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Provisional Surveillance Summary of the West Nile Virus Epidemic — United States, January–November 2002

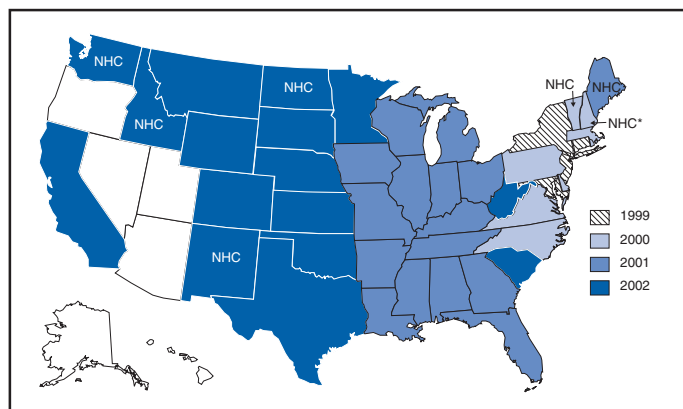
This report presents provisional summary surveillance data about West Nile virus (WNV) activity that were reported to CDC during January 1–November 30, 2002, through the ArboNET surveillance network. In 2002, the reported numbers of human and animal infections increased, and the geographic range of WNV activity expanded substantially. These data underscore the need for intensive surveillance to detect and quantify WNV activity in areas where humans are at risk, public education to teach persons how to prevent mosquito bites, and sustained and integrated mosquito-control activities.

ArboNET is a web-based surveillance data network comprising 54 state and local public health departments and CDC. Specimens from ill humans and animals, dead birds, captive sentinel animals (mostly chickens), wild-caught birds, and mosquitoes were collected by state and local public health departments and other cooperating state and federal agencies and tested for WNV or WNV-specific antibody. Test results, the county and date of specimen collection or illness onset, and other data were entered into state and local public health department databases. Animal data were forwarded regularly to ArboNET through a secure data network; human cases were reported to CDC by telephone or facsimile only.

In 2002, WNV activity was reported from 2,289 counties in 44 states and the District of Columbia (DC) (Figure 1) compared with 359 counties in 27 states and DC in 2001 (1), and WNV virus was detected for the first time in 1,929 U.S. counties and 16 states. In 2002, a total of 3,389 human cases* of WNV disease were reported, compared with 149 during 1999–2001, and large numbers of WNV-infected birds, equines, and mosquitoes also were reported.

*Because surveillance data reported on state health department web sites but not yet reported to ArboNET are not included in this summary report, the number of human cases reported from 2002 in this summary might differ from those reported in preceding 2002 MMWR weekly updates.

FIGURE 1. West Nile virus activity, by state — United States, 1999–2002



*No human cases.

Human Surveillance

In 2002, of the 3,389 reported cases of human WNV-associated illness, 2,354 (69%) persons had West Nile meningoencephalitis (WNME), 704 (21%) had West Nile fever (WNF), and 331 (10%) had an unspecified illness. Human cases were reported from 619 counties in 37 states and DC; five states (Illinois [774 cases], Michigan [475], Ohio [409], Louisiana [319], and Indiana [202]) accounted for 2,179 (64%) cases. Four of these five states (Illinois [492], Michigan [437], Ohio [277], and Louisiana [202]) together with Texas [164] accounted for 1,572 (67%) reported WNME cases. Illness onset dates ranged from June 10 to November 4

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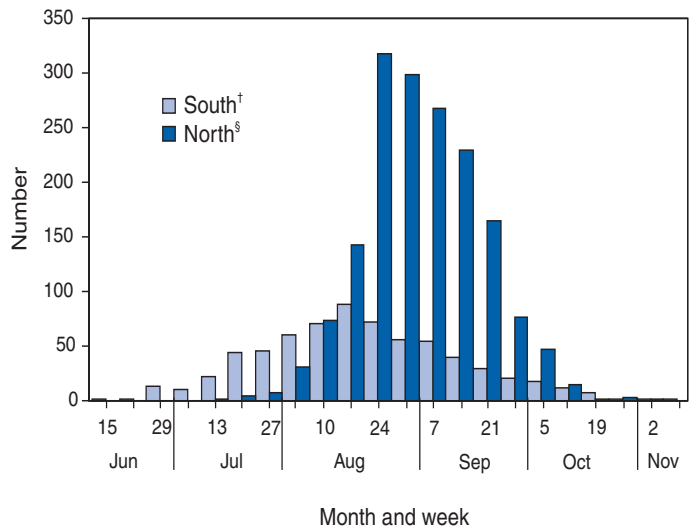
Notifiable Disease Morbidity and 122 Cities Mortality Data

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(Figure 2), and the epidemic peak of WNME cases occurred during the week ending August 24. Illness onset dates ranged from June 10 to November 4 in southern[†] states and from July 10 to October 28 in northern[§] states. The epidemic peak of WNME cases occurred 1 week earlier in southern states (88 cases during the week ending August 17) than in northern states (317 cases during the week ending August 24). For all reported human cases, the median age of infected persons was 55 years (range: 1 month–99 years); for persons with WNME, the median age was 59 years (range: 1 month–99 years); and for persons with WNF, the median age was 48 years (range: 1–93 years) (Table). Of the 2,354 persons with WNME, 199 (9%) died; two (0.3%) of 704 persons with

[†] *East South Central region*: Alabama, Kentucky, Mississippi, and Tennessee; *South Atlantic region*: Delaware, the District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; *West South Central region*: Arkansas, Louisiana, Oklahoma, and Texas; and *Pacific region*: California.
[§] *East North Central region*: Illinois, Indiana, Michigan, Ohio, and Wisconsin; *Mid-Atlantic region*: New Jersey, New York, and Pennsylvania; *Mountain region*: Colorado, Montana, and Wyoming; *New England region*: Connecticut, Massachusetts, and Rhode Island; *West North Central region*: Iowa, Kansas, Minnesota, Missouri, Nebraska, and South Dakota.

FIGURE 2. Number of human West Nile meningoencephalitis cases, by location and by week and month of illness onset — United States, June–November 2002*



* N=2,354 as of November 30.
[†] *East South Central region*: Alabama, Kentucky, Mississippi, and Tennessee; *South Atlantic region*: Delaware, the District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; *West South Central region*: Arkansas, Louisiana, Oklahoma, and Texas; and *Pacific region*: California.
[§] *East North Central region*: Illinois, Indiana, Michigan, Ohio, and Wisconsin; *Mid-Atlantic region*: New Jersey, New York, and Pennsylvania; *Mountain region*: Colorado, Montana, and Wyoming; *New England region*: Connecticut, Massachusetts, and Rhode Island; *West North Central region*: Iowa, Kansas, Minnesota, Missouri, Nebraska, and South Dakota.

TABLE. Number and percentage of reported human cases of West Nile virus disease, by clinical category and age group — United States, 2002*

Age group (yrs)	WNME [†]		WNF [§]		Unspecified	
	No.	(%)	No.	(%)	No.	(%)
0–9	31	(1)	12	(2)	6	(2)
10–19	58	(3)	18	(3)	5	(2)
20–29	138	(6)	52	(7)	22	(7)
30–39	265	(11)	121	(17)	31	(9)
40–49	355	(15)	184	(26)	76	(23)
50–59	334	(14)	118	(17)	58	(18)
60–69	349	(15)	101	(14)	56	(17)
70–79	489	(21)	67	(10)	41	(12)
80–89	295	(13)	27	(4)	28	(8)
90–99	33	(1)	3	(0)	4	(1)
Unknown	4	(0)	1	(0)	4	(1)
Total	2,354		704		331	
Median age (yrs)	59		48		53	

* As of November 30.

† West Nile meningoencephalitis.

§ West Nile fever.

WNV died; both were age >80 years. The median age of the 201 decedents was 78 years (range: 24–99 years).

Animal Surveillance

Of 2,289 counties reporting WNV activity, 1,719 (75%) counties in 42 states and DC reported 14,122 dead WNV-infected birds (7,719 crows, 4,948 blue jays, and 1,455 birds of 92 other species). Infected birds were collected from January 10 to November 7, and the peak number of infected birds occurred during the week ending August 10. Of 10,036 tested dead crows, 7,719 (77%) were WNV-positive compared with 6,403 (40%) of 16,132 birds from other species.

In 2002, a total of 9,144 (99.9%) of 9,157 reported non-human mammal cases occurred in equines, and 13 occurred in other species (dogs [three], squirrels [eight], and unspecified species [two]). Cases were reported from 1,374 counties in 38 states, with illness onset dates ranging from January 3 to November 8. Six states (Illinois [1,116 cases], Texas [1,050], Minnesota [945], Indiana [704], Kansas [675], and South Dakota [653]) accounted for 56% of reported nonhuman mammal cases.

A limited number of counties and states tested mosquitoes (639 counties in 37 states and DC), wild-caught birds (65 counties in eight states), and sentinel chickens (92 counties in eight states) as part of WNV surveillance. In 2002, approximately 1.3 million mosquitoes of 88 species were tested. WNV was detected in 4,943 pools (representing 26 species) from 315 counties in 28 states and DC. *Culex* mosquitoes (*Cx. pipiens*, *Cx. restuans*, *Cx. salinarius*, *Cx. quinquefasciatus*, and *Cx. tarsalis*) accounted for 2,717 (55%)

WNV-positive pools. WNV was reported for the first time in seven mosquito species (*Aedes aegypti*, *Anopheles walkeri*, *Cx. erraticus*, *Cx. tarsalis*, *Cx. territans*, *Culiseta inornata*, and *Psorophora ciliata*). Since 1999, a total of 36 WNV-infected mosquito species have been reported to ArboNET. In 2002, a total of 144 seropositive wild-caught birds were reported from 25 counties in four states (Indiana, Kansas, Louisiana, and Ohio), and 366 seroconverting captive sentinel birds were reported from 47 counties in seven states (Florida, Iowa, Nebraska, New York, North Carolina, Pennsylvania, and Texas).

