MMWR™
Morbidity and Mortality Weekly Report
www.cdc.gov/mmwr

Weekly October 24, 2008 / Vol. 57 / No. 42

Anaplasma phagocytophilum Transmitted Through Blood Transfusion — Minnesota, 2007

Anaplasma phagocytophilum, a gram-negative, obligate intracellular bacterium of neutrophils, causes human anaplasmosis, a tickborne rickettsial disease formerly known as human granulocytic ehrlichiosis (*1*). In November 2007, the Minnesota Department of Health was contacted about *A. phagocytophilum* infection in a hospitalized Minnesota resident who had recently undergone multiple blood transfusions. Subsequent investigation indicated the infection likely was acquired through a transfusion of red blood cells. This report describes the patient's clinical history and the epidemiologic and laboratory investigations. Although a previous case of transfusion-transmitted anaplasmosis was reported (*2*), this is the first published report in which transfusion transmission of *A. phagocytophilum* was confirmed by testing of the recipient and a donor. Although polymerase chain reaction (PCR) assays provided reliable evidence of transmission in this case, no cost-effective method for screening blood donors for *A. phagocytophilum* exists. Screening donors for a recent history of tick bite is not likely to be sensitive or specific because such exposures are common and often not recalled by persons with anaplasmosis (*3*). Physicians should consider the possibility of anaplasmosis in patients who develop posttransfusion acute thrombocytopenia, especially if accompanied by fever, and should report suspected transfusion-associated cases to health authorities.

Case Report

The patient, a male aged 68 years with a medical history of chronic renal insufficiency, psoriatic arthritis, ankylosing spondylitis, and corticosteroid therapy, underwent elective knee arthroplasty and synovectomy on October 12, 2007. Three weeks before his hospitalization, the patient had traveled to an area where blacklegged ticks (*Ixodes* spp.) were endemic, but he did not spend time outdoors and had no known tick bites. Several hours after the procedure, the patient developed bleeding at the surgical site and associated coagulopathy, indicated by elevated international normalized ratio (INR) and partial thromboplastin time (PTT) and by decreased fibrinogen and platelet counts. The extensive hemorrhage required two surgical evacuations of hematoma from the knee, popliteal artery embolization, and transfusion of multiple blood components. During October 12–21, the patient received 34 units of nonleukoreduced red blood cells (RBC), 4 units of leukocyte-reduced apheresis platelets, 14 units of fresh frozen plasma (FFP), and 7 units of cryoprecipitate. The components came from 59 individual blood donors; all donations were collected by Memorial Blood Centers (St. Paul, Minnesota). On October 19, the patient developed sepsis and multisystem failure. He was treated empirically with antibiotics (cefazolin, piperacillin/tazobactam, vancomycin, and levofloxacin). Blood cultures were negative on October 18, 20, and 31, and urine cultures were negative on October 19 and 25.

On October 31, the patient was found to have worsening thrombocytopenia. His platelet count declined from 178,000/mm^3 on October 31 to 54,000/mm^3 on November 5. On November 1, he developed hypotension and fever attributed to urinary tract infection. He was treated with levofloxacin and sulfamethoxazole/trimethoprim and was afebrile by November 3. On November 3, 22 days after admission, a peripheral blood smear from the patient demonstrated inclusions compatible with

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The *MMWR* series of publications is published by the Coordinating Center for Health Information and Service, 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 2008;57:[inclusive page numbers].

A. phagocytophilum morulae in neutrophils. Retrospective review of an October 15 blood smear from the patient showed no evidence of intracellular morulae. Whole blood specimens from November 3–5 were positive for *A. phagocytophilum* DNA by PCR assays conducted at the Mayo Medical Laboratory, Minnesota Department of Health, and CDC. Serum from November 3–5 was tested at CDC and found to be weakly positive by indirect immunofluorescence assay (IFA) (titer 1:64) for immunoglobulin G (IgG) antibodies to *A. phagocytophilum*. Doxycycline treatment was begun on November 5. The patient's platelet count steadily improved and returned to a normal level of 163,000/mm^3 on November 10. Pretransfusion blood samples and serum from the patient's convalescence period were not available for further testing. The patient improved clinically and was transferred to a rehabilitation unit on November 13. After rehabilitation, the patient was discharged on December 3, 2007.

Epidemiologic and Laboratory Investigation

In early November, Memorial Blood Centers began an investigation to identify whether any of the 59 blood donors associated with the 34 RBC, 4 platelet, 14 FFP, and 7 cryoprecipitate units had evidence of *A. phagocytophilum* infection. Paired whole blood specimens from the original donations had been retained from all 34 RBC donors and eight of 14 FFP donors and were available for PCR testing. During November 2007–March 2008, Memorial Blood Centers also collected postdonation blood samples for serologic testing and information on recent illness history and potential tick exposure from 53 of the 59 donors. In addition, plasma components from two FFP donors and two cryoprecipitate donors who donated again during December 2007–January 2008 were retained for serologic testing. The whole blood specimens retained from initial donation were tested by PCR, followed by sequencing of the PCR amplicons at CDC. Serum and plasma specimens were tested by IFA for IgG antibodies to *A. phagocytophilum*.

PCR and IFA tests on samples from a female RBC donor aged 64 years were positive for *A. phagocytophilum* infection (Table). *A. phagocytophilum* DNA was found in an RBC product donated by this woman on September 28 and transfused to the patient on October 13. IgG IFA titers to *A. phagocytophilum* were 1:512 and 1:256, respectively, in subsequent sera collected November 17 and December 18. The donor did not recall being bitten by a tick, but had spent time in wooded areas of northeast Minnesota where anaplasmosis is endemic within the month before her donation. She reported no history of fever during the month before or after her donation. No other patients received blood components from her donation.

TABLE. Polymerase chain reaction (PCR) and immunofluorescence assay (IFA) results* for *Anaplasma phagocytophilum* testing of transfusion blood products from 59 donors — Minnesota, 2007

Blood product	PCR	IFA	No. of donors
Red blood cells (n = 34)	+	1:512†	1
	–	1:64	2
	–	<1:32	31
Apheresis platelets (n = 4)	NA§	<1:32	4
Fresh frozen plasma (n = 14)	–	<1:32	6
	–	NA	2
	NA	<1:32	6
Cryoprecipitate (n = 7)	NA	<1:32	7

* Results from PCR testing by CDC of 42 whole blood segments retained from the original donations and IFA testing of 57 serum or plasma specimens submitted after the original donation.
† IFA titers 1:64 and higher were considered positive.
§ Test results not available.

No whole blood samples from other tested donors were PCR positive for *A. phagocytophilum*. Sera from two RBC donors were weakly positive by IFA (titer 1:64), but their respective whole blood samples from the original transfused units were PCR negative. These two donors did not live on wooded property and reported they had no tick exposure or illness during the 2 months before donation. Available postdonation serum samples from other donors were negative for *A. phagocytophilum* by IFA (titer <1:32).

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Editorial Note: *A. phagocytophilum*, the causative agent of anaplasmosis, typically is transmitted to humans by infected *Ixodes* spp. ticks. In wooded areas of the United States, *A. phagocytophilum* is transmitted by the blacklegged tick (*Ixodes scapularis*) in the Northeast and upper Midwest and by the western blacklegged tick (*Ixodes pacificus*) on the West Coast. In infected persons who are symptomatic, illness onset occurs 5–21 days after a bite from an infected tick. Initial presentation typically includes sudden onset of fever, headache, malaise, and myalgia, often accompanied by thrombocytopenia, leukopenia, and elevated liver transaminases. Severe infections can include prolonged fever, shock, confusion, seizures, pneumonitis, renal failure, hemorrhages, opportunistic infections, and death (*1*). Anaplasmosis and other tickborne diseases, including human ehrlichiosis, Rocky Mountain spotted fever, and babesiosis, caused by *Ehrlichia chaffeensis* or *Ehrlichia ewingii*, *Rickettsia rickettsii*, and *Babesia* spp., respectively, represent a potential risk for transmission via blood transfusion in the United States (*2–6*).

The case described in this report provides strong presumptive evidence that *A. phagocytophilum* infection in this patient was acquired through blood transfusion. Pretransfusion blood samples and convalescent serum from the transfusion recipient were not available for PCR or serologic testing to demonstrate conclusively that the patient was free of *A. phagocytophilum* infection before his hospitalization on October 12. However, the patient reported limited outdoor exposure that might include potential tick contact during the 3 weeks before hospitalization, and a blood smear collected 3 days after hospital admission showed no evidence of intracellular morulae. The timing of events and the expected incubation period for anaplasmosis (5–21 days) suggest that the patient's exposure most likely occurred during hospitalization. *A. phagocytophilum* DNA was found in a retained sample from the implicated RBC product that was transfused to the recipient, providing strong evidence that this was the likely route of disease transmission to the blood transfusion recipient.

Some blood transfusion recipients (i.e., those who are immune compromised) likely are at increased risk for developing severe complications associated with tickborne diseases. Both *A. phagocytophilum* and *E. chaffeensis* can survive in refrigerated RBCs, and possible transfusion-transmission cases have been reported for anaplasmosis (Minnesota Department of Health, unpublished data, 1998) (*2,3,5,6*). However, because of the rarity of transfusion-associated cases, concerns regarding the specificity of available tests, (none of which are approved by the Food and Drug Administration), and the economic costs associated with implementation, the U.S. blood supply is not routinely screened for tickborne disease using laboratory methods (*7*).

As a method to reduce the risk for certain pathogens in blood products, blood banks often defer donations if the potential donor is ill at the time of donation. However, persons infected with tickborne disease might experience mild illness or have asymptomatic infection, as was the case with the implicated donor in this report (*1,3*). Screening donors for a recent history of tick bite is unlikely to identify high-risk donors, because this type of exposure frequently is not recalled by persons with anaplasmosis (*3*). In this case, the implicated donor did not recall a tick bite, although she did report contact with wooded habitat in an anaplasmosis-endemic area. Nearly 75% of the other blood donors in this investigation reported similar outdoor contact, making the screening of blood donors for tick-related exposures poorly predictive for possible infection. Because *Ehrlichia* and *Anaplasma* are associated with white blood cells, leukoreduction techniques would be expected to reduce the risk for *Ehrlichia* and *Anaplasma* transfusion-transmission through RBC components (*5,8*). In the absence of effective screening tools to identify donors or products infected with

the organisms, physicians should weigh the benefits of using leukoreduced blood components, to potentially reduce the risk for *Ehrlichia* and *Anaplasma* transmissions.

Although transfusion-associated transmission of *A. phagocytophilum* appears to be rare, reported incidences of anaplasmosis and other tickborne diseases are increasing in the United States (*1*). A record 322 cases of anaplasmosis were reported in Minnesota in 2007 (6.2 cases per 100,000 population) (*9*). As the incidence of tickborne diseases increases, physician vigilance for possible transmission of these agents via transfusions also should increase. In addition to other more common etiologies, physicians should suspect possible rickettsial infection if transfusion recipients develop acute thrombocytopenia posttransfusion, especially if accompanied by fever. Such signs should lead to rapid assessment for rickettsial agents and empiric treatment with doxycycline (*1*). Although insensitive, blood smear can provide timely support for a presumptive diagnosis of anaplasmosis, followed by IFA or PCR to confirm the diagnosis (*1*). Similarly, babesiosis should be suspected in patients who develop hemolytic anemia and fever posttransfusion (*3,4*).

Anaplasmosis and ehrliciosis are nationally notifiable diseases. Suspected cases of tickborne rickettsial diseases should be reported promptly to the state or local health department, and suspected transfusion-associated transmission should be reported to the supplying blood center and appropriate public health authorities.

Acknowledgments

The findings in this report are based, in part, on contributions by G Liu, PhD, and K Smith, DVM, PhD, Minnesota Dept of Health; M Kuehnert, MD, National Center for Preparedness, Detection, and Control of Infectious Diseases, and S Holzbauer, DVM, Coordinating Office for Terrorism Preparedness and Emergency Response, CDC.

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Progress in Introduction of Pneumococcal Conjugate Vaccine — Worldwide, 2000–2008

Pneumococcal disease is a leading cause of childhood morbidity and mortality globally, causing an estimated 0.7–1.0 million deaths annually among children aged <5 years (*1*). A pneumococcal conjugate vaccine (PCV) that includes seven pneumococcal serotypes (PCV7) first became available in 2000. Studies in the United States have demonstrated that introduction of universal vaccination with PCV7 resulted in a 77% decrease in invasive pneumococcal disease among children aged <5 years and a 39% decrease in hospital admissions for pneumonia among children aged <2 years (*2,3*). A similar vaccine with two additional serotypes was highly efficacious against pneumonia and invasive disease in clinical trials in Africa and, in one trial, reduced all-cause mortality among children by 16% (*4*). Low-income countries, which account for >97% of pneumonia cases in children aged <5 years (*5*), will benefit most from introduction of PCV. This report summarizes the progress made in introducing PCV7 worldwide. As of August 2008, 26 countries offered PCV7 to all children as part of national immunization programs or had PCV7 in widespread use (i.e., with estimated national coverage >50%); however, none of these countries is a low-income or lower-middle income country. The World Health Organization (WHO) and UNICEF have recognized the safety and effectiveness of PCVs and recommend that these vaccines for young children be included in national immunization programs (*1*). Overcoming the challenges to global introduction remains an urgent public health priority.

WHO recommends including PCV in national immunization programs (i.e., routine vaccination of all young children with PCV), particularly in countries where all-cause mortality among children aged <5 years is >50 per 1,000 live births or where >50,000 children die annually from any cause (*1*). In addition, because persons infected with human immunodeficiency virus (HIV) are up to 300 times more likely to have pneumococcal disease than those who are HIV negative (*6*), WHO recommends that countries with a high prevalence of HIV infection make the introduction of PCV a priority.

