	-	3	883	1,120	1,256	1,201	1,416	1,175
Upstate N.Y.	11	9	-	1	165	226	120	108	63	26
N.Y. City	8	11	-	-	412	389	624	559	-	-
N.J.	5	4	-	-	117	259	316	261	1,322	1,086
Pa.	3	7	-	2	189	246	196	273	31	63
E.N. CENTRAL	30	38	1	2	975	1,066	549	838	92	150
Ohio	8	12	1	-	297	209	94	88	8	8
Ind.	7	6	-	1	44	90	42	46	-	1
Ill.	11	14	-	-	252	397	126	132	13	11
Mich.	3	-	-	1	215	298	287	534	71	130
Wis.	1	6	-	-	167	72	-	38	-	-
W.N. CENTRAL	6	5	3	6	279	347	198	188	717	1,010
Minn.	5	3	1	2	38	39	27	21	-	9
Iowa	-	-	-	-	74	32	17	21	1	-
Mo.	-	-	2	4	78	77	106	106	698	988
N. Dak.	-	1	-	-	1	3	4	1	-	-
S. Dak.	-	-	-	-	3	3	2	1	1	-
Nebr.	1	1	-	-	17	31	22	26	13	6
Kans.	-	-	-	-	68	162	20	12	4	7
S. ATLANTIC	44	42	2	6	2,124	2,156	1,446	1,296	167	94
Del.	-	-	-	-	12	16	7	25	5	10
Md.	4	7	-	1	273	226	107	127	6	8
D.C.	-	-	-	-	70	47	22	11	-	-
Va.	4	5	-	-	129	115	176	157	16	-
W. Va.	1	1	1	1	17	18	18	20	3	9
N.C.	3	2	-	4	195	202	207	173	25	19
S.C.	2	1	-	-	56	66	112	28	4	6
Ga.	17	17	-	-	402	845	338	381	29	-
Fla.	13	9	1	-	970	621	459	374	79	42
E.S. CENTRAL	13	12	1	3	240	362	339	414	180	180
Ky.	1	-	-	1	41	122	48	49	3	9
Tenn.	7	6	-	1	109	139	120	207	24	61
Ala.	3	5	1	1	35	70	95	78	10	4
Miss.	2	1	-	-	55	31	76	80	143	106
W.S. CENTRAL	14	9	-	-	549	766	468	748	143	643
Ark.	1	1	-	-	42	64	75	86	7	10
La.	2	2	-	-	62	85	84	110	51	142
Okla.	9	6	-	-	47	106	44	85	5	4
Tex.	2	-	-	-	398	511	265	467	80	487
MOUNTAIN	35	21	7	1	510	632	536	405	60	50
Mont.	-	-	-	-	13	11	9	3	1	1
Idaho	1	-	-	-	26	52	6	11	1	2
Wyo.	-	-	-	-	3	7	17	3	5	7
Colo.	3	2	-	-	72	79	69	87	18	8
N. Mex.	6	9	1	1	27	39	129	116	1	11
Ariz.	16	8	5	-	263	322	199	120	4	9
Utah	5	2	-	-	59	62	53	22	4	3
Nev.	4	-	1	-	47	60	54	43	26	9
PACIFIC	23	39	1	5	1,486	1,843	691	1,062	98	119
Wash.	1	3	-	2	140	133	58	128	23	20
Oreg.	5	6	-	-	61	92	113	147	16	14
Calif.	13	28	1	1	1,273	1,588	508	761	59	85
Alaska	1	1	-	-	10	14	4	9	-	-
Hawaii	3	1	-	2	2	16	8	17	-	-
Guam	-	-	-	-	-	1	-	-	-	-
P.R.	-	1	-	-	96	201	84	237	-	1
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	37	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 9, 2002, and November 10, 2001 (45th Week)*

Reporting Area	Legionellosis		Listeriosis		Lyme Disease		Malaria		Measles Total	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	979	964	510	527	14,597	13,592	1,094	1,301	27†	113§