First Indicators of WNV Activity

Among 2,289 counties reporting WNV activity in 2002, the first indicator of activity was a WNV-infected dead bird in 1,420 (62%) counties, an equine case in 660 (29%) counties, a human case in 84 (4%) counties, a seroconverting sentinel bird in 18 (0.8%) counties, an infected mosquito pool in 77 (3%) counties, and a seropositive wild-caught bird in six (0.2%) counties. In 24 counties, WNV activity was first detected on the same date by at least two surveillance mechanisms. In 531 (86%) of 619 counties reporting human cases, the first human illness onset was preceded by reports of a dead WNV-infected bird, infected equine, seroconverting sentinel chicken, or infected mosquito pool by a median of 33 days (range: 1–252 days). Of the 2,289 counties with WNV activity, 1,670 (73%) counties detected enzootic WNV activity but no human infections.

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Editorial Note: The 2002 WNV epidemic in the United States was the largest arboviral meningoencephalitis epidemic documented in the western hemisphere and the largest reported WNME epidemic. Epizootic and epidemic activity was most intense in the central United States, especially the Great Lakes region, and extended to the west coast. One human case reported in a Los Angeles County, California, resident with no known travel history (and with no other WNV activity found statewide) and a report of a WNV-infected horse in Island County, Washington, indicate the complete transcontinental movement of WNV within 3 years. In 2002, Canadian health authorities also documented WNV activity in five provinces (Manitoba, Nova Scotia, Ontario, Quebec, and Saskatchewan) (2). The 2002 WNV epidemic included the first documented cases of person-to-person WNV transmission through organ transplantation, blood and blood product transfusion, and possibly breastfeeding (3,4). Also in 2002,

intrauterine infection was reported (5), and a poliomyelitis-like syndrome was first recognized in the United States among some WNME patients with acute flaccid paralysis (AFP) (6).

Nationally, the epidemic peak of human WNV-associated illness during 2002 occurred in late August; human cases in southern states preceded those in northern states by approximately 1 month. In 2002, human cases also were reported from the New York City metropolitan area for the fourth consecutive year. This prolonged and continued widespread transmission to humans, including in areas of previous epidemic activity, underscores the importance of maintaining human surveillance programs from early June through November and the need to consider WNV disease in the differential diagnosis of encephalitis, meningitis, AFP, and nonspecific febrile illness before and after the late summer months in which arboviral outbreaks traditionally occur.

The 2002 WNV epidemic is similar to the 1975 St. Louis encephalitis (SLE) epidemic, which produced approximately 2,100 reported human illnesses and 170 fatalities (case-fatality ratio: 8%), primarily in the Mississippi and Ohio River basins (7). WNV and SLE virus are closely related; both are transmitted primarily by *Culex* mosquitoes and amplified in birds. However, SLE virus is not an avian or equine pathogen.

In 2002, the proportion of human cases reported with WNF was greater than in previous years. This change probably reflects increased testing and diagnosis of WNV infection in persons with milder illness. WNF patients tend to be younger than patients with WNME (8). The somewhat lower median age among persons with WNME reported in 2002 compared with those reported during 1999–2001 (59 years versus 66 years) could reflect the incorrect classification of some WNF cases as WNME cases. The median age among persons with fatal WNME reported in 2002 was similar to that in previous years. Although older persons are at higher risk for WNME and death, persons of any age might develop severe neurologic disease.

Bird- and horse-based surveillance are important tools for monitoring the geographic spread of WNV and for signaling WNV activity in an area before the recognition of human illnesses. The number of counties reporting WNV-infected dead birds in 2002 was five times greater than that in 2001, and the number of reported WNV-infected dead birds doubled (1). In 2002, crows, blue jays, and other members of the family Corvidae accounted for 90% of WNV-infected birds, and crows had the highest rate of WNV infection. State and local health department surveillance programs should continue to emphasize the collection and testing of dead corvids. Because noncorvid bird species were the first indicator of WNV

activity in 144 (6%) counties, surveillance programs should include these species when possible.

From 2001 to 2002, equine cases reported to ArboNET increased 12-fold, and equine transmission occurred over a longer season and in nine new states (1). In 2002, the geographic and temporal distribution of equine cases closely paralleled the human epidemic in the midwestern and north-central states, suggesting that horses, although unlikely to contribute to the transmission cycle for WNV (9), might be useful indicators of increased human risk in those areas.

The three *Culex* species that produced the most WNV-positive pools during 2002, *Cx. pipiens*, *Cx. quinquefasciatus*, and *Cx. restuans*, are among the most important WNV epizootic or epidemic vectors in the United States. During 1999–2002, an additional 33 mosquito species also were found infected with WNV. These include *Cx. nigripalpus*, the principal epidemic vector of SLE in Florida, and *Cx. tarsalis*, an important vector of SLE and western equine encephalitis in the western states. Although other species (e.g., *Ochlerotatus triseriatus*, *Ae. albopictus*, *Ae. aegypti*) might contribute to human WNV transmission, control of *Culex* mosquitoes continues to be the most important strategy to reduce the risk for WNV transmission to humans.

The ArboNET data summarized in this report probably underestimate the actual geographic distribution and intensity of WNV virus transmission in the United States for at least three reasons. First, although dead bird surveillance is important in monitoring WNV activity, only 27% of reported dead birds in 2002 were submitted for testing, compared with 50% in 2001. Many state and local health departments were overwhelmed by the large numbers of samples submitted for WNV testing and discontinued dead bird testing during the transmission season. Second, because data provided by the 54 ArboNET coordinators are derived primarily from local health unit surveillance efforts, which vary according to local capacity and priorities, some animal and human surveillance data might not yet be reported and confirmed. Finally, states might vary in their interpretation of and adherence to the national surveillance case definition of arboviral encephalitis/meningitis, and no standard national case definition for WNF exists.

The epidemic of 2002 underscores the continued need for intensive ecologic surveillance to detect early-season WNV activity. To decrease the risk for human WNV infection, the coordinated and phased public health response to detection of WNV activity in an area should include intensified mosquito-control activities that reduce the avian-mosquito amplification cycle. Prevention activities should continue to include 1) public education programs urging residential source

reduction and personal protective measures to reduce mosquito exposure; 2) development of long-term, community-level, integrated mosquito surveillance and control programs (10); and 3) high-priority emphasis on the control of *Culex* mosquitoes, especially in urban and suburban areas.

Acknowledgments

This report is based on data prepared by ArboNET surveillance coordinators in local and state health departments and ArboNET technical staff, Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, CDC.

References

1. CDC. West Nile virus activity—United States, 2001. *MMWR* 2002;51:497–501.
2. Health Canada. Population and Public Health Branch WNV surveillance updates, December 4, 2002. Available at http://www.hc-sc.gc.ca/pphb-dgspsp/wnv-vwn/mon_e.html#sitrep.
3. CDC. Update: investigations of West Nile virus infections in recipients of organ transplantation and blood transfusion—Michigan, 2002. *MMWR* 2002;51:879.
4. CDC. Possible West Nile virus transmission to an infant through breast feeding—Michigan, 2002. *MMWR* 2002;51:877–8.
5. CDC. Intrauterine West Nile virus infection—New York, 2002. *MMWR* 2002;51:1135–6.
6. CDC. Acute flaccid paralysis syndrome associated with West Nile virus infection—Mississippi and Louisiana, July–August 2002. *MMWR* 2002;51:825–8.
7. Creech WB. St. Louis encephalitis in the United States, 1975. *J Infect Dis* 1977;133:1014–6.
8. Campbell GL, Marfin AA, Lanciotti RS, Gubler DJ. West Nile virus. *Lancet Infect Dis* 2002;2:519–29.
9. Bunning ML, Bowen RA, Cropp CB, et al. Experimental infection of horses with West Nile virus. *Emerg Infect Dis* 2002;8:380–6.
10. Gubler DJ, Campbell GL, Nasci R, Komar N, Petersen L, Roehrig JT. West Nile virus in the United States: guidelines for detection, prevention, and control. *Viral Immunol* 2000;13:469–75.

Laboratory-Acquired West Nile Virus Infections — United States, 2002

West Nile virus (WNV), a mosquito-borne flavivirus introduced recently to North America, is a human, equine, and avian neuropathogen (1). The majority of human infections with WNV are mosquito-borne; however, laboratory-acquired infections with WNV and other arboviruses also occur (2–4). This report summarizes two recent cases of WNV infection in laboratory workers without other known risk factors who acquired infection through percutaneous inoculation. Laboratory workers handling fluids or tissues known or suspected to be WNV-infected should minimize their risk for exposure and should report injuries and illnesses of suspected occupational origin to their supervisor.

Case Reports

Case 1. In August 2002, a microbiologist working in a U.S. laboratory was performing a necropsy on a blue jay submitted as part of a state's WNV surveillance program. The microbiologist worked in a Class II laminar flow biosafety cabinet under biosafety level 2 (BSL-2) conditions (5) and lacerated a thumb while using a scalpel to remove the bird's brain. The wound, a superficial cut over the dorsal surface of the interphalangeal joint, was cleansed and bandaged. Four days after injury, the microbiologist had acute symptoms of headache, myalgias, and malaise followed by chills, sweats, dysesthesias, recurring hot flashes, swelling of the postauricular lymph nodes, and anorexia. Two days later, the microbiologist noted a maculopapular rash that began on the face; extended to the trunk, arms, and legs during the next 3 days; and then disappeared gradually. The microbiologist continued to work during illness and had intermittent chills, sweats, dysesthesias, and hot flashes for approximately 1 week before recovering fully. On the third day of illness (7 days post-injury), the microbiologist sought medical care from a physician and reported no history of recent mosquito bites, prolonged outdoor activities, or recent blood transfusion. On physical examination, the patient was afebrile with erythema on the cheeks, but the examination was otherwise normal. Serial serum samples taken from the patient and submitted to CDC for WNV serologic testing revealed evidence of an acute WNV infection. The initial specimen (collected 3 days after illness onset) was negative for WNV-specific IgM or neutralizing antibodies. Specimens collected 13 and 21 days after illness onset both were positive for WNV-specific IgM antibody; the latter specimen was positive for WNV-specific neutralizing antibody, with a titer of 160; the specimen collected 13 days after illness onset was not tested by neutralization. The brain of the blue jay tested positive at CDC for WNV RNA by real-time polymerase chain reaction (TaqMan[®]) using two primer/probe sets.