Only one PCV, the 7-valent formulation (PCV7), is currently licensed for use worldwide; new formulations of PCV (10-valent or 13-valent) are scheduled to become available

in some countries within 2 years. The high cost of PCV7 has restricted the number of countries introducing the vaccine. In 2006, the GAVI Alliance (formerly known as the Global Alliance for Vaccines and Immunizations), an organization that aligns public and private resources to create global access to vaccines, made funding available through 2015 for PCV introduction in the 72 countries with the lowest gross national income per capita (<$1,000 per capita) in 2003. Some of the 193 countries that are WHO member states have made national decisions to provide vaccine to all children through their national immunization programs. Other countries have elected to offer PCV7 vaccine only to certain high-risk groups, such as children who are HIV positive or other immunocompromised or chronically ill persons.

To assess the current status of global PCV7 introduction, a database maintained by WHO was used to identify all countries that had introduced PCV7 by August 2008. This information was supplemented with data from other public and private sources, including the GAVI Alliance, vaccine manufacturers, and country press releases. Countries were characterized by their economic status using World Bank income classifications based on gross national income per capita.* Countries also were categorized using three mortality or disease prevalence characteristics: 1) whether the country had a mortality rate >50 per 1,000 live births among children aged <5 years (one of the WHO PCV introduction criteria); 2) whether the prevalence of HIV infection in the country was >1% among adults aged 15–49 years, an indication of high HIV prevalence (another WHO PCV introduction criterion); and 3) whether >10% of deaths among children aged <5 years were attributed to pneumonia, an indicator of likely high childhood mortality from pneumococcal disease. Mortality data were obtained from the most recent statistics (from 2006) reported to the WHO Statistical Information System.† HIV prevalence data were obtained from the most recent statistics (from 2007) reported to UNAIDS.§

PCV7 was first introduced in 2000 in the United States. As of August 2008, PCV7 had been licensed in approximately 90 of 193 WHO member states. The vaccine had been introduced into the national childhood immunization programs as a vaccine for all children or was in widespread use in 26 (13%) member states (Figure).§ The 26 countries included Australia, New Zealand, South Korea, and countries in Europe (15), the Americas (four), and the Middle East (four). Of these 26 countries, 18 have introduced the vaccine since 2006. Twenty-four of the 26 countries (92%) are high-income countries characterized by low childhood mortality and low prevalence of HIV infection (Table).

Of the 72 countries that are eligible for funding from the GAVI Alliance for PCV introduction, 59 (82%) have a mortality rate of >50 per 1,000 live births among children aged <5 years, 35 (49%) have >1% prevalence of HIV infection among adults aged 15–49 years, and 66 (92%) have >10% of deaths in children aged <5 years attributed to pneumonia. However, none of these countries had introduced PCV as of August 2008. During 2007–2008, GAVI received applications from 11 eligible countries; of these, eight countries (Central African Republic, Democratic Republic of Congo, Gambia, Guyana, Honduras, Kenya, Nicaragua, and Rwanda) have been approved for introduction of PCV into national immunization programs but have not yet introduced the vaccine.

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Editorial Note: This report indicates that, although progress is being made to introduce PCV globally, only 26 of 193 (14%) WHO member states have introduced PCV7 into their national immunization programs for all children or have PCV in widespread use, and these countries are primarily high-income countries with relatively few childhood deaths attributable to pneumococcal disease. Increasing the use of PCV worldwide, especially in the poorest countries, can make a substantial contribution toward achieving United Nations Millennium Development Goal 4, which seeks to reduce mortality among children aged <5 years by two thirds by 2015.¶ The global use of PCV will help prevent an estimated 5.4–7.7 million deaths among children by 2030.** The use of PCVs has been shown to be cost effective in preventing childhood mortality in GAVI-eligible countries (*7*).

In 2003, the GAVI Alliance created the Pneumococcal Vaccines Accelerated Development and Introduction Plan (PneumoADIP) to work with GAVI-eligible countries to provide evidence of disease burden and vaccine effectiveness, to support evidence-driven policy-making, and to ensure a sustainable, affordable supply of vaccine. The decision of the GAVI

* Four of the 193 WHO member states for which gross national income data were not reported (the Cook Islands, Nauru, Niue, and Tuvalu) were excluded from the income analysis.

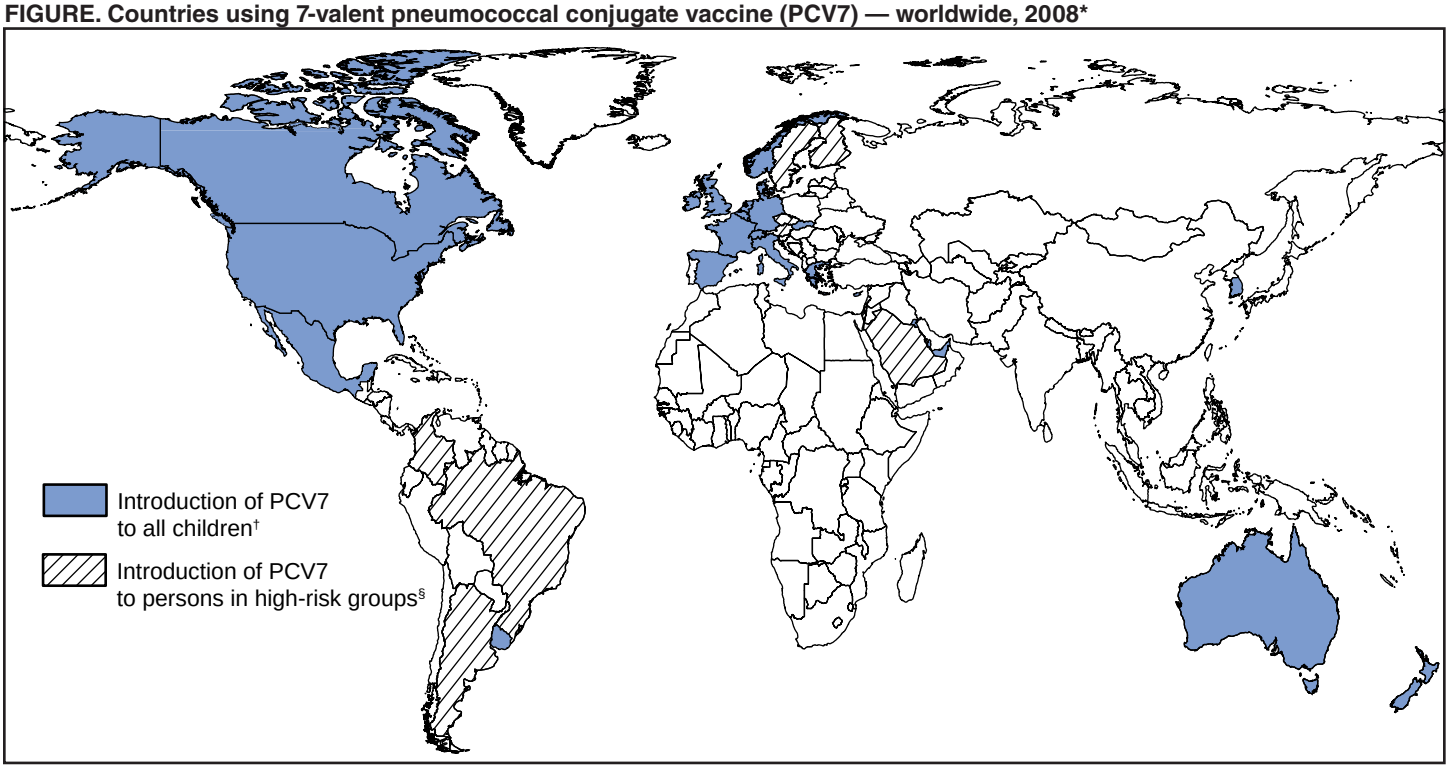
† Available at http://www.who.int/whosis.

§ Available at http://www.unaids.org/en/knowledgecentre/hivdata/globalreport/2008/2008_global_report.asp.

¶ Additional information available at http://www.un.org/millenniumgoals/childhealth.shtml.

** The Advanced market Commitment (AMC) pilot proposal for pneumococcal vaccine (available at http://www.vaccineamc.org/files/amcpilotproposal.pdf) cites an estimate of 5.4 million deaths prevented. The AMC for pneumococcal disease: innovative finance for development presentation (available at http://www.gavialliance.org/resources/7._AMC.pdf) cites an estimate of 7.7 million deaths prevented.

FIGURE. Countries using 7-valent pneumococcal conjugate vaccine (PCV7) — worldwide, 2008*



SOURCE: Database maintained by WHO, supplemented with data from other public and private sources, including the GAVI Alliance (formerly known as the Global Alliance for Vaccines and Immunizations), vaccine manufacturers, and country press releases.

* As of August 2008.

† Countries offering PCV7 to all children or having widespread use of PCV7 (i.e., with estimated national coverage >50%) (year of introduction) (n = 26): Australia (2005; high-risk 2001), Bahrain (2008; high-risk 2002), Belgium (2007; high-risk 2004), Canada (2002), Cyprus (2007; high-risk 2003), Denmark (2007), France (2006; high-risk 2003), Germany (2006; high-risk 2002), Greece (2006), Ireland (2008; high-risk 2002), Italy (2003), Kuwait (2006), Luxembourg (2005; high-risk 2003), Mexico (2008; high-risk 2006), Netherlands (2006), New Zealand (2008), Norway (2006; high-risk 2001), Qatar (2005), Slovakia (2008; high-risk 2003), South Korea (2003), Spain (2003), Switzerland (2006; high-risk 2001), United Arab Emirates (2007; high-risk 2004), United Kingdom (2006; high-risk 2001), United States (2000), and Uruguay (2008; high-risk 2006). Italy, South Korea, Spain, and United Arab Emirates have no national recommendation for coverage of all children but have widespread coverage with PCV7.

§ Countries offering coverage only to high-risk groups (e.g., persons who are human immunodeficiency virus [HIV] positive or other immunocompromised or chronically ill persons) (year of introduction) (n = 13): Argentina (2006), Austria (2002), Brazil (2004), Colombia (2007), Czech Republic (2006), Finland (2002), Israel (2004), Latvia (2006), Malta (2006), Micronesia (2007), Saudi Arabia (2006), Slovenia (2005), and Sweden (2005).

Alliance in 2006 to support introduction of PCV in eligible countries was based on evidence generated by PneumoADIP and WHO.

To complement the financial support of the GAVI Alliance, a new mechanism called the Advanced Market Commitment (AMC) has been created. AMC is a binding contract offered by countries and private donors that guarantees vaccine makers a viable market for next-generation PCVs and ensures a sustainable and affordable supply of these vaccines for low-income countries. AMC offers access to nearly $1.5 billion in vaccine financing for the next 7–10 years. During this period, GAVI-eligible countries will be expected to pay a small copayment for each dose of PCV (currently <$0.30 per dose), and under the terms of AMC, they are guaranteed a predictable, low price and access to supplies for up to 10 years after AMC funding is depleted.

Other challenges to PCV7 introduction in low-income countries include the logistics necessary to facilitate safe delivery of the vaccine. Vaccines other than PCV used in low-income countries are generally supplied in multidose vials that minimize cold-chain storage volume and reduce the volume of medical waste. Current and planned PCVs require increases in cold-chain storage and transport capacity. In addition, PCV7 is available only in single-dose, prefilled glass syringes that are not automatically disabled, which leads to increased waste disposal and safety concerns associated with the potential reuse of syringes and needles (*8*).

In countries introducing PCV, surveillance for diseases caused by pneumococcus is important to document the impact of vaccination on the burden of disease and on transmission patterns, including changes in the prevalence of pneumococcal serotypes. However, as noted in the WHO position statement

TABLE. Use of 7-valent pneumococcal conjugate vaccine (PCV7) and characteristics associated with high burden of pneumococcal disease, by World Bank income group — worldwide, 2008*

	Countries with mortality >50 per 1,000 live births among children aged <5 years§		Countries with prevalence of HIV >1% among adults aged 15–49 years¶		Countries with >10% deaths among children aged <5 years attributed to pneumonia§		Countries offering PCV7 coverage to all children**		Countries offering PCV to high-risk groups††	
Income group†	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**
High income (n = 48)	1	(2)	5	(12)	1	(2)	24	(50)	8	(17)
Upper-middle income (n = 38)	3	(8)	8	(29)	11	(29)	2	(5)	3	(8)
Lower-middle income (n = 31)	4	(13)	4	(16)	24	(77)	0	(0)	2	(6)
Lowest income (GAVI-eligible) (n = 72)	59	(82)	35	(52)	66	(92)	0	(0)	0	(0)
Total	**67**	**(36)**	**52**	**(32)**	**102**	**(54)**	**26**	**(14)**	**13**	**(7)**

* As of August 2008.
† Lowest income (GAVI-eligible) defined as having a gross national income (GNI) per capita of ≤$1000 (GAVI Alliance formerly known as the Global Alliance for Vaccines and Immunizations). Lower-middle income defined as GNI per capita $1,000–$3,595; upper-middle income defined as GNI per capita $3,596–$11,115. High-income defined as GNI per capita ≥$11,116. Data on GNI was not reported for four of 193 World Health Organization member states (the Cook Islands, Nauru, Niue, and Tuvalu); they were excluded from the income analysis.
§ Mortality data were obtained from the most recent statistics (from 2006) reported to the WHO Statistical Information System (available at http://www.who.int/whosis).
¶ >1% human immunodeficiency virus (HIV) prevalence among pregnant women is classified as a generalized epidemic (additional information available at http://data.unaids.org/publications/irc-pub01/jc370-2ndgeneration_en.pdf). An estimated prevalence is available for 43 high-income, 28 upper-middle income, 25 lower-middle income, and 67 GAVI-eligible countries; these are used as denominators for this category. HIV prevalence data were obtained from the most recent statistics (from 2007) reported to UNAIDS (available at http://www.unaids.org/en/knowledgecentre/hivdata/globalreport/2008/2008_global_report.asp).
** Also includes countries with widespread coverage with PCV7 (i.e., with estimated national coverage >50%).
†† For example, vaccine offered to HIV-positive or other immunocompromised or chronically ill persons.

on PCV (*1*), a country's inability to conduct such surveillance should not be a barrier to introducing PCV. Although health officials in all countries should strive to build the capacity to conduct high-quality surveillance, this information might be most useful to the first countries to introduce the vaccine or those areas with special populations of interest (e.g., where a high prevalence of HIV infection exists) (*1*).