NEW ENGLAND	89	65	54	52	4,266	3,949	56	86	-	5
Maine	2	7	5	2	111	-	5	4	-	-
N.H.	5	10	4	4	230	96	7	2	-	-
Vt.	36	5	3	3	32	16	4	1	-	1
Mass.	30	19	28	27	1,150	1,098	21	47	-	3
R.I.	2	10	1	1	314	449	5	9	-	-
Conn.	14	14	13	15	2,429	2,290	14	23	-	1
MID. ATLANTIC	263	228	145	95	8,520	7,441	264	391	7	19
Upstate N.Y.	91	61	52	25	4,584	3,116	43	56	1	4
N.Y. City	46	43	30	23	142	61	163	233	6	6
N.J.	22	21	30	17	1,448	1,970	28	59	-	1
Pa.	104	103	33	30	2,346	2,294	30	43	-	8
E.N. CENTRAL	231	274	68	81	84	700	124	157	3	10
Ohio	105	116	24	13	66	38	22	23	1	3
Ind.	18	20	9	8	18	22	12	16	2	4
Ill.	-	24	11	23	-	31	30	64	-	3
Mich.	74	72	18	24	-	17	46	36	-	-
Wis.	34	42	6	13	U	592	14	18	-	-
W.N. CENTRAL	50	45	17	16	333	364	56	33	3	5
Minn.	11	9	3	-	241	292	17	6	1	3
Iowa	11	8	2	2	36	34	4	6	-	-
Mo.	14	19	8	9	39	32	15	13	2	2
N. Dak.	-	1	1	-	1	-	1	-	-	-
S. Dak.	4	3	1	-	2	-	1	-	-	-
Nebr.	10	4	1	1	6	4	5	2	-	-
Kans.	-	1	1	4	8	2	13	6	-	-
S. ATLANTIC	186	167	72	71	1,173	887	320	265	2	5
Del.	7	12	-	2	155	152	4	2	-	-
Md.	41	32	17	13	623	539	101	108	-	3
D.C.	6	8	-	-	20	14	19	13	-	-
Va.	24	20	7	12	144	115	31	45	-	1
W. Va.	N	N	-	5	17	11	3	1	-	-
N.C.	11	9	6	5	122	38	21	17	-	-
S.C.	8	13	8	5	20	5	7	6	-	-
Ga.	19	11	11	14	2	-	73	41	-	1
Fla.	70	62	23	15	70	13	61	32	2	-
E.S. CENTRAL	40	54	17	21	46	62	20	35	5	2
Ky.	18	12	3	7	21	22	8	14	-	2
Tenn.	14	26	10	8	22	25	3	11	-	-
Ala.	8	12	4	6	3	8	4	6	5	-
Miss.	-	4	-	-	-	7	5	4	-	-
W.S. CENTRAL	10	23	18	31	16	81	15	83	2	1
Ark.	-	-	-	1	3	-	2	3	-	-
La.	1	6	-	-	3	8	4	6	-	-
Okla.	3	3	9	2	-	-	8	3	-	-
Tex.	6	14	9	28	10	73	1	71	2	1
MOUNTAIN	43	49	27	34	20	11	42	53	1	2
Mont.	3	-	-	-	-	-	2	3	-	-
Idaho	1	3	2	1	4	5	-	3	-	1
Wyo.	1	2	-	1	1	1	-	-	-	-
Colo.	7	14	6	9	3	-	22	22	-	-
N. Mex.	2	3	3	7	1	-	3	3	-	-
Ariz.	10	16	12	7	3	1	7	10	-	1
Utah	14	7	3	2	7	1	5	4	-	-
Nev.	5	4	1	7	1	3	3	8	1	-
PACIFIC	67	59	92	126	139	97	197	198	4	64
Wash.	7	9	8	10	10	7	21	9	-	15
Oreg.	N	N	9	12	15	11	9	15	-	3
Calif.	59	44	67	98	111	77	158	162	3	39
Alaska	-	1	-	-	3	2	2	1	-	-
Hawaii	1	5	8	6	N	N	7	11	1	7
Guam	-	-	-	-	-	-	-	1	-	-
P.R.	-	2	1	-	N	N	-	5	-	1
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 year 2001 and 2002 are provisional and cumulative (year-to-date).