Case 2. In October 2002, a microbiologist working in a U.S. laboratory who was harvesting WNV-infected mouse brains in a Class II laminar flow biosafety cabinet under BSL-3 conditions (5) punctured a finger with a contaminated needle. The wound was cleansed and bandaged. The microbiologist's body temperature was measured several times each day, and 3 days after injury, the microbiologist had upper respiratory infection (URI) symptoms without fever or chills. The next day, URI symptoms continued with malaise, fatigue, chills, and a low-grade fever (100.9° F [38.3° C]). That evening, the patient took an over-the-counter cold medication. The next morning, the patient awoke without fever or chills but with continued URI symptoms and a

dry cough and hoarseness that persisted for >1 week, although the patient missed only 1 day of work. At no time did the patient notice a skin rash, an increase in the usual degree of joint pain, or a stiff neck. The patient reported no history of recent mosquito bites, prolonged outdoor activities, or recent blood transfusion. The patient had a history of exposure to multiple flaviviruses or flavivirus antigens (i.e., had had dengue fever and had received yellow fever and Japanese encephalitis vaccines). Serial serum samples taken and submitted to CDC for WNV serologic testing revealed evidence of an acute WNV infection. WNV-specific IgM antibody was absent from both the initial specimens (1 day after injury and 3 days before fever onset) and a specimen collected 2 days after fever onset. Anti-flaviviral IgG antibody was detected in both of these specimens by enzyme-linked immunosorbent assay (ELISA), but no change in the intensity of IgG activity was observed. A serum specimen collected 10 days after illness onset was positive for WNV-specific IgM antibody and showed a sharp increase in the intensity of anti-flaviviral IgG antibody by ELISA. Neutralizing antibody test results are pending.

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Editorial Note: This report documents two recent laboratory-acquired WNV infections in the United States. On the basis of the timing of the events described, WNV infection of the two microbiologists resulted from exposure through percutaneous inoculation in laboratories. Illnesses in both laboratory workers were mild and self-limited, which is typical of illnesses in WNV-infected persons (1). These cases confirm that laboratory workers are at risk for occupationally acquired WNV infection (2–4), including West Nile meningoencephalitis.

In the second case, although the presence of heterologous flavivirus antibodies did not prevent WNV infection, these heterologous antibodies might have provided some degree of cross-protection that moderated the clinical severity of the infection. Laboratory workers should not assume that immunity to other flaviviruses will protect them from WNV infection or its more severe clinical consequences (6).

During the 2002 WNV epidemic and epizootic in the United States (7), the number of laboratories and laboratory workers involved in arboviral diagnostic and reference activities has increased substantially. Therefore, the potential for laboratory-acquired WNV infections has increased. Laboratory-acquired arboviral infections are most likely

underreported, and few recent data are available (3,4). In 2001, a suspected case of laboratory-acquired WNV infection was reported in New York (8). Laboratory workers involved in necropsies or other procedures involving materials potentially infected with WNV should use every precaution to minimize their risk for exposure to fluids or tissues during handling, including standard droplet and contact precautions; using and disposing of needles, scalpels, and other sharp instruments safely; and minimizing the generation of aerosols.

The Subcommittee on Arbovirus Laboratory Safety of the American Committee on Arthropod-Borne Viruses recommends four biosafety levels for laboratories that handle arboviruses, comprising combinations of laboratory practices and techniques, safety equipment, and laboratory facilities (2). Laboratory investigations that involve handling of live WNV should be conducted under BSL-3 containment (2,9). However, because of concerns that strict BSL-3 containment for handling human or animal specimens in the clinical diagnostic setting would severely limit the number of laboratories capable of detecting WNV infections in a timely manner, BSL-2 facilities can, with modest modification of their procedures, achieve an acceptable level of safety for the conduct of certain routine diagnostic procedures involving live WNV, including bird necropsies (9,10).

Participating laboratory employees should receive training that reinforces awareness of potential occupational hazards and risks and that stresses the importance of timely reporting of all injuries and illnesses of suspected occupational origin. After unintentional laboratory incidents of potential exposure to WNV-infected materials, an exposed person should cleanse any wound or exposed skin immediately and thoroughly, receive first aid, and then report the incident to a supervisor, as was done in the two cases described in this report. No antivirals or other drugs are known to be effective in the prevention or treatment of WNV infection. A baseline serum specimen should be obtained and stored. If the worker has an illness within the 2 weeks after the exposure, prompt medical evaluation, consultation with public health authorities, and collection of additional serum samples for virologic and serologic analysis are recommended.

CDC encourages the reporting of all laboratory-acquired arboviral infections to local, state, and federal public health authorities, regardless of clinical manifestations. Additional information and consultation about WNV are available from CDC's Division of Vector-Borne Infectious Diseases, telephone 970-221-6400 or 970-266-3592 or at <http://www.cdc.gov/ncidod/dvbid/westnile>.

References

1. Campbell GL, Marfin AA, Lanciotti RS, Gubler DJ. West Nile virus. *Lancet Infect Dis* 2002;2:519–29.
2. Anonymous. Laboratory safety for arboviruses and certain other viruses of vertebrates: the Subcommittee on Arbovirus Laboratory Safety of the American Committee on Arthropod-Borne Viruses. *Am J Trop Med Hyg* 1980;291:359–81.
3. Pike RM. Laboratory-associated infections: summary and analysis of 3,921 cases. *Health Lab Sci* 1976;13:105–14.
4. Sewell DL. Laboratory-associated infections and biosafety. *Clin Microbiol Rev* 1995;8:389–405.
5. CDC. BMBL section III: laboratory biosafety level criteria. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC, Office of Health and Safety, 2000. Available at <http://www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4s3.htm>.
6. Monath TP. Jennerian vaccination against West Nile virus [Editorial]. *Am J Trop Med Hyg* 2002;66:113–4.
7. CDC. Provisional surveillance summary of the West Nile virus epidemic—United States, January–November 2002. *MMWR* 2002;51:1129–33.
8. New York State Department of Health. West Nile virus update—January 1, 2001–December 31, 2001. Available at <http://www.health.state.ny.us/nysdoh/westnile/update/2001/today.htm>.
9. CDC, National Institutes of Health. Biosafety in microbiological and biomedical laboratories. Atlanta, Georgia: U.S. Department of Health and Human Services, Public Health Service, CDC, National Institutes of Health, 2000. Available at <http://bmbi.od.nih.gov>.
10. CDC. Epidemic/epizootic West Nile virus in the United States: revised guidelines for surveillance, prevention, and control. Atlanta, Georgia: U.S. Department of Health and Human Services, Public Health Service, CDC, 2001. Available at <http://www.cdc.gov/ncidod/dvbid/westnile/resources/wnv-guidelines-apr-2001.pdf>.

Intrauterine West Nile Virus Infection — New York, 2002

West Nile virus (WNV), a mosquito-borne flavivirus and human neuropathogen, is epidemic in the United States (1). In 2002, newly recognized mechanisms of person-to-person WNV transmission were described, including possible transmission from mother to infant through breast milk (2,3). WNV has not been previously associated with intrauterine infection or adverse birth outcomes. This report describes a case of transplacental WNV transmission. Pregnant women should take precautions to reduce their risk for WNV or other arboviral infection and should undergo diagnostic testing when clinically appropriate.

On August 29, 2002, a previously healthy woman aged 20 years in the estimated 27th week of pregnancy was admitted to a New York hospital with a 2-day history of fever, severe headache, blurred vision, abdominal and back pain, and vomiting. On examination, she had a fever of 102.7° F (39.3° C); the fetal heart rate was elevated. A computerized tomographic scan of the patient's head, a fetal sonogram, and routine analyses of blood and amniocentesis fluid were normal. A urine

culture grew *Proteus mirabilis* and *Escherichia coli*. Intravenous antibiotics were administered.

Four days after admission, the fever had resolved, and the patient had pain and weakness of the legs. Neurologic examination indicated symmetric weakness of the legs and hyporeflexia of the legs and arms. No cranial nerve abnormalities were noted. Electromyography (EMG) was not completed. On September 14, despite persistent lower extremity paresis, she left the hospital against medical advice.

On September 16, the patient was readmitted following a fall. She was afebrile, but physical examination revealed weakness in both legs. Fetal monitoring results were normal. Serum was positive for IgG antibodies to rubella virus and herpes simplex virus (HSV), and laboratory tests showed no evidence of syphilis or infection with human immunodeficiency virus (HIV). Serum also was positive for flavivirus IgM and IgG by immunofluorescence assay. Additional serum and CSF specimens were obtained during the week ending October 12. Serum was positive for WNV-specific IgM antibodies. CSF analysis indicated lymphocytic pleocytosis (11 white blood cells/mm³, 87% lymphocytes, 8% monocytes, and 5% neutrophils), elevated protein (63 mg/dL), and the presence of WNV-specific IgM antibodies. Polymerase chain reaction (PCR) tests of CSF for WNV, enterovirus (EV), and HSV were negative. EMG studies indicated widespread involvement of the lower motor neurons or their proximal axons, with the legs affected more severely than the arms. A diagnosis of meningoencephalitis was made.

Approximately 5 weeks later, the patient delivered a live infant (estimated gestational age: 38 weeks). Serum obtained from the mother at the time of birth was positive for WNV-specific IgM and neutralizing antibodies. The infant's birth weight and general clinical examination were normal. An ophthalmologic examination revealed bilateral chorioretinitis, and MRI of the brain indicated severe cerebral abnormalities, including severe bilateral white-matter loss in the temporal and occipital lobes and cystic change in one temporal lobe consistent with focal cerebral destruction. Cord blood and infant heel-stick blood samples were positive for WNV-specific IgM and neutralizing antibodies. CSF was WNV-specific IgM antibody-positive but was contaminated with red blood cells. The presence of WNV-specific IgM antibody in the infant's serum and CSF confirmed intrauterine infection with WNV. Serum was cytomegalovirus (CMV) IgM antibody-negative but IgG-positive, and serologic tests were negative for lymphocytic choriomeningitis virus infection and toxoplasmosis. PCR tests of CSF for WNV, EV, and HSV were negative. Urine CMV culture was negative. Gross and histopathologic examinations of the placenta, umbilical cord,

and amniotic membranes were normal. The placenta was WNV PCR-positive at one of two reference laboratories. The umbilical cord tissue was WNV-positive and -equivocal by PCR, respectively, at the same two laboratories. Viral cultures of umbilical cord tissue were negative; viral cultures of CSF and placenta are pending.