The slow introduction of hepatitis B vaccine worldwide, which occurred over a 20-year period, prompted recognition that financial and technical support are needed to facilitate more rapid introduction of new and underutilized vaccines (*9*). Similarly, nearly 2 decades after *Haemophilus influenzae* type b (Hib) conjugate vaccine became available, it remained underutilized among low-income countries. Beginning in 2005, the convergence of several factors facilitated introduction of Hib vaccine into GAVI-eligible countries; these factors included funding from the GAVI Alliance, technical support from WHO and its partners, a recommendation from WHO for global vaccination, and a guaranteed supply of vaccine (*10*). Several of these factors are now in place for the introduction of PCV. Additional strategies need to be developed to support introduction of PCV among middle-income, non–GAVI-eligible countries where donor support is lacking.

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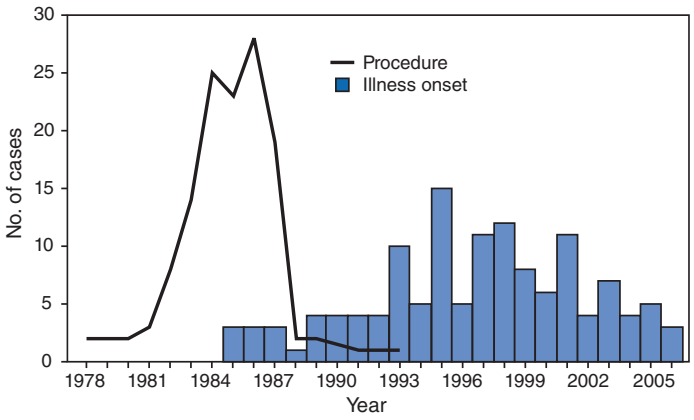
Update: Creutzfeldt-Jakob Disease Associated with Cadaveric Dura Mater Grafts — Japan, 1978–2008

Creutzfeldt-Jakob disease (CJD) is the most common of the human prion diseases (also known as transmissible spongiform encephalopathies), which, according to the leading hypothesis, are caused by an abnormal protein (i.e., prion) that is able to induce abnormal folding of normal cellular prion proteins. Annual worldwide incidence of these always fatal neurodegenerative diseases is estimated at 0.5–2.0 cases per million population. CJD can occur sporadically, or as a genetic disease, or can be transmitted iatrogenically. In 1996, a new human prion disease, variant CJD (vCJD), was first described in the United Kingdom. This disease was believed to have resulted from human consumption of cattle products contaminated with the prions responsible for bovine spongiform encephalopathy (BSE, commonly known as mad cow disease). That year, in part to check for possible vCJD cases, a national survey was conducted in Japan; 821 CJD cases were identified, including 43 cases associated with receipt of cadaveric dura mater grafts (*1*). A single brand of dural graft (Lyodura) produced by a German manufacturer before May 1987 was identified as the most likely vehicle of transmission in all but one case (*2,3*). By 2003, continued surveillance in Japan had identified a total of 97 such cases (*2*). Since then, an additional 35 cases have been identified. This report updates previous reports and summarizes the investigation of all 132 cases to date linked to dural grafts.* The results suggest that, because of the long incubation period between graft receipt and symptom onset (possibly >24.8 years), continued surveillance in Japan might identify additional CJD cases associated with dural grafts.

Since 1996, in Japan, a nongovernmental CJD surveillance group supported by the Ministry of Health and Welfare (later renamed the Ministry of Health, Labour, and Welfare) has conducted a national survey seeking cases of human prion disease. The survey is mailed to neurologic, psychiatric, and neuropathologic departments of hospitals with a minimum bed capacity of 100 (overall response rate: 74%) (*1,2*). A case of CJD associated with a dura mater graft is defined as physician-diagnosed CJD in the recipient of a cadaveric dura mater graft whose disease was reviewed and accepted as CJD by the surveillance system's panel of neurologists.

During 1996–2008, as clinicians reported additional CJD cases to the surveillance system sponsored by the Ministry of Health and Welfare, the number of persons identified with CJD associated with cadaveric dura mater grafts increased from 43 initially to 132. All 132 patients had received dura mater grafts during 1978–1993 (Figure 1). Three patients received more than one dural graft during this period, including one patient reported previously (*2,3*). For purposes of analysis, the first graft was assumed to be the source of infection in all three patients. Of the 132 patients, the most common medical conditions leading to the use of dural grafts were tumor (60 patients, 45%), brain hemorrhage (21, 16%), Jannetta procedure for facial palsy (18, 14%) and for trigeminal neuralgia (seven, 5%), and intracranial aneurysm (nine, 7%). The other conditions were unspecified anomalies (six patients), hematoma (six), injury (four), and ossification of the spinal posterior longitudinal ligament (one).

FIGURE 1. Number of cases of Creutzfeldt-Jakob disease (CJD) (N = 132) associated with dura mater grafts,* by year of procedure and illness onset — Japan, 1978–2006†



* A case of CJD associated with a dura mater graft was defined as physician-diagnosed CJD in the recipient of a cadaveric dura mater graft whose disease was reviewed and accepted as CJD by a surveillance panel of neurologists.
† As of February 2008, four additional cases were under investigation.

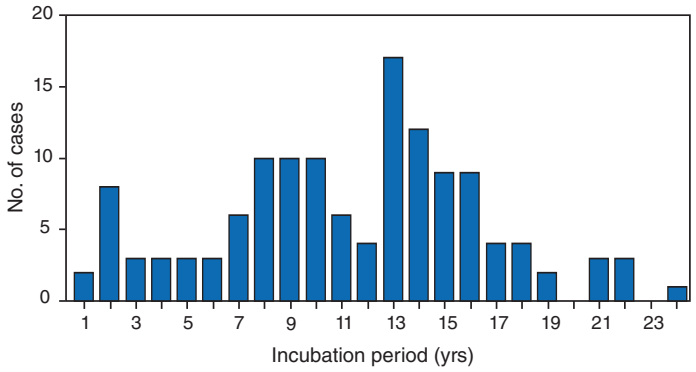
Illness onset for the 132 CJD patients ranged from September 1985 to October 2006 (Figure 1). The mean age of the 132 patients at onset was 55 years (range: 15–80 years); the median age was 57 years. A total of 79 (60%) patients were female. Neuropathologic confirmation of CJD diagnosis was obtained from 31 (23%) patients; 81 (80%) of the other 101 patients with physician-diagnosed CJD had an electroencephalogram with a periodic synchronous discharge pattern characteristic of CJD.

Incubation periods ranged from 1.2 years (receipt in 1987 and onset in 1989) to 24.8 years (receipt in 1981 and onset in 2006) (Figure 2). The median and mean incubation periods were 12.4 years and 11.8 years, respectively.

A total of 120 of the 132 patients (91%) were documented to have received Lyodura dural grafts; investigators were unable to identify the lot numbers of the grafts used. For the 12 other

* As of February 2008, four additional cases were under investigation in Japan for suspected dural graft–associated CJD.

FIGURE 2. Number of cases of Creutzfeldt-Jakob disease (CJD) (N = 132) associated with dura mater grafts,* by incubation period — Japan, 1978–2006



* A case of CJD associated with a dura mater graft was defined as physician-diagnosed CJD in the recipient of a cadaveric dura mater graft whose disease was reviewed and accepted as CJD by a surveillance panel of neurologists.

patients, the brand name of the dural graft was unknown. A total of 109 (83%) patients received their dural grafts during 1983–1987, when an estimated 100,000 persons received Lyodura grafts in Japan (*2*,*4*).

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Editorial Note: New cases of CJD associated with dural grafts continue to be reported in Japan, and Lyodura grafts remain the most likely vehicle for transmission. Similar to other allogeneic dura mater grafts, Lyodura grafts were derived from cadaveric dura mater and used by surgeons for soft-tissue reconstruction of damaged, missing, or impaired tissues (primarily dura mater). According to the manufacturer, the grafts were gradually absorbed in situ, colonized by fibroblasts and stem cells, and eventually replaced by endogenous connective tissue.

In 1987, the first identified case of CJD associated with a Lyodura graft was reported in the United States (*5*). During the U.S. investigation of that case, the manufacturer reported revising collection and processing procedures for Lyodura to reduce the risk for CJD transmission (*6*). Only six of the 132 patients in Japan received their dural grafts after 1987, and only one of these six patients is known to have received a Lyodura graft that was most likely produced after 1987. This patient had received two dura mater grafts in 1991 at a hospital that reported using only Lyodura or another brand of dural grafts, Tutoplast (*3*). No cases have been reported in Japan among patients who received their first dural graft after 1993.

The substantial number of CJD cases associated with dural grafts in Japan likely reflects the widespread use in that country of Lyodura grafts produced before May 1987. During 1983–1987, an estimated 20,000 persons in Japan received Lyodura grafts each year, approximately 50 times higher than the estimated number of recipients in the United States (*2*,*4*). Although Lyodura was then available to U.S. hospitals through the mail, the German manufacturer produced Lyodura for distribution in Japan and other countries but not for distribution in the United States (*7*). In June 1987, after the company learned of the first CJD case associated with a Lyodura graft, the manufacturer reported revising procedures for the collection and processing of its dura mater grafts after May 1, 1987, to reduce the risk for CJD transmission (*6*). The key reported processing changes included conversion from batch to individual processing of dura mater and treatment of each dura mater graft with 1.0 normal sodium hydroxide (NaOH); no practical final screening test of the product for prion contamination is available. However, the change to individual processing of dura mater greatly limited the number of grafts that could be contaminated by a single infected donor. In addition, 1.0 normal NaOH is known to be highly effective for inactivating prions (*3*).

In the United States, after report of the first Lyodura-associated CJD case, the Food and Drug Administration (FDA) issued a recall in late April 1987 of Lyodura that was packaged in 1982, the year the graft used in the initial U.S. case had been packaged. In addition, after receiving report of a second Lyodura-associated CJD case in a patient in New Zealand, CDC advised avoiding Lyodura grafts produced before May 1987 (*6*). However, no international recall of Lyodura produced before May 1987 occurred. Therefore, the implicated Lyodura with its potential contaminant might have remained in use at Japanese hospitals for several years.

Cases of dural graft–associated CJD in Japan have occurred since 1985, peaking during 1995–1999, when 51 of the 132 patients became ill. As this outbreak has continued, the median incubation period has increased to 12.4 years, and the longest period between graft surgery and onset of illness is now 24.8 years. In the United States, two more patients with Lyodura-associated CJD have been identified since the first reported case in 1987. Most recently, a patient aged 26 years died in 2006 from autopsy-confirmed CJD (*7*). The incubation period in this case was 18.7 years.

The long incubation period and always fatal outcome of CJD and other transmissible spongiform encephalopathies underscore the importance of efforts to minimize potential

exposures of persons to prions. However, implementing timely preventive measures against these diseases can be difficult because the public health significance of certain actions might not become apparent for years, if at all. For example, in 1987, the producer of Lyodura revised collection and production measures without knowing at the time that these actions likely would prevent many future deaths from Lyodura-associated CJD. Similarly, in 1997, a feed ban was instituted to prevent BSE in the United States, even though no endemic BSE had been recognized in North America. In addition, to prevent potential cases of vCJD in the United States, prospective blood donors who might have been exposed to BSE in the United Kingdom were deferred, even before transmission of the vCJD agent via blood transfusion had been documented in that country (*8*).

In 1997, the FDA's Transmissible Spongiform Encephalopathy Advisory Committee recognized that use of human dura mater carries an inherent risk for transmitting CJD. However, the committee recommended that the use of such grafts be left to the discretion of the treating neurosurgeon, provided that the human dura mater is procured and processed according to additional safety measures outlined by the committee (*9*). After the committee's recommendations were issued, the number of dural grafts distributed for use in the United States declined from an estimated 4,500 in 1997 to an estimated 900 in 2002, to a documented 389 in 2006, and 368 in 2007 (*2*) (B.E. Buck, M.D., Miami Tissue Bank, personal communication, August 2008).

CDC continues to conduct surveillance for cases of CJD in the United States through various mechanisms, including 1) receipt and investigation, in collaboration with local and state health departments, of case reports from physicians and patient support groups; 2) analysis of national multiple cause-of-death data; and 3) review of prion disease cases confirmed by the National Prion Disease Pathology Surveillance Center (NPDPSC) at Case Western Reserve University (Cleveland, Ohio). During 1996–1997, CDC established NPDPSC in collaboration with the American Association of Neuropathologists to help maintain and enhance U.S. human prion disease surveillance. NPDPSC provides, free of charge, advanced neuropathologic and biochemical prion disease diagnostic services to U.S. physicians and other appropriate health personnel, including local and state health officials. Patients with a rapidly progressive dementia consistent with CJD and a history of dural graft implantation should be reported through local or state health departments to CDC, telephone 404-639-3091.

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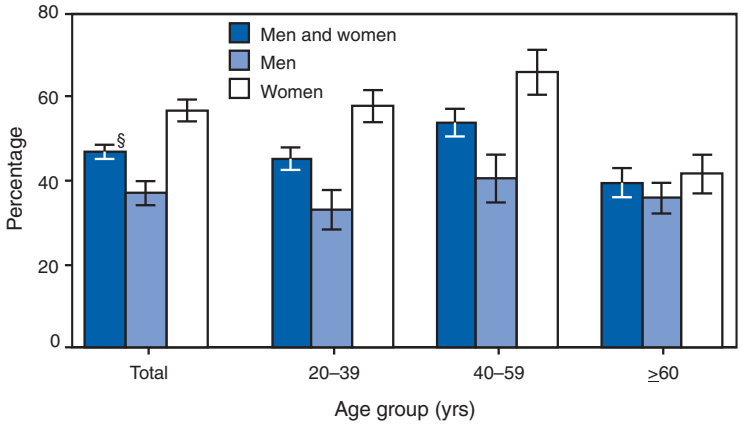
QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Adults Aged ≥20 Years Who Said They Tried to Lose Weight During the Preceding 12 Months,* by Age Group and Sex — National Health and Nutrition Examination Survey, United States, 2005–2006†



* Based on response to the question, "During the past 12 months, have you tried to lose weight?"
† Estimates are based on household interviews with a sample of the civilian, noninstitutionalized U.S. population from the National Health and Nutrition Examination Survey.
§ 95% confidence interval.