† Of 27 cases reported, 14 were indigenous and 13 were imported from another country.
§ Of 113 cases reported, 59 were indigenous and 54 were imported from another country.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 9, 2002, and November 10, 2001 (45th Week)*

Reporting Area	Meningococcal Disease		Mumps		Pertussis		Rabies, Animal	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	1,425	2,008	230	210	6,531	4,770	5,423	6,301
NEW ENGLAND	79	93	7	1	534	460	828	655
Maine	7	4	-	-	17	22	54	63
N.H.	11	12	4	-	17	17	46	19
Vt.	4	5	-	-	122	33	86	58
Mass.	38	50	2	1	340	365	269	243
R.I.	5	4	-	-	13	5	69	64
Conn.	14	18	1	-	25	18	304	208
MID. ATLANTIC	133	228	25	25	403	316	999	1,167
Upstate N.Y.	40	62	7	3	292	128	622	711
N.Y. City	21	41	2	12	13	51	10	34
N.J.	25	39	-	3	3	18	157	173
Pa.	47	86	16	7	95	119	210	249
E.N. CENTRAL	188	310	32	25	785	751	146	147
Ohio	72	79	13	1	378	270	38	42
Ind.	29	35	2	3	119	78	31	15
Ill.	36	78	8	16	141	89	31	24
Mich.	39	70	8	3	47	133	46	46
Wis.	12	48	1	2	100	181	-	20
W.N. CENTRAL	132	141	16	8	670	320	402	338
Minn.	32	20	4	3	340	146	36	43
Iowa	21	29	1	-	130	46	72	76
Mo.	43	50	5	1	127	91	49	40
N. Dak.	-	6	1	-	-	4	26	35
S. Dak.	2	5	-	-	6	4	65	53
Nebr.	26	17	-	1	8	5	-	4
Kans.	8	14	5	3	59	24	154	87
S. ATLANTIC	257	312	25	36	375	223	2,248	2,193
Del.	7	5	-	-	3	-	24	30
Md.	8	38	5	5	57	37	321	455
D.C.	-	-	-	-	2	1	-	-
Va.	37	37	4	8	132	40	454	423
W. Va.	4	12	-	-	31	3	161	131
N.C.	30	61	2	5	40	68	644	510
S.C.	28	31	3	5	41	31	133	102
Ga.	33	45	4	8	21	20	347	365
Fla.	110	83	7	5	48	23	164	177
E.S. CENTRAL	85	122	13	9	231	164	153	197
Ky.	13	21	3	3	89	68	26	26
Tenn.	37	55	2	1	101	57	97	106
Ala.	21	30	3	-	32	35	26	61
Miss.	14	16	5	5	9	4	4	4
W.S. CENTRAL	174	297	17	12	1,476	559	109	1,006
Ark.	23	21	-	-	459	130	3	-
La.	30	74	1	2	7	8	-	8
Okla.	19	28	-	-	66	27	105	57
Tex.	102	174	16	10	944	394	1	941
MOUNTAIN	78	86	18	14	913	1,204	278	252
Mont.	2	4	-	1	5	34	18	37
Idaho	4	7	2	1	65	170	37	28
Wyo.	-	5	-	1	11	1	18	28
Colo.	21	33	2	3	359	282	59	-
N. Mex.	4	10	1	2	163	129	7	15
Ariz.	23	13	1	1	167	496	115	128
Utah	4	8	7	1	96	74	13	15
Nev.	20	6	5	4	47	18	11	1
PACIFIC	299	419	77	80	1,144	773	260	346
Wash.	58	59	-	2	383	140	-	-
Oreg.	42	56	N	N	173	49	13	4
Calif.	188	289	63	39	567	541	223	304
Alaska	4	2	-	1	4	9	24	38
Hawaii	7	13	14	38	17	34	-	-
Guam	-	-	-	-	-	-	-	-
P.R.	5	5	-	1	3	-	49	85