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Editorial Note: On the basis of the presence of WNV-specific IgM in the mother and infant, this is the first report of transplacental transmission of WNV in humans. Intrauterine infections with Japanese encephalitis and dengue, two mosquito-borne flaviviruses closely related to WNV, have been associated with spontaneous abortion and severe dengue fever in the infant, respectively (4–7). Although the single case reported here demonstrates intrauterine WNV infection in an infant who had evidence of congenital abnormalities, it does not prove a causal relation between such an infection and these abnormalities.

Pregnant women should take precautions to reduce their risk for WNV and other arboviral infections by avoiding mosquitoes and by using protective clothing and repellents containing N,N-diethyl-m-toluamide (DEET) per manufacturers' directions. When WNV transmission is occurring in an area, pregnant women who have an illness that is clinically consistent with acute WNV infection should undergo appropriate diagnostic testing. Screening of asymptomatic pregnant women or newborns for evidence of WNV infection is not recommended because no specific treatment for this infection is available, and because WNV IgM antibody might persist for more than a year, tests of a single serum sample cannot accurately determine the timing of infection (8). CDC has initiated a voluntary registry to monitor birth outcomes among WNV-infected women. In the event of an adverse birth outcome, maternal and fetal or newborn samples should be submitted to a state public health laboratory or CDC for testing. Additional information and consultation about WNV are available from CDC's Division of Vector-Borne Infectious Diseases, telephone 970-221-6400 and 970-266-3592 or at <http://www.cdc.gov/ncidod/dvbid/westnile>.

References

1. CDC. Provisional surveillance summary of the West Nile virus epidemic — United States, January–November 2002. *MMWR* 2002;51:1129–33

2. CDC. Update: investigations of West Nile virus infections in recipients of organ transplantation and blood transfusion—Michigan, 2002. *MMWR* 2002;51:879.
3. CDC. Possible West Nile virus transmission to an infant through breastfeeding—Michigan, 2002. *MMWR* 2002;51:877–8.
4. Asha M, Tandon HO, Mathur KR, et al. Japanese encephalitis virus infection during pregnancy. *Indian J Med Res* 1985;81:9–12.
5. Charuvedi UC, Mathur A, Chandra SK, et al. Transplacental infection with Japanese encephalitis virus. *J Infect Dis* 1980;141:712–5.
6. Chye JK, Lim CT, Ng KB, et al. Vertical transmission of dengue. *Clin Infect Dis* 1997;25:1374–7.
7. Thaithumyanon P, Thisyakorn U, Deerojwong J, et al. Dengue infection complicated by severe hemorrhage and vertical transmission in a parturient woman. *Clin Infect Dis* 1994;18:248–9.
8. Roehrig JT, Nash D, Maldin B, et al. Persistence of virus-reactive serum IgM antibody in confirmed West Nile virus encephalitis cases. *Emerg Infect Dis* (in press).

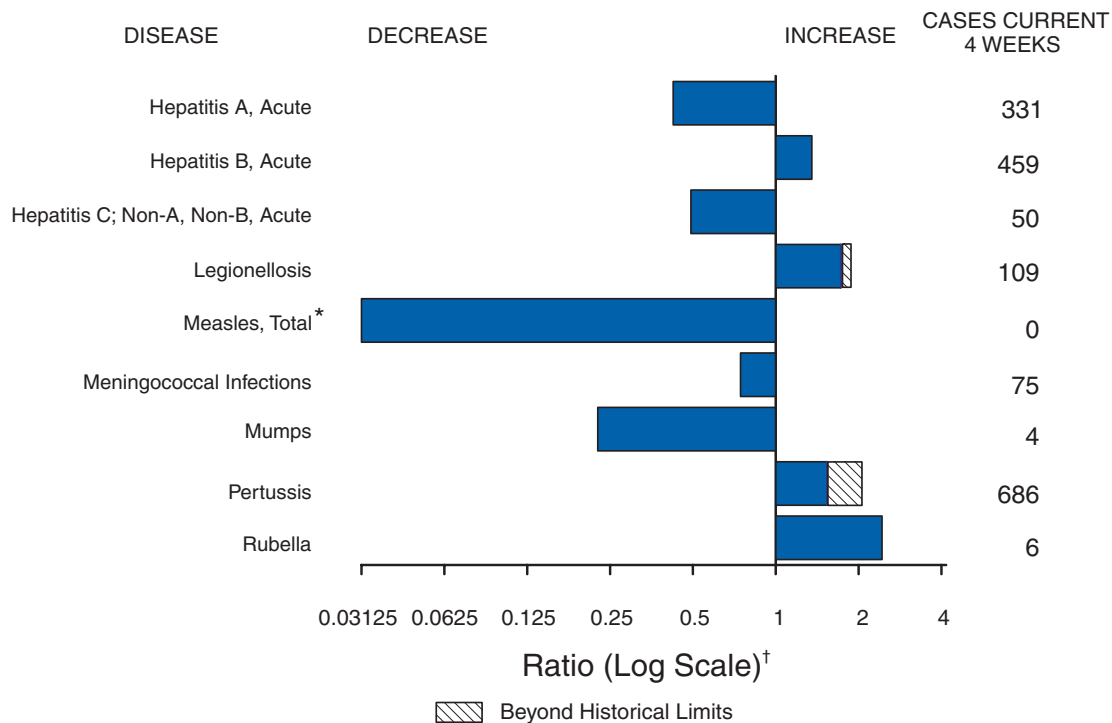
Notice to Readers

Additions to Terrorism Preparedness Compendium

To help readers locate information about terrorism preparedness, *MMWR* has established a compendium of terrorism-related recommendations and reports drawn from the *MMWR* archives. The recommendations and reports listed below have been added to the compendium and describe the last cases of naturally occurring smallpox, previous recommendations regarding smallpox vaccination, and adverse events related to the smallpox vaccine. The compendium is available at <http://www.cdc.gov/mmwr>.

- Recommendation of the Immunization Practices Advisory Committee: smallpox vaccine (1985).
- Investigation of a smallpox rumor — Mexico (1985).
- Contact spread of vaccinia from a National Guard vaccinee — Wisconsin (1985).
- Contact spread of vaccinia from a recently vaccinated marine — Louisiana (1984).
- Orthopox surveillance: post-smallpox eradication policy (1983).
- Vaccinia outbreak — Nevada (1983).
- Notice to readers: smallpox vaccine no longer available for civilians — United States (1983).
- Disseminated vaccinia infection in a college student — Tennessee (1982).
- Vaccinia necrosum after smallpox vaccination — Michigan (1982).
- Smallpox surveillance — worldwide (1978).
- Quarantine measures: smallpox — Stockholm, Sweden (1963).

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending December 14, 2002, with historical data



* No measles cases were reported for the current 4-week period yielding a ratio for week 50 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 December 14, 2002 (50th Week)*

	Cum. 2002	Cum. 2001		Cum. 2002	Cum. 2001
Anthrax	2	22	Encephalitis: West Nile†	1,750	57
Botulism: foodborne	13	33	Hansen disease (leprosy)†	69	70
infant	52	89	Hantavirus pulmonary syndrome†	16	8
other (wound & unspecified)	28	18	Hemolytic uremic syndrome, postdiarrheal†	183	183
Brucellosis†	74	124	HIV infection, pediatric§	163	190
Chancroid	67	36	Plague	1	2
Cholera	5	5	Poliomyelitis, paralytic	-	-
Cyclosporiasis†	155	143	Psittacosis†	17	24
Diphtheria	1	2	Q fever†	48	23
Ehrlichiosis: human granulocytic (HGE)†	363	219	Rabies, human	2	1
human monocytic (HME)†	164	115	Streptococcal toxic-shock syndrome†	84	75
other and unspecified	12	6	Tetanus	21	32
Encephalitis: California serogroup viral†	131	116	Toxic-shock syndrome	109	115
eastern equine†	7	8	Trichinosis	13	21
Powassan†	1	-	Tularemia†	58	128
St. Louis†	15	78	Yellow fever	1	-
western equine†	3	-			

-: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 November 24, 2002.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending December 14, 2002, and December 15, 2001 (50th Week)*