During 2005–2006, 47.1% of adults aged ≥20 years said they tried to lose weight during the preceding 12 months. More women (57.0%) than men (36.9%) reported weight loss attempts. A greater percentage of women aged 40–59 years tried to lose weight (65.9%) than women aged 20–39 years (58.2%) or ≥60 years (41.6%).

SOURCE: National Health and Nutrition Examination Survey, 2005–2006, public use data file. Available at http://www.cdc.gov/nchs/nhanes.htm.

TABLE 1. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending October 18, 2008 (42nd week)*

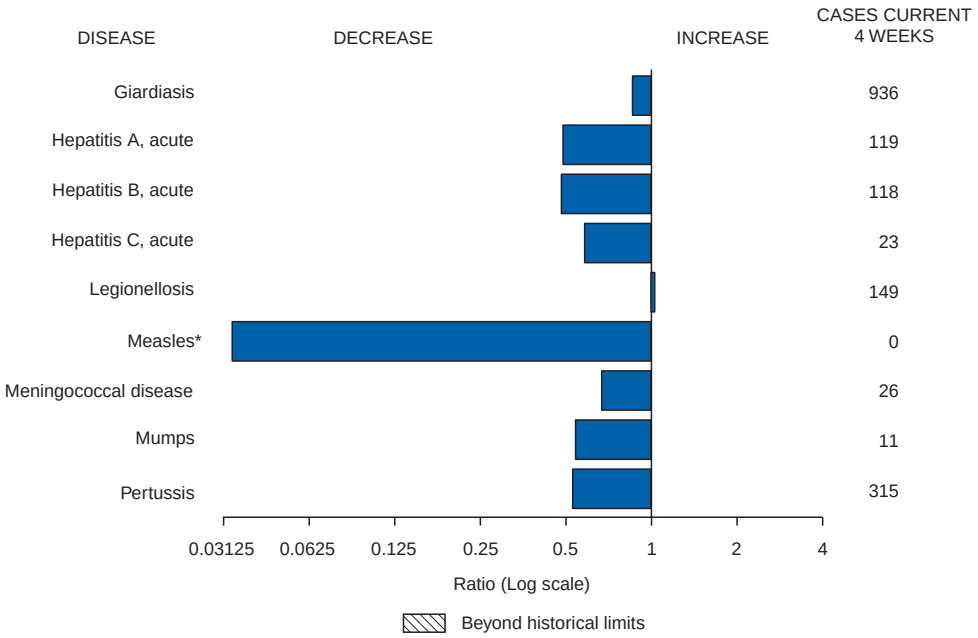
Disease	Current week	Cum 2008	5-year weekly average†	Total cases reported for previous years 2007	2006	2005	2004	2003	States reporting cases during current week (No.)
Anthrax	—	—	—	1	1	—	—	—	
Botulism:									
foodborne	—	7	0	32	20	19	16	20	
infant	1	76	2	85	97	85	87	76	MO (1)
other (wound & unspecified)	—	13	1	27	48	31	30	33	
Brucellosis	2	69	2	131	121	120	114	104	FL (1), CA (1)
Chancroid	—	28	1	23	33	17	30	54	
Cholera	—	1	0	7	9	8	6	2	
Cyclosporiasis§	1	113	1	93	137	543	160	75	OH (1)
Diphtheria	—	—	0	—	—	—	—	1	
Domestic arboviral diseases§,¶:									
California serogroup	—	35	2	55	67	80	112	108	
eastern equine	—	2	0	4	8	21	6	14	
Powassan	—	1	0	7	1	1	1	—	
St. Louis	—	7	0	9	10	13	12	41	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
Ehrlichia chaffeensis	—	610	10	828	578	506	338	321	
Ehrlichia ewingii	—	7	—	—	—	—	—	—	
Anaplasma phagocytophilum	1	255	12	834	646	786	537	362	FL (1)
undetermined	—	56	3	337	231	112	59	44	
Haemophilus influenzae,††									
invasive disease (age <5 yrs):									
serotype b	—	21	1	22	29	9	19	32	
nonserotype b	1	131	3	199	175	135	135	117	NC (1)
unknown serotype	2	146	2	180	179	217	177	227	OH (1), GA (1)
Hansen disease§	—	61	2	101	66	87	105	95	
Hantavirus pulmonary syndrome§	—	13	0	32	40	26	24	26	
Hemolytic uremic syndrome, postdiarrheal§	2	167	5	292	288	221	200	178	NH (1), OH (1)
Hepatitis C viral, acute	2	636	16	849	766	652	720	1,102	NC (2)
HIV infection, pediatric (age <13 years)§§	—	—	4	—	—	380	436	504	
Influenza-associated pediatric mortality§,¶¶	—	89	—	77	43	45	—	N	
Listeriosis	7	473	20	808	884	896	753	696	MO (1), FL (2), WA (2), CA (2)
Measles***	—	131	0	43	55	66	37	56	
Meningococcal disease, invasive†††:									
A, C, Y, & W-135	—	224	5	325	318	297	—	—	
serogroup B	—	124	2	167	193	156	—	—	
other serogroup	—	27	1	35	32	27	—	—	
unknown serogroup	1	478	10	550	651	765	—	—	OR (1)
Mumps	1	331	12	800	6,584	314	258	231	FL (1)
Novel influenza A virus infections	—	—	—	4	N	N	N	N	
Plague	—	1	0	7	17	8	3	1	
Poliomyelitis, paralytic	—	—	—	—	—	1	—	—	
Polio virus infection, nonparalytic§	—	—	—	—	N	N	N	N	
Psittacosis§	—	9	0	12	21	16	12	12	
Qfever§,§§§ total:	2	93	2	171	169	136	70	71	
acute	2	85	—	—	—	—	—	—	OH (1), CO (1)
chronic	—	8	—	—	—	—	—	—	
Rabies, human	—	—	0	1	3	2	7	2	
Rubella¶¶¶	—	13	—	12	11	11	10	7	
Rubella, congenital syndrome	—	—	—	—	1	1	—	1	
SARS-CoV§,****	—	—	—	—	—	—	—	8	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	—	110	2	132	125	129	132	161	
Syphilis, congenital (age <1 yr)	—	158	8	430	349	329	353	413	
Tetanus	—	9	1	28	41	27	34	20	
Toxic-shock syndrome (staphylococcal)§	—	46	2	92	101	90	95	133	
Trichinellosis	—	5	0	5	15	16	5	6	
Tularemia	—	84	2	137	95	154	134	129	
Typhoid fever	3	320	7	434	353	324	322	356	FL (1), WA (1), CA (1)
Vancomycin-intermediate *Staphylococcus aureus*§	—	6	0	37	6	2	—	N	
Vancomycin-resistant *Staphylococcus aureus*§	—	—	0	2	1	3	1	N	
Vibriosis (noncholera *Vibrio* species infections)§	3	374	7	447	N	N	N	N	FL (1), WA (1), CA (1)
Yellow fever	—	—	—	—	—	—	—	—	

See Table 1 footnotes on next page.

TABLE 1. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending October 18, 2008 (42nd week)*

—: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts.
* Incidence data for reporting year 2008 are provisional, whereas data for 2003, 2004, 2005, 2006, and 2007 are finalized.
† Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. Additional information is available at http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf.
§ Not notifiable in all states. Data from states where the condition is not notifiable are excluded from this table, except in 2007 and 2008 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/epo/dphsi/phs/infdis.htm.
¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.
** The names of the reporting categories changed in 2008 as a result of revisions to the case definitions. Cases reported prior to 2008 were reported in the categories: Ehrlichiosis, human monocytic (analogous to *E. chaffeensis*); Ehrlichiosis, human granulocytic (analogous to *Anaplasma phagocytophilum*), and Ehrlichiosis, unspecified, or other agent (which included cases unable to be clearly placed in other categories, as well as possible cases of *E. ewingii*).
†† Data for *H. influenzae* (all ages, all serotypes) are available in Table II.
§§ Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Updates of pediatric HIV data have been temporarily suspended until upgrading of the national HIV/AIDS surveillance data management system is completed. Data for HIV/AIDS, when available, are displayed in Table IV, which appears quarterly.
¶¶ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Eighty-seven cases occurring during the 2007–08 influenza season have been reported.
*** No measles cases were reported for the current week.
††† Data for meningococcal disease (all serogroups) are available in Table II.
§§§ In 2008, Q fever acute and chronic reporting categories were recognized as a result of revisions to the Q fever case definition. Prior to that time, case counts were not differentiated with respect to acute and chronic Q fever cases.
¶¶¶ No rubella cases were reported for the current week.
**** Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals October 18, 2008, with historical data



* No measles cases were reported for the current 4-week period yielding a ratio for week 42 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.

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TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending October 18, 2008, and October 20, 2007 (42nd week)*