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	1	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 9, 2002, and November 10, 2001 (45th Week)*

Reporting Area	Rocky Mountain Spotted Fever		Rubella				Salmonellosis	
			Rubella		Congenital Rubella			
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	916	536	13	21	2	-	35,747	34,871
NEW ENGLAND	7	3	-	-	-	-	1,952	2,138
Maine	-	-	-	-	-	-	134	159
N.H.	-	1	-	-	-	-	125	155
Vt.	-	-	-	-	-	-	70	74
Mass.	4	2	-	-	-	-	1,075	1,230
R.I.	3	-	-	-	-	-	149	120
Conn.	-	-	-	-	-	-	399	400
MID. ATLANTIC	39	31	1	8	-	-	4,345	4,581
Upstate N.Y.	7	2	1	1	-	-	1,370	1,062
N.Y. City	8	2	-	6	-	-	1,161	1,156
N.J.	10	9	-	1	-	-	621	1,064
Pa.	14	18	-	-	-	-	1,193	1,299
E.N. CENTRAL	17	16	1	2	-	-	4,685	4,469
Ohio	12	2	-	-	-	-	1,268	1,219
Ind.	2	1	-	-	-	-	425	472
Ill.	-	12	-	2	-	-	1,445	1,251
Mich.	3	1	1	-	-	-	791	775
Wis.	-	-	-	-	-	-	756	752
W.N. CENTRAL	97	67	-	3	-	-	2,334	2,041
Minn.	-	-	-	-	-	-	509	553
Iowa	3	2	-	1	-	-	461	317
Mo.	89	61	-	1	-	-	768	555
N. Dak.	-	1	-	-	-	-	42	58
S. Dak.	1	2	-	-	-	-	102	141
Nebr.	4	1	-	-	-	-	150	142
Kans.	-	-	-	1	-	-	302	275
S. ATLANTIC	482	264	5	5	-	-	9,918	8,145
Del.	4	10	-	-	-	-	81	89
Md.	56	38	-	1	-	-	840	706
D.C.	2	-	-	-	-	-	69	72
Va.	38	25	-	-	-	-	1,086	1,193
W. Va.	2	-	-	-	-	-	128	118
N.C.	270	149	-	-	-	-	1,334	1,185
S.C.	68	29	-	2	-	-	720	785
Ga.	27	9	-	-	-	-	1,827	1,514
Fla.	15	4	5	2	-	-	3,833	2,483
E.S. CENTRAL	97	104	-	-	1	-	2,811	2,436
Ky.	5	2	-	-	-	-	339	336
Tenn.	73	72	-	-	1	-	715	576
Ala.	16	15	-	-	-	-	781	680
Miss.	3	15	-	-	-	-	976	844
W.S. CENTRAL	158	39	2	1	-	-	3,068	4,492
Ark.	97	8	-	-	-	-	914	828
La.	-	2	-	-	-	-	659	782
Okla.	61	29	-	-	-	-	446	430
Tex.	-	-	2	1	-	-	1,049	2,452
MOUNTAIN	13	11	1	-	-	-	1,961	1,926
Mont.	1	1	-	-	-	-	80	68
Idaho	-	1	-	-	-	-	131	126
Wyo.	4	2	-	-	-	-	91	58
Colo.	2	2	-	-	-	-	492	534
N. Mex.	1	1	-	-	-	-	283	254
Ariz.	-	-	-	-	-	-	524	534
Utah	-	3	1	-	-	-	183	197
Nev.	5	1	-	-	-	-	177	155
PACIFIC	6	1	3	2	1	-	4,673	4,643
Wash.	-	-	-	-	-	-	457	462
Oreg.	2	1	-	-	-	-	322	248
Calif.	4	-	3	1	-	-	3,577	3,579
Alaska	-	-	-	-	-	-	72	39
Hawaii	-	-	-	1	1	-	245	315
Guam	-	-	-	-	-	-	-	22
P.R.	-	-	-	3	-	-	201	830
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	25	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 9, 2002, and November 10, 2001 (45th Week)*