Reporting Area	AIDS		Chlamydia†		Cryptosporidiosis		Escherichia coli, Enterohemorrhagic			
	Cum. 2002§	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	O157:H7		Shiga Toxin Positive, Serogroup non-O157	
							Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	38,878	38,400	741,661	747,507	2,679	3,642	3,459	3,140	155	158
NEW ENGLAND	1,488	1,390	26,266	23,466	174	145	256	243	32	41
Maine	28	44	1,715	1,299	11	18	38	27	5	1
N.H.	35	37	1,529	1,330	29	16	32	36	-	3
Vt.	12	15	902	622	33	33	14	14	1	1
Mass.	754	694	10,483	9,936	62	53	113	113	9	10
R.I.	97	93	2,695	2,832	21	8	14	16	-	1
Conn.	562	507	8,942	7,447	18	17	45	37	17	25
MID. ATLANTIC	8,998	10,582	81,719	83,696	334	343	244	233	-	-
Upstate N.Y.	946	1,296	16,142	14,648	138	107	177	146	-	-
N.Y. City	5,290	6,169	25,921	28,649	124	118	16	16	-	-
N.J.	1,304	1,584	11,343	14,773	11	24	51	71	-	-
Pa.	1,458	1,533	28,313	25,626	61	94	N	N	-	-
E.N. CENTRAL	4,221	2,796	129,375	138,203	869	1,565	828	795	19	12
Ohio	766	531	30,399	36,537	120	175	151	224	15	10
Ind.	482	342	16,427	14,805	56	81	76	84	1	-
Ill.	2,094	1,251	35,843	41,794	88	481	171	169	-	-
Mich.	701	497	30,992	29,121	122	180	135	99	3	2
Wis.	178	175	15,714	15,946	483	648	295	219	-	-
W.N. CENTRAL	716	805	40,710	38,067	406	520	500	503	38	40
Minn.	149	130	9,350	8,002	213	179	164	209	33	30
Iowa	85	86	5,144	4,847	47	81	122	79	-	-
Mo.	337	394	14,560	13,519	32	51	69	66	N	N
N. Dak.	3	2	801	999	20	13	17	19	-	3
S. Dak.	10	23	2,128	1,736	31	8	40	43	2	6
Nebr.	64	77	2,456	3,100	47	184	54	60	3	1
Kans.	68	93	6,271	5,864	16	4	34	27	-	-
S. ATLANTIC	11,487	11,422	144,051	143,218	307	368	406	247	39	38
Del.	180	230	2,555	2,683	3	6	9	4	-	1
Md.	1,676	1,685	16,071	14,756	21	39	26	29	-	-
D.C.	769	777	3,251	3,169	5	13	1	-	-	-
Va.	816	954	16,646	17,377	27	26	63	50	10	6
W. Va.	80	93	2,203	2,274	2	2	9	10	-	-
N.C.	971	817	23,892	21,040	36	30	191	57	-	-
S.C.	792	633	11,311	14,842	6	7	5	23	-	-
Ga.	1,536	1,520	29,781	31,088	106	157	40	44	9	10
Fla.	4,667	4,713	38,341	35,989	101	88	62	30	20	21
E.S. CENTRAL	1,844	1,646	46,348	48,055	117	51	108	138	-	1
Ky.	288	315	8,454	8,634	9	5	30	64	-	1
Tenn.	764	519	15,203	14,084	54	14	46	44	-	-
Ala.	388	415	12,654	13,836	44	17	21	18	-	-
Miss.	404	397	10,037	11,501	10	15	11	12	-	-
W.S. CENTRAL	3,867	3,801	102,895	102,732	36	127	74	215	-	-
Ark.	223	188	6,865	7,121	8	9	12	16	-	-
La.	905	795	18,084	17,452	6	7	2	7	-	-
Okla.	181	214	10,484	10,312	16	15	23	34	-	-
Tex.	2,558	2,604	67,462	67,847	6	96	37	158	-	-
MOUNTAIN	1,319	1,291	46,252	44,893	156	236	357	291	19	20
Mont.	11	15	2,201	1,846	6	37	31	20	-	-
Idaho	28	19	2,420	1,945	29	22	50	75	8	5
Wyo.	8	4	899	800	9	7	15	10	2	2
Colo.	286	281	13,115	12,865	57	42	100	87	5	7
N. Mex.	81	141	5,870	5,940	19	30	12	16	3	6
Ariz.	559	489	14,199	13,880	17	9	34	30	1	-
Utah	63	107	2,680	2,873	15	82	87	35	-	-
Nev.	283	235	4,868	4,744	4	7	28	18	-	-
PACIFIC	4,937	4,667	124,045	125,177	280	287	686	475	8	6
Wash.	449	473	14,327	13,094	43	U	144	129	-	-
Oreg.	311	215	6,575	7,014	40	56	223	85	8	6
Calif.	4,039	3,865	95,411	98,596	194	227	270	238	-	-
Alaska	30	19	3,500	2,571	1	1	8	4	-	-
Hawaii	108	95	4,232	3,902	2	3	41	19	-	-
Guam	3	11	-	384	-	-	N	N	-	-
P.R.	1,045	1,111	1,997	2,635	-	-	-	2	-	-
V.I.	74	11	125	141	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	3	U	144	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 November 24, 2002.

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending December 14, 2002, and December 15, 2001 (50th Week)*

Reporting Area	<i>Escherichia coli</i> <i>Enterohemorrhagic</i>		Giardiasis	Gonorrhea		<i>Haemophilus influenzae</i> , Invasive			
	Shiga Toxin Positive, Not Serogrouped			Cum. 2002	Cum. 2001	All Ages, All Serotypes		Age <5 Years Serotype B	
	Cum. 2002	Cum. 2001				Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	37	19	16,430	314,111	345,837	1,405	1,415	26	22
NEW ENGLAND	1	1	1,604	7,346	6,685	123	108	-	1
Maine	-	-	209	140	141	2	2	-	-
N.H.	-	-	43	121	172	10	7	-	-
Vt.	1	1	143	93	74	7	4	-	-
Mass.	-	-	810	3,130	3,060	50	41	-	1
R.I.	-	-	156	906	812	10	7	-	-
Conn.	-	-	243	2,956	2,426	44	47	-	-
MID. ATLANTIC	-	3	3,552	37,651	41,997	249	218	6	3
Upstate N.Y.	-	-	1,199	8,332	8,577	111	76	2	-
N.Y. City	-	-	1,278	10,903	12,191	63	57	-	-
N.J.	-	-	350	6,511	8,342	48	46	-	-
Pa.	-	3	725	11,905	12,887	27	39	4	3
E.N. CENTRAL	13	7	3,172	63,444	72,563	201	264	4	2
Ohio	12	7	934	17,173	20,487	77	74	-	1
Ind.	-	-	-	7,104	6,737	42	46	2	-
Ill.	-	-	736	19,060	22,984	58	98	-	-
Mich.	1	-	890	14,250	16,470	16	13	2	-
Wis.	-	-	612	5,857	5,885	8	33	-	1
W.N. CENTRAL	4	4	1,971	15,903	16,342	69	74	1	1
Minn.	-	-	791	2,863	2,585	47	42	1	-
Iowa	-	-	304	1,229	1,263	1	-	-	-
Mo.	N	N	469	8,235	8,426	12	20	-	-
N. Dak.	2	4	28	47	54	-	7	-	-
S. Dak.	-	-	73	260	275	-	-	-	-
Nebr.	-	-	133	713	1,124	1	3	-	1
Kans.	2	-	173	2,556	2,615	8	2	-	-
S. ATLANTIC	1	-	2,705	81,103	88,900	330	351	4	1
Del.	-	-	51	1,526	1,652	-	-	-	-
Md.	-	-	110	8,604	8,942	85	86	2	-
D.C.	-	-	42	2,619	2,786	-	-	-	-
Va.	-	-	319	9,444	10,453	32	28	-	-
W. Va.	1	-	59	875	699	15	16	-	1
N.C.	-	-	-	15,145	15,872	31	46	-	-
S.C.	-	-	121	6,864	10,560	13	8	-	-
Ga.	-	-	747	16,361	17,295	68	98	-	-
Fla.	-	-	1,256	19,665	20,641	86	69	2	-
E.S. CENTRAL	8	3	375	26,643	31,272	64	75	1	-
Ky.	8	3	-	3,644	3,485	6	2	-	-
Tenn.	-	-	175	8,880	9,420	33	44	-	-
Ala.	-	-	200	8,262	10,811	16	27	1	-
Miss.	-	-	-	5,857	7,556	9	2	-	-
W.S. CENTRAL	4	-	240	46,130	50,493	59	56	2	2
Ark.	-	-	165	4,341	4,484	1	2	-	-
La.	-	-	5	11,176	12,030	9	9	-	-
Okla.	-	-	70	4,519	4,667	45	43	-	-
Tex.	4	-	-	26,094	29,312	4	2	2	2
MOUNTAIN	6	1	1,613	10,176	10,058	184	142	5	8
Mont.	-	-	92	108	101	-	-	-	-
Idaho	-	-	130	93	74	2	2	-	-
Wyo.	-	-	29	59	76	1	1	-	-
Colo.	6	1	559	3,242	3,091	34	38	-	-
N. Mex.	-	-	135	1,226	993	26	26	-	1
Ariz.	-	-	192	3,566	3,785	91	54	3	4
Utah	-	-	321	277	210	18	9	1	1
Nev.	-	-	155	1,605	1,728	12	12	1	2
PACIFIC	-	-	1,198	25,715	27,527	126	127	3	4
Wash.	-	-	398	2,794	2,862	4	7	2	-
Oreg.	-	-	439	857	1,089	62	36	-	-
Calif.	-	-	168	20,773	22,569	22	55	1	4
Alaska	-	-	106	580	421	2	6	-	-
Hawaii	-	-	87	711	586	36	23	-	-
Guam	-	-	-	-	47	-	-	-	-
P.R.	-	-	38	292	575	1	2	-	-
V.I.	-	-	-	31	35	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	1	14	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 December 14, 2002, and December 15, 2001 (50th Week)*