Reporting area	Chlamydia†					Coccidiodomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	12,915	21,187	28,892	863,362	883,610	64	122	341	5,118	5,932	71	102	424	5,374	9,628
New England	446	704	1,516	29,191	28,495	—	0	1	1	2	—	5	36	269	284
Connecticut	179	210	1,093	9,047	8,484	N	0	0	N	N	—	0	34	34	42
Maine§	—	49	72	1,962	2,074	N	0	0	N	N	—	1	6	38	42
Massachusetts	209	325	660	13,791	12,862	N	0	0	N	N	—	2	9	91	111
New Hampshire	21	41	73	1,716	1,702	—	0	1	1	2	—	1	4	48	43
Rhode Island§	9	54	90	2,091	2,519	—	0	0	—	—	—	0	2	7	9
Vermont§	28	15	52	584	854	N	0	0	N	N	—	1	7	51	37
Mid. Atlantic	1,673	2,754	4,959	117,400	115,667	—	0	0	—	—	3	13	34	599	1,226
New Jersey	—	416	520	15,469	17,408	N	0	0	N	N	—	1	2	25	59
New York (Upstate)	—	563	2,177	21,731	21,555	N	0	0	N	N	—	5	18	227	204
New York City	921	1,019	3,039	46,597	42,017	N	0	0	N	N	—	2	6	87	88
Pennsylvania	752	821	1,021	33,603	34,687	N	0	0	N	N	3	5	15	260	875
E.N. Central	1,093	3,495	4,373	137,987	144,128	—	1	3	38	29	26	25	121	1,621	1,612
Illinois	—	1,058	1,711	37,893	42,401	N	0	0	N	N	—	2	6	73	176
Indiana	196	377	656	16,246	17,045	N	0	0	N	N	—	3	41	162	80
Michigan	621	826	1,226	35,945	30,192	—	0	3	29	20	2	5	12	216	158
Ohio	31	881	1,261	34,226	38,482	—	0	1	9	9	22	6	59	590	497
Wisconsin	245	340	612	13,677	16,008	N	0	0	N	N	2	8	46	580	701
W.N. Central	899	1,243	1,701	52,253	51,051	—	0	77	1	7	7	17	71	797	1,385
Iowa	197	164	240	7,171	7,066	N	0	0	N	N	2	5	30	245	569
Kansas	301	174	529	7,524	6,585	N	0	0	N	N	1	1	8	69	127
Minnesota	—	266	373	10,672	10,959	—	0	77	—	—	—	5	21	189	212
Missouri	358	473	566	19,648	18,876	—	0	1	1	7	4	3	13	135	151
Nebraska§	—	93	252	3,544	4,142	N	0	1	N	N	—	2	8	90	149
North Dakota	—	33	65	1,357	1,369	N	0	0	N	N	—	0	51	5	21
South Dakota	43	54	85	2,337	2,054	N	0	0	N	N	—	1	9	64	156
S. Atlantic	2,915	3,750	7,609	151,854	174,336	—	0	1	4	4	22	18	54	751	1,021
Delaware	113	66	150	2,936	2,714	—	0	1	1	—	—	0	2	11	18
District of Columbia	21	133	217	5,634	4,799	—	0	1	—	1	—	0	2	7	3
Florida	1,181	1,339	1,569	56,100	46,138	N	0	0	N	N	9	8	35	385	532
Georgia	12	385	1,338	13,900	34,699	N	0	0	N	N	2	4	14	169	202
Maryland§	366	457	667	18,364	17,890	—	0	1	3	3	—	0	4	24	30
North Carolina	—	43	4,783	5,901	23,379	N	0	0	N	N	11	0	18	54	96
South Carolina§	731	463	3,047	21,570	21,938	N	0	0	N	N	—	1	15	33	63
Virginia§	488	581	1,059	25,038	20,201	N	0	0	N	N	—	1	4	52	67
West Virginia	3	58	96	2,411	2,578	N	0	0	N	N	—	0	3	16	10
E.S. Central	1,066	1,565	2,394	65,680	66,860	—	0	0	—	—	—	3	25	129	552
Alabama§	—	471	589	17,172	20,493	N	0	0	N	N	—	1	9	53	97
Kentucky	116	234	370	9,670	6,582	N	0	0	N	N	—	0	10	28	243
Mississippi	523	364	1,048	16,366	17,499	N	0	0	N	N	—	0	3	16	91
Tennessee§	427	532	791	22,472	22,286	N	0	0	N	N	—	1	6	32	121
W.S. Central	1,919	2,729	4,426	114,372	100,397	—	0	1	3	2	2	5	130	432	363
Arkansas§	251	274	455	11,539	7,918	N	0	0	N	N	—	0	6	34	52
Louisiana	275	375	774	15,798	16,139	—	0	1	3	2	—	1	6	46	50
Oklahoma	—	207	392	7,668	10,664	N	0	0	N	N	2	1	16	115	102
Texas§	1,393	1,879	3,923	79,367	65,676	N	0	0	N	N	—	2	117	237	159
Mountain	553	1,206	1,811	46,543	59,380	46	88	170	3,437	3,697	3	10	77	445	2,737
Arizona	221	438	650	16,133	20,082	46	87	168	3,367	3,574	1	1	9	79	44
Colorado	58	196	488	7,365	14,024	N	0	0	N	N	2	1	12	90	194
Idaho§	—	61	314	2,835	2,940	N	0	0	N	N	—	1	51	48	394
Montana§	21	58	363	2,414	2,116	N	0	1	N	N	—	1	6	37	55
Nevada§	—	176	416	6,668	7,817	—	1	7	41	52	—	0	2	12	33
New Mexico§	—	138	561	5,293	7,239	—	0	3	23	19	—	2	23	137	109
Utah	253	118	209	4,681	4,192	—	0	5	4	49	—	1	19	31	1,857
Wyoming§	—	28	58	1,154	970	—	0	1	2	3	—	0	4	11	51
Pacific	2,351	3,697	4,676	148,082	143,296	18	32	217	1,629	2,191	8	9	29	331	448
Alaska	86	91	129	3,575	3,937	N	0	0	N	N	—	0	1	3	3
California	1,778	2,870	4,115	116,306	111,723	18	32	217	1,629	2,191	4	5	14	200	237
Hawaii	—	108	152	4,222	4,579	N	0	0	N	N	—	0	1	2	6
Oregon§	223	184	402	7,996	7,759	N	0	0	N	N	—	1	4	46	116
Washington	264	383	634	15,983	15,298	N	0	0	N	N	4	2	16	80	86
American Samoa	—	0	22	73	95	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	5	24	107	694	—	0	0	—	—	—	0	0	—	—
Puerto Rico	216	117	612	5,622	6,136	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	12	23	502	143	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Chlamydia refers to genital infections caused by *Chlamydia trachomatis*.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Due to technical difficulty, no data from the NEDSS system were included in week 42.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending October 18, 2008, and October 20, 2007 (42nd week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive All ages, all serotypes†				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	259	308	1,158	13,369	14,695	3,635	5,979	8,913	240,617	284,512	20	47	173	2,028	1,958
New England	4	24	49	1,036	1,219	69	103	227	4,232	4,515	1	3	12	124	148
Connecticut	1	6	11	247	308	32	51	199	2,085	1,726	1	0	9	35	39
Maine§	—	3	12	131	158	—	2	6	77	100	—	0	3	9	9
Massachusetts	—	10	18	343	516	31	38	127	1,700	2,177	—	1	5	57	75
New Hampshire	3	2	11	123	26	—	2	6	81	123	—	0	1	9	15
Rhode Island§	—	1	7	64	67	6	6	13	265	339	—	0	1	6	8
Vermont§	—	3	13	128	144	—	1	5	24	50	—	0	3	8	2
Mid. Atlantic	20	60	131	2,523	2,546	331	627	1,028	26,339	29,751	4	10	31	401	378
New Jersey	—	8	14	300	332	—	108	168	3,971	4,916	—	1	7	61	56
New York (Upstate)	—	23	111	916	919	—	124	545	4,865	5,498	—	3	22	122	106
New York City	5	16	27	652	695	174	181	518	8,582	8,818	—	1	6	67	84
Pennsylvania	15	15	40	655	600	157	224	394	8,921	10,519	4	4	8	151	132
E.N. Central	24	48	75	1,926	2,362	567	1,246	1,644	49,574	58,671	1	7	28	297	298
Illinois	—	11	20	425	753	—	370	589	13,227	15,917	—	2	7	83	95
Indiana	N	0	0	N	N	89	151	284	6,623	7,342	—	1	20	62	47
Michigan	2	11	19	448	502	399	327	657	13,744	12,451	—	0	3	16	23
Ohio	21	16	31	702	662	2	308	531	12,284	17,412	1	2	6	112	83
Wisconsin	1	9	23	351	445	77	100	183	3,696	5,549	—	1	2	24	50
W.N. Central	92	28	621	1,629	1,071	221	322	425	13,231	15,936	4	3	24	155	113
Iowa	1	6	16	261	252	23	29	48	1,218	1,605	—	0	1	2	1
Kansas	2	3	11	134	150	84	41	130	1,842	1,861	—	0	3	11	11
Minnesota	81	0	575	590	6	5	59	92	2,366	2,782	3	0	21	53	49
Missouri	8	8	22	377	435	103	150	210	6,456	8,186	1	1	6	60	35
Nebraska§	—	4	10	158	125	—	26	47	995	1,191	—	0	2	21	14
North Dakota	—	0	36	17	16	—	2	6	82	102	—	0	2	8	3
South Dakota	—	1	10	92	87	6	6	15	272	209	—	0	0	—	—
S. Atlantic	43	54	85	2,124	2,447	953	1,261	3,072	51,434	66,187	6	11	29	520	499
Delaware	—	1	3	30	37	28	20	44	857	1,053	—	0	2	6	8
District of Columbia	—	1	5	44	62	15	48	104	2,127	1,924	—	0	1	8	3
Florida	35	22	52	1,015	1,031	347	454	549	18,770	18,845	1	3	10	147	134
Georgia	8	11	25	446	542	1	190	560	5,339	14,255	4	2	9	122	100
Maryland§	—	5	12	183	220	131	118	188	4,951	5,359	—	2	6	75	73
North Carolina	N	0	0	N	N	—	54	1,949	2,638	10,578	1	1	9	62	48
South Carolina§	—	2	7	85	91	239	182	832	7,847	8,460	—	1	7	40	41
Virginia§	—	8	39	281	426	192	165	486	8,330	4,925	—	1	6	43	68
West Virginia	—	0	5	40	38	—	15	26	575	788	—	0	3	17	24
E.S. Central	—	8	21	337	456	337	565	945	23,602	26,105	—	3	8	104	110
Alabama§	—	5	12	186	210	—	183	287	6,804	8,813	—	0	2	16	24
Kentucky	N	0	0	N	N	36	90	153	3,718	2,596	—	0	1	2	8
Mississippi	N	0	0	N	N	168	131	401	5,885	6,688	—	0	2	13	7
Tennessee§	—	4	11	151	246	133	164	296	7,195	8,008	—	2	6	73	71
W.S. Central	2	7	41	325	355	631	967	1,355	39,184	41,640	4	2	29	91	85
Arkansas§	—	3	8	105	128	62	87	167	3,774	3,422	—	0	3	8	9
Louisiana	—	2	9	97	116	103	165	317	6,818	9,254	—	0	2	7	7
Oklahoma	2	3	35	123	111	—	79	124	2,903	4,121	4	1	21	70	60
Texas§	N	0	1	N	N	466	636	1,102	25,689	24,843	—	0	3	6	9
Mountain	14	28	59	1,160	1,427	124	210	337	8,090	11,198	—	5	14	232	209
Arizona	1	3	7	108	162	31	67	111	2,317	4,133	—	2	11	98	78
Colorado	13	11	27	439	452	74	58	102	2,485	2,781	—	1	4	44	50
Idaho§	—	3	19	144	154	—	3	13	123	224	—	0	4	12	5
Montana§	—	1	9	68	90	2	2	48	95	54	—	0	1	2	2
Nevada§	—	2	6	76	114	—	41	130	1,585	1,908	—	0	1	12	10
New Mexico§	—	2	7	73	100	—	24	104	978	1,417	—	1	4	29	34
Utah	—	6	27	235	320	17	11	36	408	617	—	1	6	32	26
Wyoming§	—	0	3	17	35	—	2	9	99	64	—	0	2	3	4
Pacific	60	55	185	2,308	2,812	402	618	746	24,931	30,509	—	2	7	104	118
Alaska	—	2	10	81	62	10	10	24	403	450	—	0	4	15	10
California	36	35	91	1,493	1,906	336	521	657	20,635	25,481	—	0	3	25	45
Hawaii	—	1	5	35	65	—	11	22	465	537	—	0	2	15	10
Oregon§	9	9	19	375	379	29	23	53	995	964	—	1	4	46	51
Washington	15	9	87	324	400	27	59	90	2,433	3,077	—	0	3	3	2
American Samoa	—	0	0	—	—	—	0	1	3	3	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	2	—	1	12	56	111	—	0	1	—	—
Puerto Rico	—	2	13	107	337	3	5	25	221	269	—	0	0	—	2
U.S. Virgin Islands	—	0	0	—	—	—	2	6	93	37	N	0	0	N	N

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 are provisional.
† Data for *H. influenzae* (age <5 yrs for serotype b, nonserotype b, and unknown serotype) are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Due to technical difficulty, no data from the NEDSS system were included in week 42.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending October 18, 2008, and October 20, 2007 (42nd week)*

Reporting area	Hepatitis (viral, acute), by type†										Legionellosis				
	A					B									
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	35	47	171	1,995	2,354	22	69	259	2,679	3,479	19	55	138	2,180	2,081
New England	—	2	7	95	114	—	1	7	50	101	4	3	14	106	123
Connecticut	—	0	4	26	20	—	0	7	19	34	4	0	5	37	32
Maine§	—	0	2	6	3	—	0	2	10	10	—	0	2	7	4
Massachusetts	—	1	5	38	59	—	0	3	9	37	—	0	3	13	34
New Hampshire	—	0	2	12	12	—	0	1	6	4	—	0	5	24	7
Rhode Island§	—	0	2	11	12	—	0	2	4	13	—	0	5	20	37
Vermont§	—	0	1	2	8	—	0	1	2	3	—	0	1	5	9
Mid. Atlantic	2	6	12	233	387	3	9	15	344	457	5	15	58	744	661
New Jersey	—	1	4	42	110	—	3	7	102	129	—	1	8	62	89
New York (Upstate)	—	1	6	53	63	—	1	5	55	72	—	5	19	264	178
New York City	—	2	6	86	140	—	2	6	69	100	—	2	11	89	146
Pennsylvania	2	1	6	52	74	3	3	7	118	156	5	6	33	329	248
E.N. Central	4	6	16	260	277	3	7	12	302	381	2	11	38	480	495
Illinois	—	2	10	83	100	—	1	5	70	117	—	1	5	59	100
Indiana	—	0	4	19	23	1	0	6	34	46	—	1	7	39	49
Michigan	—	2	7	98	73	—	2	6	101	94	—	2	16	134	142
Ohio	4	1	4	39	52	2	2	7	91	106	2	5	18	234	173
Wisconsin	—	0	2	21	29	—	0	1	6	18	—	0	3	14	31
W.N. Central	8	4	29	224	141	1	2	9	76	94	1	2	9	99	94
Iowa	—	1	7	97	41	—	0	2	13	21	—	0	2	12	10
Kansas	—	0	3	12	6	—	0	3	6	8	—	0	1	2	9
Minnesota	8	0	23	36	56	1	0	5	8	16	1	0	4	16	23
Missouri	—	0	3	36	19	—	1	4	43	33	—	1	5	49	37
Nebraska§	—	0	5	39	14	—	0	1	5	10	—	0	4	18	11
North Dakota	—	0	2	—	—	—	0	1	1	—	—	0	2	—	—
South Dakota	—	0	1	4	5	—	0	1	—	6	—	0	1	2	4
S. Atlantic	4	8	15	313	407	8	16	60	669	826	3	8	28	359	333
Delaware	—	0	1	6	7	—	0	3	7	14	—	0	2	11	9
District of Columbia	U	0	0	U	U	U	0	0	U	U	1	0	1	13	13
Florida	2	3	8	127	128	7	6	12	272	275	1	3	7	120	118
Georgia	—	1	4	38	57	1	3	6	105	127	—	0	3	22	30
Maryland§	—	1	3	31	67	—	1	4	53	97	—	2	10	96	62
North Carolina	2	0	9	57	49	—	0	17	73	111	1	0	7	29	36
South Carolina§	—	0	2	11	15	—	1	6	44	54	—	0	2	10	16
Virginia§	—	1	5	38	76	—	2	16	77	110	—	1	6	39	41
West Virginia	—	0	2	5	8	—	1	30	38	38	—	0	3	19	8
E.S. Central	—	1	9	64	92	—	7	13	278	311	—	2	10	92	81
Alabama§	—	0	4	9	18	—	2	5	84	107	—	0	2	12	9
Kentucky	—	0	3	24	19	—	2	5	73	60	—	1	4	46	42
Mississippi	—	0	2	4	8	—	0	3	32	32	—	0	1	1	—
Tennessee§	—	0	6	27	47	—	2	8	89	112	—	1	5	33	30
W.S. Central	—	5	55	186	209	1	14	131	500	718	—	1	23	57	104
Arkansas§	—	0	1	5	11	—	1	4	30	63	—	0	2	9	12
Louisiana	—	0	1	10	27	—	1	4	62	82	—	0	2	8	4
Oklahoma	—	0	3	7	10	1	2	37	89	66	—	0	3	3	5
Texas§	—	4	53	164	161	—	8	107	319	507	—	1	18	37	83
Mountain	1	4	9	155	192	—	4	10	154	172	—	2	5	59	91
Arizona	1	2	8	71	130	—	1	5	54	71	—	0	3	16	34
Colorado	—	1	3	32	21	—	0	3	23	30	—	0	1	6	20
Idaho§	—	0	3	17	4	—	0	2	6	11	—	0	1	3	5
Montana§	—	0	1	1	9	—	0	1	2	—	—	0	1	4	3
Nevada§	—	0	2	5	10	—	1	3	30	37	—	0	1	8	8
New Mexico§	—	0	3	15	9	—	0	2	9	11	—	0	1	4	9
Utah	—	0	2	11	6	—	0	5	27	8	—	0	3	18	9
Wyoming§	—	0	1	3	3	—	0	1	3	4	—	0	0	—	3
Pacific	16	10	51	465	535	6	8	30	306	419	4	4	18	184	99
Alaska	—	0	1	2	4	—	0	2	9	5	—	0	1	1	—
California	16	8	42	382	463	4	5	19	215	311	3	3	14	146	70
Hawaii	—	0	2	16	5	—	0	2	6	12	—	0	1	5	2
Oregon§	—	0	3	23	23	—	1	3	36	49	—	0	2	15	10
Washington	—	1	7	42	40	2	1	9	40	42	1	0	3	17	17
American Samoa	—	0	0	—	—	—	0	0	—	14	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	1	—	2	—	0	0	—	—
Puerto Rico	—	0	4	16	56	—	1	5	36	70	—	0	1	1	4
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 are provisional.
† Data for acute hepatitis C, viral are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Due to technical difficulty, no data from the NEDSS system were included in week 42.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending October 18, 2008, and October 20, 2007 (42nd week)*