Reporting Area	Shigellosis		Streptococcal Disease, Invasive, Group A		*Streptococcus pneumoniae*, Drug Resistant, Invasive		*Streptococcus pneumoniae*, Invasive (<5 Years)	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	15,952	16,856	3,549	3,204	2,020	2,250	226	371
NEW ENGLAND	287	276	167	197	17	112	3	40
Maine	10	6	20	10	-	-	-	-
N.H.	11	6	35	N	-	-	N	N
Vt.	1	7	9	14	5	7	2	1
Mass.	171	195	88	59	N	N	N	N
R.I.	16	17	15	12	12	4	1	3
Conn.	78	45	-	102	-	101	-	36
MID. ATLANTIC	1,169	1,356	568	593	97	143	59	96
Upstate N.Y.	270	435	261	236	81	136	58	96
N.Y. City	355	374	133	157	U	U	U	U
N.J.	332	252	118	124	N	N	N	N
Pa.	212	295	56	76	16	7	1	-
E.N. CENTRAL	1,577	3,918	646	714	199	161	99	115
Ohio	570	2,613	190	181	53	1	19	-
Ind.	89	198	45	56	141	160	55	54
Ill.	611	545	145	231	2	-	-	61
Mich.	162	279	266	195	3	-	N	N
Wis.	145	283	-	51	N	N	25	-
W.N. CENTRAL	909	1,728	214	337	414	137	49	54
Minn.	201	387	108	156	292	63	49	45
Iowa	115	340	-	-	N	N	N	N
Mo.	166	286	42	69	5	9	-	-
N. Dak.	16	21	-	17	1	6	-	9
S. Dak.	150	543	13	11	1	4	-	-
Nebr.	179	84	18	36	29	19	N	N
Kans.	82	67	33	48	86	36	N	N
S. ATLANTIC	5,892	2,396	716	529	1,067	1,187	7	5
Del.	275	14	2	4	3	6	N	N
Md.	1,024	137	123	N	N	N	N	N
D.C.	53	52	7	21	48	5	1	3
Va.	870	336	68	70	N	N	N	N
W. Va.	9	8	19	19	39	37	6	2
N.C.	396	312	112	134	N	N	U	U
S.C.	106	237	34	10	169	243	N	N
Ga.	1,350	449	153	166	268	370	N	N
Fla.	1,809	851	198	105	540	526	N	N
E.S. CENTRAL	1,261	1,516	103	107	119	216	-	-
Ky.	157	717	18	35	17	24	N	N
Tenn.	93	91	85	72	102	191	N	N
Ala.	699	189	-	-	-	1	N	N
Miss.	312	519	-	-	-	-	-	-
W.S. CENTRAL	1,523	2,600	100	292	67	253	5	61
Ark.	164	532	6	-	6	15	-	-
La.	372	218	-	1	61	238	2	61
Okla.	518	76	41	39	N	N	3	-
Tex.	469	1,774	53	252	N	N	-	-
MOUNTAIN	806	864	514	361	40	37	4	-
Mont.	3	8	-	-	-	-	-	-
Idaho	15	39	9	7	N	N	N	N
Wyo.	9	7	7	11	9	7	-	-
Colo.	163	223	132	139	-	-	-	-
N. Mex.	192	112	95	75	30	28	-	-
Ariz.	346	354	241	126	-	-	N	N
Utah	33	52	30	3	-	-	4	-
Nev.	45	69	-	-	1	2	-	-
PACIFIC	2,528	2,202	521	74	-	4	-	-
Wash.	145	186	65	-	-	-	N	N
Oreg.	103	98	N	N	N	N	N	N
Calif.	2,213	1,857	364	-	N	N	N	N
Alaska	6	6	-	-	-	-	N	N
Hawaii	61	55	92	74	-	4	-	-
Guam	-	45	-	1	-	-	-	-
P.R.	8	16	N	N	-	-	N	N
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	-	-	U	U
C.N.M.I.	17	U	-	U	-	-	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 9, 2002, and November 10, 2001 (45th Week)*

Reporting Area	Syphilis				Tuberculosis		Typhoid Fever	
	Primary & Secondary		Congenital					