Reporting Area	<i>Haemophilus influenzae</i> , Invasive				Hepatitis (Viral, Acute), By Type					
	Age <5 Years				A		B		C; Non-A, Non-B	
	Non-Serotype B		Unknown Serotype		Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001						
UNITED STATES	231	234	15	28	7,859	9,959	6,492	6,988	3,395	3,724
NEW ENGLAND	14	15	-	-	280	715	267	138	23	33
Maine	-	-	-	-	8	11	14	5	-	-
N.H.	-	1	-	-	11	18	22	16	-	-
Vt.	-	-	-	-	3	16	5	5	13	7
Mass.	7	7	-	-	136	369	129	37	9	26
R.I.	-	-	-	-	32	72	30	28	1	-
Conn.	7	7	-	-	90	229	67	47	-	-
MID. ATLANTIC	28	37	-	3	1,038	1,250	1,541	1,330	1,792	1,297
Upstate N.Y.	12	10	-	1	178	265	138	125	69	29
N.Y. City	8	13	-	-	505	435	817	628	-	-
N.J.	5	6	-	-	152	278	361	277	1,687	1,184
Pa.	3	8	-	2	203	272	225	300	36	84
E.N. CENTRAL	36	39	1	2	1,031	1,170	678	907	105	157
Ohio	9	13	1	-	323	246	116	90	4	9
Ind.	8	6	-	1	46	96	56	48	-	1
Ill.	12	14	-	-	262	426	146	151	13	12
Mich.	5	-	-	1	222	323	317	573	84	135
Wis.	2	6	-	-	178	79	43	45	4	-
W.N. CENTRAL	7	6	3	6	295	380	219	218	731	1,096
Minn.	6	4	1	2	42	41	35	31	1	12
Iowa	-	-	-	-	80	35	19	22	1	-
Mo.	-	-	2	4	81	84	115	118	710	1,068
N. Dak.	-	1	-	-	3	3	5	2	-	-
S. Dak.	-	-	-	-	3	3	2	1	1	-
Nebr.	1	1	-	-	17	36	22	30	13	8
Kans.	-	-	-	-	69	178	21	14	5	8
S. ATLANTIC	42	46	2	7	2,243	2,500	1,490	1,508	189	106
Del.	-	-	-	-	13	16	7	29	5	11
Md.	4	8	-	2	293	278	120	136	8	9
D.C.	-	-	-	-	75	60	21	13	-	-
Va.	5	5	-	-	152	133	193	171	16	-
W. Va.	1	1	1	1	22	27	18	25	3	9
N.C.	3	2	-	4	203	236	216	208	26	21
S.C.	2	1	-	-	62	73	117	29	4	6
Ga.	12	20	-	-	386	908	277	418	38	-
Fla.	15	9	1	-	1,037	769	521	479	89	50
E.S. CENTRAL	15	13	1	4	250	401	360	469	191	187
Ky.	2	-	-	1	41	127	50	54	4	11
Tenn.	8	7	-	2	113	164	129	240	33	64
Ala.	3	5	1	1	39	73	101	86	10	4
Miss.	2	1	-	-	57	37	80	89	144	108
W.S. CENTRAL	14	9	-	-	578	802	578	810	198	664
Ark.	-	1	-	-	65	69	92	99	9	13
La.	2	2	-	-	68	86	98	119	67	149
Okla.	10	6	-	-	49	110	44	97	5	4
Tex.	2	-	-	-	396	537	344	495	117	498
MOUNTAIN	50	25	7	1	536	704	582	458	61	55
Mont.	-	-	-	-	13	12	10	3	1	1
Idaho	1	-	-	-	30	55	7	11	1	2
Wyo.	-	-	-	-	3	7	17	3	5	8
Colo.	3	3	-	-	74	87	75	102	15	9
N. Mex.	6	11	1	1	29	40	144	133	1	12
Ariz.	31	8	5	-	275	370	204	135	4	9
Utah	5	3	-	-	64	66	60	23	4	3
Nev.	4	-	1	-	48	67	65	48	30	11
PACIFIC	25	44	1	5	1,608	2,037	777	1,150	105	129
Wash.	2	4	-	2	145	152	68	141	25	23
Oreg.	5	7	-	-	66	101	120	162	16	15
Calif.	13	31	1	1	1,385	1,754	573	818	64	91
Alaska	2	1	-	-	10	14	5	9	-	-
Hawaii	3	1	-	2	2	16	11	20	-	-
Guam	-	-	-	-	-	2	-	-	-	-
P.R.	-	1	-	-	96	226	84	260	-	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 December 14, 2002, and December 15, 2001 (50th 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	1,147	1,064	568	581	17,473	14,813	1,199	1,414	36†	114§
NEW ENGLAND	107	73	58	56	5,958	4,429	66	100	-	5
Maine	5	8	5	2	111	-	6	5	-	-
N.H.	7	12	4	4	244	113	7	2	-	-
Vt.	36	5	3	3	35	18	4	1	-	1
Mass.	35	21	31	30	1,297	1,157	27	52	-	3
R.I.	9	13	1	2	335	493	7	13	-	-
Conn.	15	14	14	15	3,936	2,648	15	27	-	1
MID. ATLANTIC	314	255	160	105	9,446	8,063	320	421	7	20
Upstate N.Y.	102	67	56	27	4,887	3,500	44	63	1	4
N.Y. City	60	43	34	25	168	62	206	247	6	7
N.J.	28	24	32	20	1,716	2,006	36	65	-	1
Pa.	124	121	38	33	2,675	2,495	34	46	-	8
E.N. CENTRAL	261	308	79	85	108	716	130	170	3	10
Ohio	119	140	26	15	75	43	24	26	1	3
Ind.	24	21	12	8	20	24	14	16	2	4
Ill.	-	24	12	24	-	31	30	69	-	3
Mich.	84	79	22	24	13	21	46	39	-	-
Wis.	34	44	7	14	U	597	16	20	-	-
W.N. CENTRAL	61	47	19	21	456	393	56	37	3	5
Minn.	17	9	5	3	359	318	17	6	1	3
Iowa	12	8	2	2	41	35	4	9	-	-
Mo.	17	21	8	10	40	34	15	14	2	2
N. Dak.	1	1	1	-	1	-	1	-	-	-
S. Dak.	4	3	1	-	2	-	1	-	-	-
Nebr.	10	4	1	1	6	4	5	2	-	-
Kans.	-	1	1	5	7	2	13	6	-	-
S. ATLANTIC	216	180	78	78	1,249	936	318	283	4	5
Del.	10	12	-	2	177	152	4	2	-	-
Md.	52	32	20	15	660	576	107	110	-	3
D.C.	6	8	-	-	21	16	20	13	-	-
Va.	30	28	7	13	149	116	32	49	-	1
W. Va.	N	N	-	5	17	13	3	1	-	-
N.C.	12	11	6	6	127	41	22	19	-	-
S.C.	9	14	8	5	20	5	7	8	-	-
Ga.	17	12	11	16	1	-	46	44	2	1
Fla.	80	63	26	16	77	17	77	37	2	-
E.S. CENTRAL	47	57	20	22	49	69	20	36	12	2
Ky.	21	12	4	7	22	23	7	14	-	2
Tenn.	18	28	11	8	24	30	3	12	-	-
Ala.	8	13	4	7	3	9	5	6	12	-
Miss.	-	4	1	-	-	7	5	4	-	-
W.S. CENTRAL	24	27	20	34	40	84	22	86	1	1
Ark.	-	-	-	1	3	1	2	3	-	-
La.	4	7	-	-	4	8	4	6	-	-
Okla.	3	3	9	2	-	-	10	3	-	-
Tex.	17	17	11	31	33	75	6	74	1	1
MOUNTAIN	50	56	30	38	19	13	48	63	2	2
Mont.	3	-	-	-	-	-	2	3	-	-
Idaho	2	3	2	1	4	5	-	3	-	1
Wyo.	1	3	-	2	2	1	-	1	-	-
Colo.	8	16	7	10	1	-	23	24	-	-
N. Mex.	2	3	3	7	1	1	3	3	-	-
Ariz.	14	20	14	9	3	2	12	16	-	1
Utah	15	7	3	2	7	1	5	4	1	-
Nev.	5	4	1	7	1	3	3	9	1	-
PACIFIC	67	61	104	142	148	110	219	218	4	64
Wash.	7	10	8	10	10	7	23	15	-	15
Oreg.	N	N	9	12	16	13	11	17	-	3
Calif.	59	45	79	114	119	88	175	172	3	39
Alaska	-	1	-	-	3	2	2	1	-	-
Hawaii	1	5	8	6	N	N	8	13	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 36 cases reported, 23 were indigenous and 13 were imported from another country.

§ Of 114 cases reported, 60 were indigenous and 54 were imported from another country.

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending December 14, 2002, and December 15, 2001 (50th 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	1,555	2,191	235	239	7,611	5,702	6,017	6,819
NEW ENGLAND	87	107	7	2	715	658	886	725
Maine	8	6	-	-	17	22	59	67
N.H.	14	14	4	-	57	28	48	21
Vt.	4	6	-	-	146	75	89	61
Mass.	41	56	2	2	456	506	295	273
R.I.	5	6	-	-	13	6	72	70
Conn.	15	19	1	-	26	21	323	233
MID. ATLANTIC	151	244	25	27	482	351	1,127	1,282
Upstate N.Y.	44	68	6	3	352	138	681	766
N.Y. City	23	42	2	12	13	57	23	37
N.J.	27	43	-	4	1	23	182	193
Pa.	57	91	17	8	116	133	241	286
E.N. CENTRAL	202	347	38	27	902	835	148	158
Ohio	74	91	14	1	420	305	39	52
Ind.	32	41	2	3	145	90	32	15
Ill.	36	83	14	16	154	102	31	24
Mich.	44	81	7	5	58	146	46	47
Wis.	16	51	1	2	125	192	-	20
W.N. CENTRAL	149	164	17	16	713	426	433	358
Minn.	35	26	4	5	356	188	34	46
Iowa	26	31	1	1	143	88	77	81
Mo.	49	56	5	4	136	103	50	40
N. Dak.	3	6	1	-	3	5	36	37
S. Dak.	2	5	-	-	6	4	79	56
Nebr.	26	25	-	1	8	7	-	4
Kans.	8	15	6	5	61	31	157	94
S. ATLANTIC	269	332	23	42	387	264	2,463	2,395
Del.	7	6	-	-	4	-	53	30
Md.	9	41	5	8	59	50	352	491
D.C.	-	-	-	-	2	1	-	-
Va.	41	40	4	8	140	56	498	478
W. Va.	4	14	-	-	32	4	169	137
N.C.	32	62	2	5	43	73	697	561
S.C.	30	32	3	7	43	33	140	111
Ga.	28	53	2	9	14	23	375	389
Fla.	118	84	7	5	50	24	179	198
E.S. CENTRAL	88	140	13	9	250	195	170	203
Ky.	15	27	3	3	93	92	27	29
Tenn.	36	60	2	1	114	61	106	106
Ala.	23	34	3	-	34	37	33	64
Miss.	14	19	5	5	9	5	4	4
W.S. CENTRAL	187	322	12	14	1,562	745	228	1,083
Ark.	23	23	-	-	488	230	8	-
La.	38	76	1	2	7	12	-	9
Okla.	22	31	-	-	66	31	118	60
Tex.	104	192	11	12	1,001	472	102	1,014
MOUNTAIN	93	96	19	15	1,266	1,368	290	253
Mont.	3	4	-	1	9	36	19	38
Idaho	5	8	1	1	148	170	38	28
Wyo.	-	5	-	2	11	1	18	28
Colo.	24	37	2	3	423	361	59	-
N. Mex.	4	11	1	2	183	136	7	15
Ariz.	31	16	1	1	340	549	125	128
Utah	6	8	8	1	104	76	13	15
Nev.	20	7	6	4	48	39	11	1
PACIFIC	329	439	81	87	1,334	860	272	362
Wash.	63	63	-	2	439	164	-	-
Oreg.	45	59	N	N	188	52	13	4
Calif.	208	301	65	44	685	588	235	317
Alaska	4	3	-	1	5	15	24	41
Hawaii	9	13	16	40	17	41	-	-
Guam	-	-	-	-	-	-	-	-
P.R.	5	8	-	1	3	-	49	96
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 December 14, 2002, and December 15, 2001 (50th Week)*