Reporting area	Lyme Disease					Malaria					Meningococcal disease, invasive† All serotypes				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	62	376	1,378	20,125	23,011	3	22	136	823	1,040	1	19	53	853	885
New England	—	49	244	2,931	7,156	—	1	35	32	48	—	0	3	20	39
Connecticut	—	0	35	—	2,856	—	0	27	11	1	—	0	1	1	6
Maine§	—	2	73	468	363	—	0	1	—	6	—	0	1	4	7
Massachusetts	—	14	114	1,039	2,827	—	0	2	14	29	—	0	3	15	19
New Hampshire	—	10	129	1,150	827	—	0	1	3	9	—	0	0	—	3
Rhode Island§	—	0	12	—	161	—	0	8	—	—	—	0	1	—	1
Vermont§	—	1	38	274	122	—	0	1	4	3	—	0	1	—	3
Mid. Atlantic	34	174	988	12,257	9,439	—	5	14	199	321	—	2	6	99	113
New Jersey	—	34	188	2,301	2,764	—	0	2	—	61	—	0	2	10	16
New York (Upstate)	—	53	453	4,045	2,739	—	1	8	28	56	—	0	3	25	30
New York City	—	1	13	25	373	—	3	10	139	168	—	0	2	24	20
Pennsylvania	34	55	517	5,886	3,563	—	1	3	32	36	—	1	5	40	47
E.N. Central	2	10	92	846	1,990	1	2	7	102	109	—	3	9	135	138
Illinois	—	0	9	69	147	—	1	6	41	51	—	1	4	40	52
Indiana	—	0	8	34	43	—	0	2	5	9	—	0	4	23	24
Michigan	—	0	12	82	50	—	0	2	13	15	—	0	3	25	24
Ohio	—	0	4	33	31	1	0	3	27	19	—	1	4	33	29
Wisconsin	2	7	79	628	1,719	—	0	3	16	15	—	0	2	14	9
W.N. Central	—	8	740	924	456	1	1	9	54	30	—	2	8	78	56
Iowa	—	1	8	81	115	—	0	1	5	3	—	0	3	16	12
Kansas	—	0	1	3	8	1	0	1	8	3	—	0	1	3	4
Minnesota	—	2	731	789	315	—	0	8	22	11	—	0	7	22	16
Missouri	—	0	4	36	9	—	0	4	11	6	—	0	3	23	14
Nebraska§	—	0	2	11	6	—	0	2	8	6	—	0	1	11	5
North Dakota	—	0	9	1	3	—	0	2	—	—	—	0	1	1	2
South Dakota	—	0	1	3	—	—	0	0	—	1	—	0	1	2	3
S. Atlantic	16	61	172	2,813	3,741	—	5	15	215	223	—	3	10	133	145
Delaware	—	11	37	629	624	—	0	1	2	4	—	0	1	2	1
District of Columbia	5	3	11	141	109	—	0	2	3	2	—	0	0	—	—
Florida	10	1	8	87	24	—	1	7	48	49	—	1	3	46	56
Georgia	—	0	3	20	8	—	1	5	46	36	—	0	2	16	21
Maryland§	—	29	136	1,254	2,117	—	1	5	48	56	—	0	4	15	19
North Carolina	1	0	7	33	42	—	0	7	24	20	—	0	4	12	16
South Carolina§	—	0	3	18	25	—	0	2	9	6	—	0	3	19	15
Virginia§	—	11	68	569	734	—	1	7	35	49	—	0	2	18	15
West Virginia	—	0	11	62	58	—	0	0	—	1	—	0	1	5	2
E.S. Central	—	0	5	39	47	—	0	2	14	32	—	1	6	41	44
Alabama§	—	0	3	10	11	—	0	1	3	6	—	0	2	5	8
Kentucky	—	0	1	3	5	—	0	1	4	7	—	0	2	7	9
Mississippi	—	0	1	1	1	—	0	1	1	2	—	0	2	10	10
Tennessee§	—	0	3	25	30	—	0	2	6	17	—	0	3	19	17
W.S. Central	—	2	11	70	67	—	1	64	58	79	—	2	13	88	90
Arkansas§	—	0	1	2	1	—	0	1	—	—	—	0	2	7	9
Louisiana	—	0	1	3	2	—	0	1	3	14	—	0	3	20	25
Oklahoma	—	0	1	—	—	—	0	4	2	5	—	0	5	12	15
Texas§	—	1	10	65	64	—	1	60	53	60	—	1	7	49	41
Mountain	—	0	5	38	39	—	1	3	26	57	—	1	4	48	57
Arizona	—	0	2	6	2	—	0	2	12	12	—	0	2	9	12
Colorado	—	0	1	5	—	—	0	1	4	21	—	0	1	11	20
Idaho§	—	0	2	8	7	—	0	1	1	3	—	0	2	3	4
Montana§	—	0	1	4	4	—	0	0	—	3	—	0	1	5	2
Nevada§	—	0	2	9	11	—	0	3	4	2	—	0	2	6	4
New Mexico§	—	0	2	4	5	—	0	1	2	5	—	0	1	7	2
Utah	—	0	0	—	7	—	0	1	3	11	—	0	1	5	11
Wyoming§	—	0	1	2	3	—	0	0	—	—	—	0	1	2	2
Pacific	10	4	10	207	76	1	3	9	123	141	1	4	17	211	203
Alaska	—	0	2	5	7	—	0	2	4	2	—	0	2	3	1
California	10	3	8	154	62	1	2	8	91	101	—	3	17	149	150
Hawaii	N	0	0	N	N	—	0	1	2	2	—	0	2	4	8
Oregon§	—	0	5	39	6	—	0	2	4	13	1	1	3	31	26
Washington	—	0	7	9	1	—	0	3	22	23	—	0	5	24	18
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	1	1	1	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	1	3	—	0	1	3	6
U.S. Virgin Islands	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 are provisional.
† Data for meningococcal disease, invasive caused by serogroups A, C, Y, & W-135; serogroup B; other serogroup; and unknown serogroup are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Due to technical difficulty, no data from the NEDSS system were included in week 42.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending October 18, 2008, and October 20, 2007 (42nd week)*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	58	146	849	6,357	7,862	43	103	152	4,021	5,150	19	27	195	1,752	1,764
New England	—	15	49	543	1,224	4	7	21	300	459	—	0	1	2	8
Connecticut	—	1	4	34	76	4	4	17	169	194	—	0	0	—	—
Maine†	—	0	5	26	71	—	1	5	38	74	N	0	1	N	N
Massachusetts	—	12	33	420	952	N	0	0	N	N	—	0	1	1	7
New Hampshire	—	0	4	30	68	—	1	3	35	45	—	0	1	1	1
Rhode Island†	—	0	25	22	19	N	0	4	N	N	—	0	0	—	—
Vermont†	—	0	6	11	38	—	1	6	58	146	—	0	0	—	—
Mid. Atlantic	7	19	43	735	1,032	11	22	43	1,021	854	—	1	5	60	70
New Jersey	—	0	9	4	183	—	0	0	—	—	—	0	2	2	26
New York (Upstate)	—	6	24	341	477	11	9	20	425	443	—	0	2	15	6
New York City	—	1	6	46	113	—	0	2	13	39	—	0	2	22	23
Pennsylvania	7	9	23	344	259	—	13	28	583	372	—	0	2	21	15
E.N. Central	13	21	189	1,051	1,337	1	4	28	229	384	2	1	12	106	53
Illinois	—	3	9	155	152	—	1	21	97	109	—	1	9	69	34
Indiana	5	1	15	69	52	—	0	2	9	11	—	0	3	7	5
Michigan	1	5	13	202	253	—	1	8	67	194	—	0	1	3	3
Ohio	7	6	176	564	585	1	1	7	56	70	2	0	4	26	10
Wisconsin	—	2	8	61	295	N	0	0	N	N	—	0	1	1	1
W.N. Central	17	12	142	598	528	—	3	12	157	235	2	4	34	421	349
Iowa	—	1	9	64	129	—	0	2	20	29	—	0	2	6	15
Kansas	1	1	7	41	93	—	0	7	—	97	—	0	0	—	12
Minnesota	5	2	131	192	111	—	0	10	54	28	—	0	4	—	1
Missouri	11	3	18	209	74	—	0	9	47	38	2	3	34	392	303
Nebraska†	—	1	9	76	58	—	0	0	—	—	—	0	4	20	13
North Dakota	—	0	5	1	7	—	0	8	24	21	—	0	0	—	—
South Dakota	—	0	3	15	56	—	0	2	12	22	—	0	1	3	5
S. Atlantic	8	14	50	665	803	19	37	101	1,726	1,873	15	10	69	666	832
Delaware	—	0	3	14	10	—	0	0	—	—	—	0	3	25	16
District of Columbia	—	0	1	5	8	—	0	0	—	—	—	0	2	7	3
Florida	8	3	20	235	189	—	0	77	116	128	1	0	3	15	14
Georgia	—	1	6	59	33	—	6	42	288	248	2	1	8	64	56
Maryland†	—	2	8	80	94	—	8	17	342	363	—	1	5	54	54
North Carolina	—	0	38	79	273	11	9	16	389	417	12	0	55	343	521
South Carolina†	—	2	22	87	66	—	0	0	—	46	—	0	5	32	61
Virginia†	—	2	8	101	103	7	12	24	518	607	—	1	15	120	102
West Virginia	—	0	2	5	27	1	1	11	73	64	—	0	1	6	5
E.S. Central	2	6	13	227	397	2	1	7	91	141	—	3	22	245	246
Alabama†	—	0	5	30	84	—	0	0	—	—	—	1	8	71	81
Kentucky	1	1	8	59	22	2	0	4	41	18	—	0	1	1	5
Mississippi	1	2	9	77	220	—	0	1	2	2	—	0	3	6	17
Tennessee†	—	1	6	61	71	—	0	6	48	121	—	1	18	167	143
W.S. Central	—	20	198	1,008	885	4	2	40	83	917	—	1	153	220	172
Arkansas†	—	1	11	46	147	—	1	6	45	27	—	0	14	44	89
Louisiana	—	1	7	65	18	—	0	0	—	6	—	0	1	4	4
Oklahoma	—	0	26	32	6	4	0	32	36	45	—	0	132	142	45
Texas†	—	16	179	865	714	—	0	20	2	839	—	0	8	30	34
Mountain	2	17	37	638	899	—	4	15	67	84	—	0	3	27	31
Arizona	—	3	10	160	187	N	3	11	N	N	—	0	2	10	7
Colorado	2	3	13	122	255	—	0	0	—	—	—	0	1	1	3
Idaho†	—	0	5	24	37	—	0	1	—	10	—	0	1	1	4
Montana†	—	1	11	76	39	—	0	2	8	18	—	0	1	3	1
Nevada†	—	0	7	24	35	—	0	1	7	12	—	0	1	1	—
New Mexico†	—	0	5	31	66	—	0	3	24	10	—	0	1	2	4
Utah	—	5	27	188	260	—	0	6	13	16	—	0	0	—	—
Wyoming†	—	0	2	13	20	—	0	3	15	18	—	0	2	9	12
Pacific	9	20	303	892	757	2	4	13	164	203	—	0	1	4	3
Alaska	7	2	29	165	45	—	0	4	12	39	N	0	0	N	N
California	—	7	129	257	376	2	3	12	139	153	—	0	1	1	1
Hawaii	—	0	2	10	18	—	0	0	—	—	N	0	0	N	N
Oregon†	—	3	8	144	106	—	0	4	13	11	—	0	1	3	2
Washington	2	6	169	316	212	—	0	0	—	—	N	0	0	N	N
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	0	—	—	2	1	5	54	44	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