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	5,432	5,222	299	431	9,977	11,972	228	319
NEW ENGLAND	121	54	-	5	332	396	14	16
Maine	2	1	-	-	10	15	-	1
N.H.	7	1	-	-	13	16	-	2
Vt.	1	3	-	-	-	4	-	-
Mass.	81	30	-	3	190	202	8	10
R.I.	6	9	-	-	34	55	-	-
Conn.	24	10	-	2	85	104	6	3
MID. ATLANTIC	557	450	55	69	1,815	1,976	47	104
Upstate N.Y.	29	17	8	5	250	321	9	15
N.Y. City	344	247	21	32	933	978	23	42
N.J.	127	106	25	32	418	431	11	38
Pa.	57	80	1	-	214	246	4	9
E.N. CENTRAL	937	913	51	61	997	1,224	18	32
Ohio	141	69	4	2	126	244	6	4
Ind.	58	139	1	9	105	85	2	2
Ill.	286	334	29	40	508	570	1	17
Mich.	428	348	17	6	217	256	4	5
Wis.	24	23	-	4	41	69	5	4
W.N. CENTRAL	94	89	-	9	465	465	8	15
Minn.	48	31	-	2	202	199	3	6
Iowa	2	4	-	-	24	34	-	-
Mo.	24	23	-	5	115	115	1	9
N. Dak.	-	-	-	-	2	3	-	-
S. Dak.	-	-	-	-	10	12	-	-
Nebr.	3	8	-	-	23	32	4	-
Kans.	17	23	-	2	89	70	-	-
S. ATLANTIC	1,459	1,770	67	102	2,021	2,224	44	41
Del.	10	13	-	-	13	15	-	1
Md.	172	235	14	4	249	200	7	10
D.C.	55	34	1	2	-	51	-	-
Va.	59	92	1	5	163	224	7	11
W. Va.	2	4	-	-	28	26	-	-
N.C.	255	403	18	12	306	291	2	2
S.C.	113	214	8	21	146	150	-	-
Ga.	306	342	10	22	347	421	9	9
Fla.	487	433	15	36	769	846	19	8
E.S. CENTRAL	417	580	18	30	631	730	4	1
Ky.	83	43	3	1	114	115	4	-
Tenn.	153	286	8	17	251	265	-	1
Ala.	140	118	4	5	177	235	-	-
Miss.	41	133	3	7	89	115	-	-
W.S. CENTRAL	742	648	64	72	1,345	1,822	5	18
Ark.	31	33	2	7	109	134	-	-
La.	133	155	-	-	-	114	-	-
Okla.	61	55	3	5	122	131	2	-
Tex.	517	405	59	60	1,114	1,443	3	18
MOUNTAIN	259	193	15	29	299	477	11	8
Mont.	-	-	-	-	6	6	-	1
Idaho	8	1	-	-	9	7	-	-
Wyo.	-	1	-	-	3	3	-	-
Colo.	44	20	1	1	48	115	5	1
N. Mex.	30	15	-	2	22	47	2	-
Ariz.	162	139	14	26	171	193	-	1
Utah	8	10	-	-	26	33	2	1
Nev.	7	7	-	-	14	73	2	4
PACIFIC	846	525	29	54	2,072	2,658	77	84
Wash.	53	42	1	-	198	208	4	5
Oreg.	20	13	1	-	97	95	2	7
Calif.	765	458	26	54	1,608	2,186	66	68
Alaska	-	-	-	-	43	43	-	1
Hawaii	8	12	1	-	126	126	5	3
Guam	-	9	-	1	-	54	-	3
P.R.	227	242	15	13	75	95	-	-
V.I.	1	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	15	U	-	U	32	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE III. Deaths in 122 U.S. cities,* week ending November 9, 2002 (45th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	320	239	54	21	3	3	35
Boston, Mass.	U	U	U	U	U	U	U
Bridgeport, Conn.	45	33	8	3	-	1	3
Cambridge, Mass.	14	12	2	-	-	-	2
Fall River, Mass.	26	20	5	1	-	-	5