Reporting Area	Rocky Mountain Spotted Fever		Rubella				Salmonellosis	
	Cum. 2002	Cum. 2001	Rubella		Congenital Rubella		Cum. 2002	Cum. 2001
			Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001		
UNITED STATES	957	587	13	21	3	3	39,660	38,434
NEW ENGLAND	9	3	-	-	-	-	2,105	2,265
Maine	-	-	-	-	-	-	144	163
N.H.	-	1	-	-	-	-	137	161
Vt.	-	-	-	-	-	-	73	80
Mass.	5	2	-	-	-	-	1,150	1,299
R.I.	4	-	-	-	-	-	163	139
Conn.	-	-	-	-	-	-	438	423
MID. ATLANTIC	40	32	1	8	-	-	4,992	5,055
Upstate N.Y.	9	2	1	1	-	-	1,510	1,194
N.Y. City	9	2	-	6	-	-	1,408	1,284
N.J.	2	9	-	1	-	-	712	1,151
Pa.	20	19	-	-	-	-	1,362	1,426
E.N. CENTRAL	19	16	1	2	-	1	5,130	4,822
Ohio	13	2	-	-	-	1	1,371	1,304
Ind.	3	1	-	-	-	-	495	505
Ill.	-	12	-	2	-	-	1,556	1,349
Mich.	3	1	1	-	-	-	851	853
Wis.	-	-	-	-	-	-	857	811
W.N. CENTRAL	99	68	-	3	-	-	2,566	2,223
Minn.	-	-	-	-	-	-	577	618
Iowa	3	2	-	1	-	-	513	328
Mo.	91	62	-	1	-	-	846	611
N. Dak.	-	1	-	-	-	-	43	59
S. Dak.	1	2	-	-	-	-	105	146
Nebr.	4	1	-	-	-	-	150	153
Kans.	-	-	-	1	-	-	332	308
S. ATLANTIC	495	299	6	5	-	1	10,871	9,193
Del.	4	12	1	-	-	-	94	93
Md.	57	39	-	1	-	-	920	788
D.C.	2	1	-	-	-	-	76	81
Va.	42	29	-	-	-	1	1,214	1,262
W. Va.	2	-	-	-	-	-	149	139
N.C.	285	174	-	-	-	-	1,509	1,347
S.C.	69	31	-	2	-	-	795	862
Ga.	19	9	-	-	-	-	1,671	1,671
Fla.	15	4	5	2	-	-	4,443	2,950
E.S. CENTRAL	110	115	-	-	1	-	3,168	2,647
Ky.	5	2	-	-	-	-	387	368
Tenn.	81	79	-	-	1	-	797	641
Ala.	20	18	-	-	-	-	861	738
Miss.	4	16	-	-	-	-	1,123	900
W.S. CENTRAL	163	42	1	1	1	-	3,496	4,925
Ark.	97	9	-	-	-	-	1,037	898
La.	-	2	-	-	1	-	770	815
Okla.	61	31	-	-	-	-	492	471
Tex.	5	-	1	1	-	-	1,197	2,741
MOUNTAIN	14	11	1	-	-	-	2,182	2,146
Mont.	1	1	-	-	-	-	89	73
Idaho	-	1	-	-	-	-	159	136
Wyo.	5	2	-	-	-	-	105	61
Colo.	2	2	-	-	-	-	591	578
N. Mex.	1	1	-	-	-	-	314	273
Ariz.	-	-	-	-	-	-	545	619
Utah	-	3	1	-	-	-	196	215
Nev.	5	1	-	-	-	-	183	191
PACIFIC	8	1	3	2	1	1	5,150	5,158
Wash.	-	-	-	-	-	-	493	532
Oreg.	3	1	-	-	-	-	342	270
Calif.	5	-	3	1	-	-	3,967	3,960
Alaska	-	-	-	-	-	-	77	48
Hawaii	-	-	-	1	1	1	271	348
Guam	-	-	-	-	-	-	-	24
P.R.	-	-	-	3	-	-	201	892
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 December 14, 2002, and December 15, 2001 (50th 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	18,418	18,942	3,827	3,472	2,126	2,511	274	416
NEW ENGLAND	326	301	173	219	18	124	3	47
Maine	12	6	20	12	-	-	-	-
N.H.	13	7	35	N	-	-	N	N
Vt.	1	7	10	16	5	9	2	1
Mass.	184	204	93	66	N	N	N	N
R.I.	17	23	15	13	13	4	1	4
Conn.	99	54	-	112	-	111	-	42
MID. ATLANTIC	1,400	1,450	626	637	118	166	73	111
Upstate N.Y.	339	463	281	253	92	159	71	111
N.Y. City	431	405	145	162	U	U	U	U
N.J.	386	266	136	138	N	N	N	N
Pa.	244	316	64	84	26	7	2	-
E.N. CENTRAL	1,794	4,293	735	761	242	173	118	126
Ohio	661	2,872	202	192	78	3	29	-
Ind.	104	220	48	60	159	170	63	59
Ill.	672	606	196	250	2	-	-	67
Mich.	185	299	288	208	3	-	N	N
Wis.	172	296	1	51	N	N	26	-
W.N. CENTRAL	978	1,906	238	362	424	159	57	62
Minn.	221	420	125	171	292	72	57	53
Iowa	123	358	-	-	N	N	N	N
Mo.	193	306	42	72	5	11	-	-
N. Dak.	16	21	3	17	1	6	-	9
S. Dak.	156	627	13	12	1	4	-	-
Nebr.	179	100	18	39	29	25	N	N
Kans.	90	74	37	51	96	41	N	N
S. ATLANTIC	6,911	3,011	716	563	1,073	1,326	8	9
Del.	384	17	2	4	3	6	N	N
Md.	1,200	151	141	N	N	N	N	N
D.C.	58	54	9	22	54	11	1	4
Va.	986	513	71	78	N	N	N	N
W. Va.	12	8	19	20	46	40	7	5
N.C.	550	352	113	139	N	N	U	U
S.C.	120	247	35	13	185	272	N	N
Ga.	1,299	666	116	180	182	414	N	N
Fla.	2,302	1,003	210	107	603	583	N	N
E.S. CENTRAL	1,469	1,686	108	113	124	233	-	-
Ky.	194	801	18	38	17	26	N	N
Tenn.	128	113	90	75	107	206	N	N
Ala.	810	208	-	-	-	1	N	N
Miss.	337	564	-	-	-	-	-	-
W.S. CENTRAL	1,718	2,870	116	315	85	281	11	61
Ark.	194	559	8	-	11	21	-	-
L.a.	412	243	-	1	73	260	4	61
Okla.	570	100	47	46	N	N	7	-
Tex.	542	1,968	61	268	N	N	-	-
MOUNTAIN	909	964	575	418	42	45	4	-
Mont.	4	8	-	-	-	-	-	-
Idaho	17	40	11	7	N	N	N	N
Wyo.	9	7	7	12	10	9	-	-
Colo.	210	242	140	157	-	-	-	-
N. Mex.	221	119	107	89	31	34	-	-
Ariz.	362	417	279	150	-	-	N	N
Utah	39	61	31	3	-	-	4	-
Nev.	47	70	-	-	1	2	-	-
PACIFIC	2,913	2,461	540	84	-	4	-	-
Wash.	174	209	65	-	-	-	N	N
Oreg.	116	112	N	N	N	N	N	N
Calif.	2,553	2,076	378	-	N	N	N	N
Alaska	6	7	-	-	-	-	N	N
Hawaii	64	57	97	84	-	4	-	-
Guam	-	49	-	1	-	-	-	-
P.R.	8	20	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 December 14, 2002, and December 15, 2001 (50th 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	6,114	5,828	345	477	11,440	13,500	255	348
NEW ENGLAND	134	65	1	8	386	441	14	18
Maine	2	1	-	3	20	20	-	1
N.H.	8	1	-	-	17	16	-	2
Vt.	2	3	-	-	6	5	-	-
Mass.	90	40	1	3	221	229	8	12
R.I.	6	9	-	-	35	60	-	-
Conn.	26	11	-	2	87	111	6	3
MID. ATLANTIC	666	514	69	72	2,023	2,210	61	111
Upstate N.Y.	32	18	12	5	283	343	9	15
N.Y. City	413	272	23	32	1,029	1,098	32	48
N.J.	146	132	33	35	469	486	16	38
Pa.	75	92	1	-	242	283	4	10
E.N. CENTRAL	1,063	1,029	61	67	1,146	1,387	19	34
Ohio	164	76	4	2	156	269	7	5
Ind.	70	149	1	13	117	107	2	2
Ill.	330	384	32	42	594	643	1	18
Mich.	471	397	24	6	238	290	4	5
Wis.	28	23	-	4	41	78	5	4
W.N. CENTRAL	103	98	-	9	512	513	9	16
Minn.	53	33	-	2	216	214	3	7
Iowa	2	4	-	-	30	34	-	-
Mo.	27	25	-	5	126	137	2	9
N. Dak.	-	-	-	-	4	3	-	-
S. Dak.	-	1	-	-	11	13	-	-
Nebr.	3	10	-	-	23	32	4	-
Kans.	18	25	-	2	102	80	-	-
S. ATLANTIC	1,649	1,920	78	111	2,406	2,606	40	47
Del.	11	14	-	-	15	15	-	1
Md.	201	256	14	4	266	230	8	10
D.C.	64	41	1	2	-	51	-	-
Va.	66	102	1	5	279	266	7	11
W. Va.	2	4	-	-	28	28	-	-
N.C.	269	431	19	14	369	387	2	3
S.C.	122	229	11	21	147	196	-	-
Ga.	346	379	10	23	393	481	4	12
Fla.	568	464	22	42	909	952	19	10
E. S. CENTRAL	441	639	22	38	703	801	4	1
Ky.	87	46	3	1	124	122	4	-
Tenn.	161	318	11	23	276	287	-	1
Ala.	150	137	4	5	200	256	-	-
Miss.	43	138	4	9	103	136	-	-
W. S. CENTRAL	820	739	69	80	1,508	1,985	6	18
Ark.	33	46	2	9	119	150	-	-
La.	147	173	-	-	-	115	-	-
Okla.	72	59	3	6	139	148	2	-
Tex.	568	461	64	65	1,250	1,572	4	18
MOUNTAIN	293	227	15	34	355	537	10	9
Mont.	-	-	-	-	6	14	-	1
Idaho	9	1	-	-	9	7	-	-
Wyo.	-	1	-	-	3	3	-	-
Colo.	46	22	1	1	56	124	5	1
N. Mex.	31	17	-	2	28	53	1	-
Ariz.	186	168	14	31	208	221	-	2
Utah	8	10	-	-	31	33	2	1
Nev.	13	8	-	-	14	82	2	4
PACIFIC	945	597	30	58	2,401	3,020	92	94
Wash.	59	50	2	-	228	225	6	6
Oreg.	26	13	1	-	103	114	2	8
Calif.	852	522	26	58	1,886	2,488	79	76
Alaska	-	-	-	-	48	50	-	1
Hawaii	8	12	1	-	136	143	5	3
Guam	-	11	-	1	-	63	-	3
P.R.	227	262	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 December 14, 2002 (50th Week)