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* Incidence data for reporting year 2008 are provisional.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Due to technical difficulty, no data from the NEDSS system were included in week 42.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending October 18, 2008, and October 20, 2007 (42nd week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	451	798	2,110	34,467	37,706	38	81	247	3,941	4,004	171	392	1,227	14,590	14,201
New England	—	20	433	1,521	2,040	—	3	41	187	281	—	3	32	144	229
Connecticut	—	0	403	403	431	—	0	38	38	71	—	0	31	31	44
Maine§	—	2	14	115	109	—	0	3	16	33	—	0	6	19	14
Massachusetts	—	14	52	741	1,189	—	2	11	80	128	—	2	5	78	145
New Hampshire	—	3	10	115	148	—	0	3	28	32	—	0	1	3	5
Rhode Island§	—	1	7	77	91	—	0	3	8	7	—	0	2	10	18
Vermont§	—	1	7	70	72	—	0	3	17	10	—	0	1	3	3
Mid. Atlantic	15	92	164	4,096	5,080	—	7	192	536	446	3	37	94	1,799	643
New Jersey	—	14	30	488	1,071	—	1	4	25	101	—	8	37	568	146
New York (Upstate)	—	25	73	1,104	1,197	—	3	188	375	173	—	9	35	501	124
New York City	1	23	51	1,082	1,128	—	0	5	46	46	—	11	35	588	224
Pennsylvania	14	29	78	1,422	1,684	—	2	9	90	126	3	2	65	142	149
E.N. Central	33	87	175	3,802	5,036	9	10	53	648	621	48	70	145	2,829	2,299
Illinois	—	20	63	824	1,725	—	1	7	61	114	—	18	29	629	547
Indiana	—	9	53	495	557	—	1	14	80	77	—	12	83	538	94
Michigan	4	17	37	748	809	—	2	33	176	103	—	2	7	101	67
Ohio	28	25	65	1,064	1,100	9	2	17	170	138	44	21	76	1,257	1,020
Wisconsin	1	16	49	671	845	—	3	17	161	189	4	8	39	304	571
W.N. Central	16	50	126	2,236	2,364	3	14	57	672	662	6	18	39	728	1,581
Iowa	—	8	15	341	402	3	2	20	180	157	—	3	11	125	75
Kansas	2	6	25	366	352	—	0	4	37	46	3	0	5	43	23
Minnesota	—	13	70	602	561	—	3	21	165	201	—	4	25	259	201
Missouri	14	14	33	589	637	—	2	9	124	131	3	5	29	184	1,141
Nebraska§	—	5	13	189	229	—	1	28	127	75	—	0	2	5	22
North Dakota	—	0	35	35	37	—	0	20	2	8	—	0	15	35	3
South Dakota	—	2	11	114	146	—	0	4	37	44	—	1	9	77	116
S. Atlantic	194	263	448	9,223	9,584	8	13	52	645	563	47	60	149	2,429	3,699
Delaware	1	3	9	133	128	—	0	1	10	13	—	0	1	7	10
District of Columbia	—	1	4	42	49	—	0	1	10	—	—	0	3	13	15
Florida	129	102	181	4,025	3,668	4	2	18	133	107	18	16	75	688	1,912
Georgia	11	38	84	1,750	1,647	—	1	7	74	82	11	25	48	894	1,280
Maryland§	—	12	34	567	762	—	2	9	102	72	—	1	5	59	91
North Carolina	53	20	228	1,085	1,312	4	1	12	86	119	18	2	27	169	71
South Carolina§	—	18	55	749	895	—	0	4	32	10	—	9	32	439	138
Virginia§	—	19	49	738	970	—	2	25	173	143	—	4	13	144	158
West Virginia	—	3	25	134	153	—	0	3	25	17	—	0	61	16	24
E.S. Central	13	55	129	2,613	2,785	2	5	21	224	276	—	38	178	1,448	1,992
Alabama§	—	14	46	679	763	—	1	17	51	59	—	8	43	325	553
Kentucky	13	9	18	383	479	2	1	7	81	105	—	5	24	229	398
Mississippi	—	14	57	943	866	—	0	2	5	6	—	7	112	286	856
Tennessee§	—	15	36	608	677	—	2	7	87	106	—	15	32	608	185
W.S. Central	29	97	894	4,089	3,966	—	5	25	169	218	7	71	748	3,063	1,738
Arkansas§	—	12	39	589	666	—	1	3	37	39	—	7	27	429	70
Louisiana	—	18	46	789	780	—	0	1	2	10	—	11	25	501	433
Oklahoma	29	16	72	683	515	—	0	14	25	16	7	3	32	139	101
Texas§	—	41	794	2,028	2,005	—	3	11	105	153	—	48	702	1,994	1,134
Mountain	27	57	113	2,557	2,218	1	9	23	435	505	16	18	43	790	784
Arizona	14	19	45	881	781	—	1	8	62	91	11	9	31	438	443
Colorado	13	11	43	587	488	1	2	14	138	143	5	2	9	101	101
Idaho§	—	3	14	132	116	—	2	12	91	115	—	0	1	11	11
Montana§	—	2	10	90	81	—	0	3	30	—	—	0	1	6	22
Nevada§	—	3	14	155	214	—	0	4	19	25	—	2	13	134	54
New Mexico§	—	6	32	419	241	—	1	6	42	35	—	1	7	67	91
Utah	—	6	17	260	235	—	1	6	49	81	—	1	4	30	30
Wyoming§	—	1	5	33	62	—	0	2	4	15	—	0	1	3	32
Pacific	124	111	399	4,330	4,633	15	8	51	425	432	44	30	81	1,360	1,236
Alaska	—	1	4	44	77	—	0	1	6	4	—	0	0	—	8
California	86	78	286	3,167	3,526	6	5	39	222	220	40	27	73	1,164	995
Hawaii	—	6	15	212	223	—	0	5	11	29	—	1	3	37	65
Oregon§	3	7	20	349	269	—	1	8	61	68	—	1	10	73	68
Washington	35	12	103	558	538	9	2	16	125	111	4	2	20	86	100
American Samoa	—	0	1	2	—	—	0	0	—	—	—	0	1	1	4
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	11	15	—	0	0	—	—	—	0	3	14	14
Puerto Rico	7	10	41	397	736	—	0	1	2	1	—	0	4	16	21
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 are provisional.
† Includes *E. coli* O157:H7; Shiga toxin-positive, serogroup non-O157; and Shiga toxin-positive, not serogrouped.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Due to technical difficulty, no data from the NEDSS system were included in week 42.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending October 18, 2008, and October 20, 2007 (42nd week)*

Reporting area	Streptococcal diseases, invasive, group A					*Streptococcus pneumoniae*, invasive disease, nondrug resistant† Age <5 years				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max		
United States	35	96	259	4,298	4,341	14	38	166	1,302	1,382
New England	2	6	31	306	338	—	1	14	56	103
Connecticut	1	0	26	95	104	—	0	11	—	12
Maine§	—	0	3	22	23	—	0	1	1	2
Massachusetts	—	3	8	138	163	—	1	5	39	70
New Hampshire	1	0	2	22	24	—	0	1	8	9
Rhode Island§	—	0	9	17	8	—	0	2	7	8
Vermont§	—	0	2	12	16	—	0	1	1	2
Mid. Atlantic	3	18	43	851	804	—	5	19	151	253
New Jersey	—	3	11	133	147	—	1	6	30	49
New York (Upstate)	—	6	17	279	247	—	2	14	80	83
New York City	—	4	10	159	189	—	1	8	41	121
Pennsylvania	3	6	16	280	221	N	0	4	N	N
E.N. Central	11	19	42	809	831	1	6	23	217	241
Illinois	—	5	16	211	252	—	1	6	46	60
Indiana	5	2	11	118	99	—	1	14	32	15
Michigan	1	3	10	147	173	—	1	5	58	61
Ohio	5	5	14	231	197	1	1	5	48	53
Wisconsin	—	2	10	102	110	—	1	3	33	52
W.N. Central	3	4	39	326	288	6	2	16	117	76
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	5	34	28	—	0	3	15	1
Minnesota	—	0	35	154	137	5	0	13	53	43
Missouri	3	1	10	75	74	1	1	2	30	21
Nebraska§	—	0	3	33	23	—	0	3	7	10
North Dakota	—	0	5	10	15	—	0	2	5	1
South Dakota	—	0	2	20	11	—	0	1	7	—
S. Atlantic	11	22	37	909	1,045	2	6	16	227	247
Delaware	—	0	2	6	10	—	0	0	—	—
District of Columbia	1	0	4	24	17	—	0	1	1	2
Florida	5	5	11	215	255	1	1	4	53	53
Georgia	—	5	14	201	204	1	1	5	57	56
Maryland§	—	4	8	144	175	—	1	5	45	52
North Carolina	5	2	10	125	141	N	0	0	N	N
South Carolina§	—	1	5	55	88	—	1	4	39	41
Virginia§	—	2	12	110	133	—	0	6	25	36
West Virginia	—	0	3	29	22	—	0	1	7	7
E.S. Central	—	4	9	145	179	—	2	11	72	78
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	3	33	36	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	3	16	5
Tennessee§	—	3	7	112	143	—	1	9	56	73
W.S. Central	1	8	85	364	261	—	5	66	203	190
Arkansas§	—	0	2	5	17	—	0	2	5	11
Louisiana	—	0	2	12	14	—	0	2	10	31
Oklahoma	1	2	19	93	58	—	1	7	56	42
Texas§	—	6	65	254	172	—	3	58	132	106
Mountain	4	10	22	458	477	2	5	12	183	181
Arizona	1	3	9	167	183	1	2	8	93	90
Colorado	3	3	8	133	117	1	1	4	52	38
Idaho§	—	0	2	12	16	—	0	1	3	2
Montana§	N	0	0	N	N	—	0	1	4	1
Nevada§	—	0	2	8	2	N	0	1	N	N
New Mexico§	—	2	8	84	82	—	0	3	15	28
Utah	—	1	5	48	72	—	0	3	15	22
Wyoming§	—	0	2	6	5	—	0	1	1	—
Pacific	—	3	9	130	118	—	0	5	13	13
Alaska	—	0	4	32	22	N	0	4	N	N
California	—	0	0	—	—	N	0	0	N	N
Hawaii	—	2	9	98	96	—	0	2	13	13
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	12	30	4	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	14	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 are provisional.
† Includes cases of invasive pneumococcal disease, in children aged <5 years, caused by *S. pneumoniae*, which is susceptible or for which susceptibility testing is not available (NNDSS event code 11717).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Due to technical difficulty, no data from the NEDSS system were included in week 42.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending October 18, 2008, and October 20, 2007 (42nd week)*