Hartford, Conn.	U	U	U	U	U	U	U
Lowell, Mass.	22	16	3	3	-	-	4
Lynn, Mass.	18	15	1	2	-	-	2
New Bedford, Mass.	30	26	3	1	-	-	2
New Haven, Conn.	40	26	5	4	3	2	5
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	3	1	2	-	-	-	-
Springfield, Mass.	36	24	10	2	-	-	2
Waterbury, Conn.	26	19	6	1	-	-	2
Worcester, Mass.	60	47	9	4	-	-	8
MID. ATLANTIC	2,113	1,455	447	137	28	32	98
Albany, N.Y.	48	33	11	1	2	1	2
Allentown, Pa.	27	23	3	1	-	-	1
Buffalo, N.Y.	103	71	21	7	-	4	6
Camden, N.J.	33	23	7	3	-	-	1
Elizabeth, N.J.	13	6	4	2	1	-	-
Erie, Pa.	68	55	10	2	-	1	4
Jersey City, N.J.	58	38	10	8	-	2	-
New York City, N.Y.	1,188	823	264	72	15	14	59
Newark, N.J.	51	18	21	8	1	1	6
Paterson, N.J.	23	17	-	3	2	1	1
Philadelphia, Pa.	227	161	42	18	5	1	7
Pittsburgh, Pa.§	36	17	13	5	-	1	-
Reading, Pa.	27	19	7	-	-	1	1
Rochester, N.Y.	118	79	17	4	2	4	10
Schenectady, N.Y.	22	17	2	3	-	-	-
Scranton, Pa.	27	19	7	-	-	1	-
Syracuse, N.Y.	U	U	U	U	U	U	U
Trenton, N.J.	20	15	5	-	-	-	-
Utica, N.Y.	24	21	3	-	-	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	1,668	1,172	332	92	30	38	114
Akron, Ohio	61	43	9	4	1	-	7
Canton, Ohio	43	29	13	1	-	-	2
Chicago, Ill.	U	U	U	U	U	U	U
Cincinnati, Ohio	84	61	15	6	-	2	13
Cleveland, Ohio	118	82	23	8	2	3	5
Columbus, Ohio	217	152	41	14	5	5	12
Dayton, Ohio	132	105	16	6	4	1	7
Detroit, Mich.	185	104	56	15	5	5	16
Evansville, Ind.	44	33	9	1	-	1	5
Fort Wayne, Ind.	66	53	6	5	2	-	5
Gary, Ind.	17	9	5	1	-	2	1
Grand Rapids, Mich.	61	45	8	4	-	4	5
Indianapolis, Ind.	179	131	37	6	1	4	15
Lansing, Mich.	54	34	13	4	-	3	3
Milwaukee, Wis.	123	97	15	5	2	4	7
Peoria, Ill.	55	35	13	6	1	-	3
Rockford, Ill.	65	36	23	2	2	2	3
South Bend, Ind.	39	26	6	1	5	1	-
Toledo, Ohio	75	57	16	2	-	-	3
Youngstown, Ohio	50	40	8	1	-	1	2
W.N. CENTRAL	507	365	86	31	17	8	42
Des Moines, Iowa	U	U	U	U	U	U	U
Duluth, Minn.	27	22	2	2	1	-	4
Kansas City, Kans.	31	17	7	5	-	2	2
Kansas City, Mo.	117	90	16	8	3	-	9
Lincoln, Nebr.	32	27	3	1	-	1	4
Minneapolis, Minn.	70	42	13	7	5	3	3
Omaha, Nebr.	92	71	14	6	-	1	11
St. Louis, Mo.	U	U	U	U	U	U	U
St. Paul, Minn.	56	40	13	1	2	-	6
Wichita, Kans.	82	56	18	1	6	1	3
S. ATLANTIC	1,153	745	247	113	28	20	77
Atlanta, Ga.	U	U	U	U	U	U	U
Baltimore, Md.	185	116	46	17	3	3	7
Charlotte, N.C.	89	52	24	8	3	2	9
Jacksonville, Fla.	143	95	25	14	7	2	10
Miami, Fla.	122	83	25	10	1	3	10
Norfolk, Va.	51	37	13	-	-	1	-
Richmond, Va.	49	29	13	5	1	1	2
Savannah, Ga.	48	34	6	6	1	1	5