Reporting Area	All Causes, By Age (Years)						P&I [†] Total	Reporting Area	All Causes, By Age (Years)						P&I [†] Total
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	457	312	105	27	10	3	49	S. ATLANTIC	1,343	865	287	107	39	44	66
Boston, Mass.	143	91	32	13	7	-	13	Atlanta, Ga.	157	76	42	19	9	11	4
Bridgeport, Conn.	45	35	8	2	-	-	6	Baltimore, Md.	141	82	30	18	7	4	7
Cambridge, Mass.	13	8	4	1	-	-	3	Charlotte, N.C.	172	119	30	12	1	10	15
Fall River, Mass.	19	17	2	-	-	-	4	Jacksonville, Fla.	200	130	47	15	5	2	12
Hartford, Conn.	U	U	U	U	U	U	U	Miami, Fla.	111	77	27	5	1	1	4
Lowell, Mass.	24	13	8	2	1	-	2	Norfolk, Va.	55	40	6	3	1	5	3
Lynn, Mass.	17	13	3	1	-	-	1	Richmond, Va.	64	34	10	9	4	7	2
New Bedford, Mass.	39	30	8	1	-	-	6	Savannah, Ga.	53	33	15	4	-	1	2
New Haven, Conn.	29	19	6	1	2	1	2	St. Petersburg, Fla.	68	47	13	8	-	-	5
Providence, R.I.	U	U	U	U	U	U	U	Tampa, Fla.	223	169	37	8	7	2	10
Somerville, Mass.	5	4	1	-	-	-	-	Washington, D.C.	99	58	30	6	4	1	2
Springfield, Mass.	34	20	12	1	-	1	4	Wilmington, Del.	U	U	U	U	U	U	U
Waterbury, Conn.	34	25	6	2	-	1	1	E.S. CENTRAL	1,012	693	192	76	24	27	90
Worcester, Mass.	55	37	15	3	-	-	7	Birmingham, Ala.	204	146	38	12	5	3	22
MID. ATLANTIC	2,440	1,704	499	152	48	36	128	Chattanooga, Tenn.	82	58	11	9	-	4	2
Albany, N.Y.	62	49	6	3	2	2	9	Knoxville, Tenn.	131	95	26	5	5	-	8
Allentown, Pa.	20	16	3	-	-	1	3	Lexington, Ky.	93	65	16	5	3	4	11
Buffalo, N.Y.	94	61	25	3	4	1	12	Memphis, Tenn.	187	115	41	19	5	7	16
Camden, N.J.	24	17	3	4	-	-	2	Mobile, Ala.	91	64	15	9	1	2	4
Elizabeth, N.J.	30	21	7	2	-	-	-	Montgomery, Ala.	48	34	8	5	1	-	12
Erie, Pa.	59	50	4	2	2	1	-	Nashville, Tenn.	176	116	37	12	4	7	15
Jersey City, N.J.	47	29	12	5	1	-	-	W.S. CENTRAL	1,625	1,062	326	142	51	44	96
New York City, N.Y.	1,234	854	271	69	14	26	43	Austin, Tex.	88	60	16	6	2	4	13
Newark, N.J.	50	25	14	8	1	1	8	Baton Rouge, La.	80	61	13	6	-	-	3
Paterson, N.J.	26	13	3	6	4	-	1	Corpus Christi, Tex.	66	49	10	6	-	1	2
Philadelphia, Pa.	366	235	95	24	11	1	19	Dallas, Tex.	219	134	60	18	2	5	-
Pittsburgh, Pa. [§]	38	26	8	3	-	1	5	El Paso, Tex.	103	78	15	6	4	-	2
Reading, Pa.	23	20	1	2	-	-	4	Ft. Worth, Tex.	155	99	32	13	4	7	13
Rochester, N.Y.	136	105	21	5	4	1	7	Houston, Tex.	314	171	64	39	21	19	20
Schenectady, N.Y.	25	21	1	2	1	-	3	Little Rock, Ark.	90	55	21	9	4	1	3
Scranton, Pa.	24	17	5	2	-	-	3	New Orleans, La.	U	U	U	U	U	U	U
Syracuse, N.Y.	106	86	10	6	3	1	6	San Antonio, Tex.	296	198	58	29	8	3	18
Trenton, N.J.	27	20	5	1	1	-	-	Shreveport, La.	63	46	11	1	3	2	5
Utica, N.Y.	18	14	3	1	-	-	3	Tulsa, Okla.	151	111	26	9	3	2	17
Yonkers, N.Y.	31	25	2	4	-	-	-	MOUNTAIN	860	610	150	71	18	11	67
E.N. CENTRAL	2,139	1,434	483	133	50	39	133	Albuquerque, N.M.	129	90	23	8	6	2	9
Akron, Ohio	58	38	15	2	1	2	2	Boise, Idaho	39	28	8	2	-	1	4
Canton, Ohio	50	39	10	1	-	-	6	Colorado Springs, Colo.	53	35	10	4	3	1	3
Chicago, Ill.	366	226	91	33	11	5	23	Denver, Colo.	U	U	U	U	U	U	U
Cincinnati, Ohio	U	U	U	U	U	U	U	Las Vegas, Nev.	295	203	60	27	4	1	19
Cleveland, Ohio	131	85	28	13	2	3	7	Ogden, Utah	29	22	3	3	1	-	-
Columbus, Ohio	182	113	45	12	6	6	17	Phoenix, Ariz.	U	U	U	U	U	U	U
Dayton, Ohio	139	97	33	4	2	3	7	Pueblo, Colo.	29	20	5	4	-	-	4
Detroit, Mich.	204	118	55	16	11	4	11	Salt Lake City, Utah	111	80	16	9	2	4	16
Evansville, Ind.	82	59	20	1	2	-	10	Tucson, Ariz.	175	132	25	14	2	2	12
Fort Wayne, Ind.	87	61	16	6	1	3	2	PACIFIC	1,724	1,228	334	81	33	48	125
Gary, Ind.	14	6	2	5	1	-	1	Berkeley, Calif.	23	15	6	-	1	1	2
Grand Rapids, Mich.	52	37	13	-	2	-	4	Fresno, Calif.	146	110	31	3	-	2	11
Indianapolis, Ind.	225	145	54	14	7	5	8	Glendale, Calif.	9	5	1	1	-	2	1
Lansing, Mich.	62	48	12	2	-	-	7	Honolulu, Hawaii	100	72	18	5	1	4	6
Milwaukee, Wis.	123	89	26	7	1	-	8	Long Beach, Calif.	48	30	14	1	2	1	6
Peoria, Ill.	62	47	12	2	-	1	2	Los Angeles, Calif.	296	191	66	17	10	12	18
Rockford, Ill.	53	37	13	2	1	-	8	Pasadena, Calif.	27	22	4	1	-	-	3
South Bend, Ind.	66	49	10	5	1	1	2	Portland, Ore.	170	119	38	8	2	3	6
Toledo, Ohio	114	88	17	4	-	5	5	Sacramento, Calif.	204	155	31	7	5	6	15
Youngstown, Ohio	69	52	11	4	1	1	3	San Diego, Calif.	171	123	25	6	7	10	13
W.N. CENTRAL	673	459	144	38	19	13	60	San Francisco, Calif.	U	U	U	U	U	U	U
Des Moines, Iowa	106	79	19	2	3	3	8	San Jose, Calif.	203	163	28	10	-	2	23
Duluth, Minn.	39	31	5	3	-	-	4	Santa Cruz, Calif.	26	16	7	3	-	-	2
Kansas City, Kans.	44	23	16	5	-	-	3	Seattle, Wash.	113	73	28	8	2	2	7
Kansas City, Mo.	100	62	25	5	4	4	5	Spokane, Wash.	61	45	12	3	1	-	7
Lincoln, Nebr.	48	31	9	7	1	-	9	Tacoma, Wash.	127	89	25	8	2	3	5
Minneapolis, Minn.	77	48	14	7	5	3	6	TOTAL	12,273 [¶]	8,367	2,520	827	292	265	814
Omaha, Nebr.	86	61	20	2	2	1	9								
St. Louis, Mo.	U	U	U	U	U	U	U								
St. Paul, Minn.	65	51	11	2	-	1	6								
Wichita, Kans.	108	73	25	5	4	1	10								

U: Unavailable. -:No reported cases.

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

[†] Pneumonia and influenza.

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

[¶] Total includes unknown ages.

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