Reporting area	*Streptococcus pneumoniae*, invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Age <5 years									
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	19	58	307	2,288	2,390	3	9	43	340	402	112	233	351	9,356	8,925
New England	—	1	49	50	101	—	0	8	8	13	2	6	14	246	210
Connecticut	—	0	44	7	55	—	0	7	—	4	—	0	6	25	25
Maine§	—	0	2	15	11	—	0	1	2	2	—	0	2	10	9
Massachusetts	—	0	0	—	2	—	0	0	—	2	1	4	11	177	125
New Hampshire	—	0	0	—	—	—	0	0	—	—	1	0	2	16	24
Rhode Island§	—	0	3	16	18	—	0	1	4	3	—	0	5	13	24
Vermont§	—	0	2	12	15	—	0	1	2	2	—	0	5	5	3
Mid. Atlantic	2	4	13	205	135	—	0	2	19	25	27	32	51	1,370	1,260
New Jersey	—	0	0	—	—	—	0	0	—	—	—	4	10	162	177
New York (Upstate)	—	1	6	53	47	—	0	2	6	9	—	3	13	109	113
New York City	—	1	5	63	—	—	0	0	—	—	20	21	37	890	743
Pennsylvania	2	2	9	89	88	—	0	2	13	16	7	5	12	209	227
E.N. Central	3	14	64	568	623	1	2	14	81	92	13	18	34	785	709
Illinois	—	1	17	71	141	—	0	6	14	30	—	5	19	185	371
Indiana	—	2	39	169	140	—	0	11	20	22	—	2	10	112	43
Michigan	—	0	3	14	2	—	0	1	2	1	6	2	17	169	90
Ohio	3	8	17	314	340	1	1	4	45	39	6	6	14	272	156
Wisconsin	—	0	0	—	—	—	0	0	—	—	1	1	4	47	49
W.N. Central	2	3	115	134	164	—	0	9	8	35	—	7	15	310	288
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	13	16
Kansas	—	1	5	57	76	—	0	1	3	8	—	0	5	25	17
Minnesota	—	0	114	—	23	—	0	9	—	22	—	2	5	78	52
Missouri	2	1	8	72	51	—	0	1	2	1	—	5	10	186	192
Nebraska§	—	0	0	—	2	—	0	0	—	—	—	0	2	8	4
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	2	5	12	—	0	1	3	4	—	0	0	—	7
S. Atlantic	12	22	53	967	1,038	2	4	10	159	186	16	50	215	2,049	2,031
Delaware	—	0	1	3	10	—	0	0	—	2	2	0	4	13	12
District of Columbia	—	0	3	14	17	—	0	1	1	1	—	2	9	103	152
Florida	11	13	30	565	576	1	2	6	104	102	7	20	36	804	696
Georgia	1	7	22	304	377	1	1	5	46	73	—	10	175	375	376
Maryland§	—	0	2	4	1	—	0	1	1	—	1	6	14	261	257
North Carolina	N	0	0	N	N	N	0	0	N	N	—	5	19	220	270
South Carolina§	—	0	0	—	—	—	0	0	—	—	2	1	5	68	81
Virginia§	N	0	0	N	N	N	0	0	N	N	4	5	17	203	181
West Virginia	—	1	9	77	57	—	0	2	7	8	—	0	1	2	6
E.S. Central	—	6	15	225	208	—	1	4	41	28	13	21	34	882	725
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	17	350	306
Kentucky	—	1	6	64	21	—	0	2	11	2	—	1	7	68	48
Mississippi	—	0	5	4	43	—	0	1	1	—	8	3	15	131	95
Tennessee§	—	3	13	157	144	—	0	3	29	26	5	8	17	333	276
W.S. Central	—	2	7	64	68	—	0	2	12	7	34	40	61	1,654	1,501
Arkansas§	—	0	2	12	5	—	0	1	3	2	3	2	19	137	98
Louisiana	—	1	7	52	63	—	0	2	9	5	—	10	22	377	422
Oklahoma	N	0	1	N	N	N	0	1	N	N	—	1	5	54	55
Texas§	—	0	0	—	—	—	0	0	—	—	31	24	48	1,086	926
Mountain	—	1	7	72	50	—	0	2	4	13	2	9	29	327	385
Arizona	—	0	0	—	—	—	0	0	—	—	—	4	21	145	205
Colorado	—	0	0	—	—	—	0	0	—	—	2	2	7	84	42
Idaho§	N	0	0	N	N	N	0	0	N	N	—	0	1	3	1
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	3	—	1
Nevada§	N	1	4	N	N	N	0	1	N	N	—	1	6	58	88
New Mexico§	—	0	1	2	—	—	0	0	—	—	—	1	4	34	31
Utah	—	0	7	25	34	—	0	2	4	11	—	0	2	—	14
Wyoming§	—	0	1	2	16	—	0	1	—	2	—	0	1	3	3
Pacific	—	0	1	2	3	—	0	1	2	3	5	43	65	1,733	1,816
Alaska	N	0	0	N	N	N	0	0	N	N	—	0	1	1	7
California	N	0	0	N	N	N	0	0	N	N	4	39	59	1,558	1,672
Hawaii	—	0	1	2	3	—	0	1	2	3	—	0	2	12	7
Oregon§	N	0	0	N	N	N	0	0	N	N	—	0	3	18	15
Washington	N	0	0	N	N	N	0	0	N	N	1	4	9	144	115
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	0	—	4
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	3	11	125	129
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 are provisional.
† Includes cases of invasive pneumococcal disease caused by drug-resistant *S. pneumoniae* (DRSP) (NNDSS event code 11720).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Due to technical difficulty, no data from the NEDSS system were included in week 42.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending October 18, 2008, and October 20, 2007 (42nd week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007	Current week	Previous 52 weeks		Cum 2008	Cum 2007
		Med	Max				Med	Max				Med	Max		
United States	168	652	1,660	20,757	31,594	—	1	76	522	1,200	—	2	82	624	2,367
New England	—	13	68	425	2,042	—	0	2	5	5	—	0	1	3	6
Connecticut	—	0	38	—	1,168	—	0	2	4	2	—	0	1	3	2
Maine¶	—	0	26	—	278	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	1	1	—	—	0	0	—	3	—	0	0	—	3
New Hampshire	—	6	18	210	294	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	0	—	—	—	0	1	1	—	—	0	0	—	1
Vermont¶	—	6	17	214	302	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	50	54	113	1,846	3,950	—	0	7	36	21	—	0	4	16	8
New Jersey	N	0	0	N	N	—	0	1	3	1	—	0	1	4	—
New York (Upstate)	N	0	0	N	N	—	0	5	20	3	—	0	2	7	1
New York City	N	0	0	N	N	—	0	2	8	12	—	0	3	5	2
Pennsylvania	50	54	113	1,846	3,950	—	0	2	5	5	—	0	0	—	5
E.N. Central	59	145	336	5,093	9,022	—	0	6	36	110	—	0	5	22	64
Illinois	—	11	63	725	914	—	0	4	11	60	—	0	2	8	38
Indiana	—	0	222	—	222	—	0	1	2	14	—	0	1	1	10
Michigan	27	64	154	2,205	3,292	—	0	3	7	16	—	0	2	7	—
Ohio	30	50	128	1,801	3,711	—	0	3	14	13	—	0	2	2	10
Wisconsin	2	5	38	362	883	—	0	1	2	7	—	0	1	4	6
W.N. Central	18	23	145	939	1,268	—	0	6	40	248	—	0	23	154	732
Iowa	N	0	0	N	N	—	0	3	5	12	—	0	1	4	17
Kansas	1	5	36	309	468	—	0	2	6	14	—	0	3	23	26
Minnesota	—	0	0	—	—	—	0	2	3	44	—	0	6	18	57
Missouri	17	11	51	562	726	—	0	3	9	61	—	0	1	7	15
Nebraska¶	N	0	0	N	N	—	0	1	4	20	—	0	8	33	139
North Dakota	—	0	140	48	—	—	0	2	2	49	—	0	12	41	318
South Dakota	—	0	5	20	74	—	0	5	11	48	—	0	6	28	160
S. Atlantic	36	89	167	3,500	4,251	—	0	3	13	43	—	0	3	12	38
Delaware	—	1	6	45	41	—	0	0	—	1	—	0	1	1	—
District of Columbia	—	0	3	22	27	—	0	0	—	—	—	0	0	—	—
Florida	24	26	87	1,338	1,022	—	0	2	2	3	—	0	0	—	—
Georgia	N	0	0	N	N	—	0	1	3	23	—	0	1	4	26
Maryland¶	N	0	2	N	N	—	0	3	7	6	—	0	2	6	4
North Carolina	N	0	0	N	N	—	0	0	—	4	—	0	0	—	4
South Carolina¶	—	15	66	670	873	—	0	0	—	3	—	0	0	—	2
Virginia¶	—	20	81	848	1,348	—	0	0	—	3	—	0	1	1	2
West Virginia	12	13	66	573	940	—	0	1	1	—	—	0	0	—	—
E.S. Central	—	18	101	911	463	—	0	8	48	72	—	0	12	81	94
Alabama¶	—	18	101	901	461	—	0	3	10	16	—	0	3	9	6
Kentucky	N	0	0	N	N	—	0	1	2	4	—	0	0	—	—
Mississippi	—	0	2	10	2	—	0	6	31	47	—	0	10	66	82
Tennessee¶	N	0	0	N	N	—	0	1	5	5	—	0	2	6	6
W.S. Central	—	182	886	6,448	8,409	—	0	7	53	257	—	0	8	50	148
Arkansas¶	—	10	38	469	640	—	0	2	8	13	—	0	1	—	7
Louisiana	—	1	10	62	101	—	0	2	9	25	—	0	6	27	12
Oklahoma	N	0	0	N	N	—	0	1	3	59	—	0	1	5	45
Texas¶	—	166	852	5,917	7,668	—	0	6	33	160	—	0	4	18	84
Mountain	5	37	105	1,528	2,133	—	0	11	79	285	—	0	23	163	1,033
Arizona	—	0	0	—	—	—	0	10	47	47	—	0	6	30	42
Colorado	5	14	43	678	869	—	0	4	13	99	—	0	12	64	477
Idaho¶	N	0	0	N	N	—	0	1	2	11	—	0	7	30	119
Montana¶	—	6	27	241	314	—	0	1	—	37	—	0	2	5	165
Nevada¶	N	0	0	N	N	—	0	2	8	1	—	0	3	7	10
New Mexico¶	—	4	22	165	316	—	0	1	3	39	—	0	1	1	21
Utah	—	10	55	434	600	—	0	2	6	28	—	0	4	18	41
Wyoming¶	—	0	4	10	34	—	0	0	—	23	—	0	2	8	158
Pacific	—	1	7	67	56	—	0	35	212	159	—	0	20	123	244
Alaska	—	1	5	51	29	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	35	211	152	—	0	19	118	225
Hawaii	—	0	6	16	27	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	0	—	7	—	0	2	4	19
Washington	N	0	0	N	N	—	0	1	1	—	—	0	1	1	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	1	17	57	221	—	0	0	—	—	—	0	0	—	—
Puerto Rico	11	8	20	358	622	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2008 are provisional.
† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table I.
§ Not notifiable in all states. Data from states where the condition is not notifiable are excluded from this table, except in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/epo/dphsi/phs/infdis.htm.
¶ Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Due to technical difficulty, no data from the NEDSS system were included in week 42.

TABLE III. Deaths in 122 U.S. cities,* week ending October 18, 2008 (42nd week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	517	371	103	29	7	7	59
Boston, MA	133	96	29	3	4	1	15
Bridgeport, CT	43	31	9	2	—	1	7
Cambridge, MA	16	9	5	2	—	—	2
Fall River, MA	24	19	3	2	—	—	—
Hartford, CT	57	39	14	4	—	—	12
Lowell, MA	26	19	4	2	1	—	4
Lynn, MA	3	2	1	—	—	—	—
New Bedford, MA	24	16	7	1	—	—	—
New Haven, CT	U	U	U	U	U	U	U
Providence, RI	50	40	5	2	—	3	6
Somerville, MA	4	3	1	—	—	—	—
Springfield, MA	31	23	4	2	1	1	8
Waterbury, CT	27	19	7	1	—	—	1
Worcester, MA	79	55	14	8	1	1	4
Mid. Atlantic	1,793	1,250	395	94	33	17	77
Albany, NY	50	39	7	2	—	2	4
Allentown, PA	27	24	3	—	—	—	1
Buffalo, NY	72	40	23	6	2	1	2
Camden, NJ	32	19	10	3	—	—	—
Elizabeth, NJ	8	6	2	—	—	—	—
Erie, PA	42	29	10	2	—	1	2
Jersey City, NJ	24	18	2	2	1	1	—
New York City, NY	978	683	222	51	18	4	31
Newark, NJ	45	18	15	5	3	4	4
Paterson, NJ	11	3	5	—	1	2	1
Philadelphia, PA	152	91	39	10	6	2	5
Pittsburgh, PA§	37	30	4	3	—	—	2
Reading, PA	33	27	5	1	—	—	3
Rochester, NY	132	101	24	6	1	—	14
Schenectady, NY	23	19	4	—	—	—	1
Scranton, PA	29	25	4	—	—	—	2
Syracuse, NY	66	53	12	1	—	—	4
Trenton, NJ	2	2	—	—	—	—	—
Utica, NY	14	12	1	1	—	—	—
Yonkers, NY	16	11	3	1	1	—	1
E.N. Central	1,945	1,291	441	126	51	36	121
Akron, OH	45	32	11	1	—	1	1
Canton, OH	44	32	9	1	1	1	4
Chicago, IL	292	187	67	22	9	7	21
Cincinnati, OH	87	53	17	6	7	4	9
Cleveland, OH	211	137	50	18	3	3	9
Columbus, OH	204	134	43	19	6	2	17
Dayton, OH	86	58	22	5	1	—	6
Detroit, MI	153	78	52	17	5	1	8
Evansville, IN	53	42	9	1	—	1	7
Fort Wayne, IN	46	34	10	—	1	1	2
Gary, IN	15	7	4	1	2	1	—
Grand Rapids, MI	52	34	11	5	—	2	6
Indianapolis, IN	217	135	51	16	12	3	12
Lansing, MI	50	42	5	2	—	1	2
Milwaukee, WI	77	48	23	3	—	3	—
Peoria, IL	46	37	6	—	2	1	5
Rockford, IL	48	38	4	4	—	2	1
South Bend, IN	51	40	9	1	1	—	2
Toledo, OH	103	72	27	2	1	1	3
Youngstown, OH	65	51	11	2	—	1	6
W.N. Central	593	392	131	38	23	9	39
Des Moines, IA	60	44	10	5	1	—	5
Duluth, MN	39	26	13	—	—	—	1
Kansas City, KS	28	15	6	5	2	—	1
Kansas City, MO	112	68	30	8	5	1	5
Lincoln, NE	32	30	2	—	—	—	2
Minneapolis, MN	74	34	22	5	8	5	2
Omaha, NE	74	58	8	6	2	—	10
St. Louis, MO	59	29	20	6	2	2	4
St. Paul, MN	52	41	8	1	2	—	7
Wichita, KS	63	47	12	2	1	1	2
S. Atlantic	1,211	728	335	83	34	31	87
Atlanta, GA	147	83	39	18	5	2	9
Baltimore, MD	192	111	59	9	10	3	19
Charlotte, NC	111	66	35	3	4	3	7
Jacksonville, FL	165	102	41	13	3	6	14
Miami, FL	79	55	15	8	1	—	7
Norfolk, VA	43	20	13	1	1	8	—
Richmond, VA	65	35	22	6	2	—	7
Savannah, GA	43	26	13	3	—	1	2
St. Petersburg, FL	64	37	18	5	3	1	4
Tampa, FL	189	127	47	10	3	2	13
Washington, D.C.	98	55	29	7	2	5	2
Wilmington, DE	15	11	4	—	—	—	3
E.S. Central	754	483	193	52	17	9	60
Birmingham, AL	180	112	48	15	4	1	15
Chattanooga, TN	63	45	13	4	1	—	6
Knoxville, TN	100	69	20	4	5	2	7
Lexington, KY	40	29	7	3	1	—	3
Memphis, TN	117	75	34	6	1	1	14
Mobile, AL	81	40	26	13	2	—	5
Montgomery, AL	63	44	14	4	—	1	4
Nashville, TN	110	69	31	3	3	4	6
W.S. Central	1,624	986	408	137	50	43	80
Austin, TX	88	57	16	11	1	3	5
Baton Rouge, LA	60	25	19	13	3	—	3
Corpus Christi, TX	65	41	16	4	3	1	7
Dallas, TX	194	107	49	28	6	4	9
El Paso, TX	67	51	14	1	—	1	3
Fort Worth, TX	104	64	30	2	3	5	1
Houston, TX	532	309	143	42	19	19	18
Little Rock, AR	86	53	22	8	2	1	3
New Orleans, LA¶	U	U	U	U	U	U	U
San Antonio, TX	246	161	55	17	7	6	17
Shreveport, LA	55	38	10	5	2	—	7
Tulsa, OK	127	80	34	6	4	3	7
Mountain	937	607	217	60	30	23	47
Albuquerque, NM	94	67	21	3	2	1	2
Boise, ID	47	29	11	3	4	—	2
Colorado Springs, CO	57	39	10	5	1	2	2
Denver, CO	78	47	20	7	2	2	8
Las Vegas, NV	227	142	65	11	8	1	12
Ogden, UT	33	25	5	3	—	—	5
Phoenix, AZ	115	72	23	10	6	4	3
Pueblo, CO	21	15	2	3	1	—	1
Salt Lake City, UT	116	72	25	11	1	7	5
Tucson, AZ	149	99	35	4	5	6	7
Pacific	1,524	1,054	323	86	38	23	118
Berkeley, CA	13	4	5	3	—	1	—
Fresno, CA	95	72	18	5	—	—	9
Glendale, CA	39	31	6	2	—	—	1
Honolulu, HI	52	41	5	2	2	2	7
Long Beach, CA	53	34	9	6	2	2	12
Los Angeles, CA	268	159	63	30	11	5	27
Pasadena, CA	25	19	4	1	1	—	2
Portland, OR	137	95	34	6	—	2	9
Sacramento, CA	187	127	46	10	1	3	15
San Diego, CA	141	96	35	4	3	3	8
San Francisco, CA	85	60	21	3	1	—	7
San Jose, CA	137	104	22	5	4	2	9
Santa Cruz, CA	20	16	3	—	1	—	3
Seattle, WA	101	70	22	4	3	2	—
Spokane, WA	62	46	10	3	2	1	4
Tacoma, WA	109	80	20	2	7	—	5
Total**	**10,898**	**7,162**	**2,546**	**705**	**283**	**198**	**688**

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.

¶ Because of Hurricane Katrina, weekly reporting of deaths has been temporarily disrupted.

** Total includes unknown ages.

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☆ U.S. Government Printing Office: 2009-523-019/41133 Region IV ISSN: 0149-2195