St. Petersburg, Fla.	49	30	6	8	3	2	4
Tampa, Fla.	195	127	42	19	4	3	21
Washington, D.C.	204	125	46	26	5	2	5
Wilmington, Del.	18	17	1	-	-	-	4
E.S. CENTRAL	801	514	182	68	21	16	61
Birmingham, Ala.	193	120	41	22	7	3	21
Chattanooga, Tenn.	64	43	14	3	2	2	4
Knoxville, Tenn.	83	52	23	7	1	-	4
Lexington, Ky.	62	43	12	2	4	1	6
Memphis, Tenn.	142	87	37	17	-	1	7
Mobile, Ala.	75	56	14	2	1	2	5
Montgomery, Ala.	26	19	4	2	1	-	3
Nashville, Tenn.	156	94	37	13	5	7	11
W.S. CENTRAL	1,313	819	284	113	57	40	75
Austin, Tex.	76	40	25	4	2	5	7
Baton Rouge, La.	26	21	3	2	-	-	-
Corpus Christi, Tex.	68	38	23	5	1	1	4
Dallas, Tex.	207	130	45	20	4	8	14
El Paso, Tex.	63	46	9	5	1	2	2
Ft. Worth, Tex.	105	65	24	5	3	8	3
Houston, Tex.	322	175	64	38	35	10	16
Little Rock, Ark.	55	34	18	1	2	-	-
New Orleans, La.	38	19	10	5	4	-	-
San Antonio, Tex.	200	132	41	20	3	4	19
Shreveport, La.	53	39	9	2	2	1	5
Tulsa, Okla.	100	80	13	6	-	1	5
MOUNTAIN	829	550	185	59	25	10	66
Albuquerque, N.M.	104	67	22	12	1	2	8
Boise, Idaho	33	24	6	1	2	-	3
Colo. Springs, Colo.	64	47	9	4	3	1	3
Denver, Colo.	103	69	21	8	4	1	9
Las Vegas, Nev.	232	139	65	18	9	1	21
Ogden, Utah	26	20	3	3	-	-	7
Phoenix, Ariz.	U	U	U	U	U	U	U
Pueblo, Colo.	27	22	5	-	-	-	3
Salt Lake City, Utah	98	56	27	6	5	4	3
Tucson, Ariz.	142	106	27	7	1	1	9
PACIFIC	1,674	1,164	336	112	28	34	105
Berkeley, Calif.	16	11	2	3	-	-	3
Fresno, Calif.	157	112	30	10	2	3	17
Glendale, Calif.	19	16	3	-	-	-	-
Honolulu, Hawaii	60	47	10	3	-	-	3
Long Beach, Calif.	62	40	15	5	1	1	5
Los Angeles, Calif.	354	230	79	29	10	6	14
Pasadena, Calif.	21	18	1	1	-	1	6
Portland, Oreg.	159	111	30	10	2	6	11
Sacramento, Calif.	168	121	31	10	2	4	8
San Diego, Calif.	144	101	21	15	4	3	7
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	187	135	36	10	2	4	18
Santa Cruz, Calif.	27	22	5	-	-	-	3
Seattle, Wash.	131	85	34	6	3	3	5
Spokane, Wash.	59	40	11	4	1	3	1
Tacoma, Wash.	110	75	28	6	1	-	4
TOTAL	10,378¶	7,023	2,153	746	237	201	673

U: Unavailable. -:No reported cases.

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

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

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

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to Editor, *MMWR* Series, Mailstop C-08, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone 888-232-3228.

☆U.S. Government Printing Office: 2003-533-155/69074 Region IV