

Weekly

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# Nonpharmaceutical Fentanyl-Related Deaths — Multiple States, April 2005–March 2007

On April 21, 2006, increases in overdoses were reported among illicit drug users in Camden, New Jersey, via the CDC Epidemic Information Exchange (Epi-X). This alert elicited reports of similar increases in overdoses in other parts of New Jersey, and in Maryland; Chicago, Illinois; Detroit, Michigan; and Philadelphia, Pennsylvania. The increases in Chicago and Detroit had been recognized several months earlier but attributed to heroin overdoses until fentanyl was detected in the blood or urine of some decedents. Illicitly manufactured nonpharmaceutical fentanyl (NPF), a synthetic opioid 30-50 times more potent than heroin (1), also was found by law enforcement personnel and medical examiner staffs at the scene of some overdoses. In May 2006, to identify NPFrelated deaths in six state and local jurisdictions, CDC implemented an ad hoc case-finding and surveillance system, later managed by the Drug Enforcement Administration (DEA). This report summarizes the results of that effort, which identified 1,013 NPF-related deaths that occurred during April 4, 2005-March 28, 2007. As a result, on April 23, 2007, DEA began regulating access to N-phenethyl-4-piperidone, a chemical used to make illicit NPF (1). Increased public health efforts are needed to improve epidemiologic data collection on drug overdoses, enable early detection of increases in drug overdoses, educate illicit drug users regarding the risks for overdose, and help users obtain treatment for their addictions.

Since 1990, pharmaceutical fentanyl (e.g., Duragesic transdermal patches) has been approved for patient use to relieve severe or chronic pain. However, pharmaceutical fentanyl also has been misused and associated with fatal drug overdoses (2). In addition, since the 1970s, NPF and various fentanyl analogs (e.g., alphamethylfentanyl) have been produced illicitly, sold in street drug markets for their heroin-like effect, and implicated in fatal overdoses (3). One gram of pure fentanyl can be cut into approximately 7,000 doses for street

sale (1). Manufacture of NPF requires minimal technical knowledge, and recipes for making NPF are available on the Internet (1). Testing of drug samples containing fentanyl can distinguish between pharmaceutical and illicitly manufactured NPF. However, testing of biologic samples (e.g., serum) cannot distinguish between pharmaceutical fentanyl and NPF (4).

In May 2006, in response to concern over reports of increased NPF-related deaths, CDC collaborated with medical examiners, law enforcement agencies, and public health departments in six state and local jurisdictions\* to establish an ad hoc surveillance system for NPF-related deaths. In each jurisdiction, reports from participating medical examiners were reviewed. An NPF-related death was defined as one in which 1) fentanyl caused or contributed to the death, 2) no evidence was found of the involvement of pharmaceutical fentanyl products, and 3) toxicology testing confirmed fentanyl in the body, in unused drugs of the decedent, or in a specimen from a person with whom the decedent shared drugs. Public health departments and law enforcement agencies collaborated with participating medical examiners, initially identifying NPF-related deaths that

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DEPARTMENT OF HEALTH AND HUMAN SERVICES CENTERS FOR DISEASE CONTROL AND PREVENTION

<sup>\*</sup> All of Delaware and New Jersey and parts of Illinois, Michigan, Missouri, and Pennsylvania.

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occurred during April 2005–May 2006 and adding new NPFrelated deaths as they were identified. In September 2006, DEA took over the surveillance system, using the same case definition; data collection ended in May 2007.

Testing of street drugs found samples consisting of NPF alone and NPF mixed with other drugs. Most of the implicated NPF was mixed with heroin or cocaine, sold as a street drug, and used as an injection. During April 4, 2005– March 28, 2007, the CDC/DEA surveillance system identified 1,013 NPF-related deaths (Table). The monthly incidence of NPF deaths peaked in June 2006 at 150 cases and decreased to one death in February 2007 and one death in March 2007 (Figure 1). Among the 984 decedents whose sex and age were known, 577 (58.6%) were aged 35–54 years (Figure 2), and 788 (80.1%) were male. Among the 984 decedents whose race/ethnicity were known, 545 (55.4%) were white, 392 (39.8%) were black, and 41 (4.2%) were Hispanic.

In response to the NPF-related deaths, public health agencies formed task forces; alerted health-care providers, law enforcement, and drug users; and intensified community outreach to drug users (including hiring additional outreach workers). In some areas, outreach activities included training drug users and others in overdose prevention and cardiopulmonary resuscitation and providing "take-home" parenteral or intranasal naloxone, an antagonist used to reverse opioid overdoses (5). Law enforcement agencies (e.g., DEA and local and state police) responded by identifying and arresting sellers of NPF, seizing NPF, and closing NPF production facilities, including one in Toluca, Mexico, in May 2006. In April 2007, DEA began regulating access to N-phenethyl-4-piperidone, a chemical used to manufacture NPF (1).

**Reported by:** TS Jones, MD, T Stephen Jones Public Health Consulting, Florence, Massachusetts. L Krzywicki, J Maginnis, Delaware Information and Analysis Center, Dover, Delaware. NL Jones, MD, Office of the

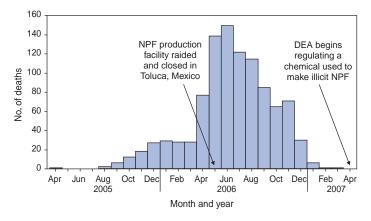
### TABLE. Number of reported nonpharmaceutical fentanylrelated deaths, by jurisdiction — CDC/Drug Enforcement Administration surveillance system, United States, April 4, 2005–March 28, 2007

State	Jurisdiction	Deaths meeting case definition*
Delaware	Entire state	19
Illinois	Cook County	349
Michigan	Wayne County	230
Missouri	City of St. Louis, St. Louis County	60†
New Jersey	Entire state	86
Pennsylvania	Philadelphia	269
Total		1,013

\* Deaths in which 1) fentanyl caused or contributed to the death, 2) no evidence was found of the involvement of pharmaceutical fentanyl products, and 3) toxicology testing confirmed fentanyl in the body, in unused drugs of the decedent, or in a specimen from a person with whom the decedent shared drugs.

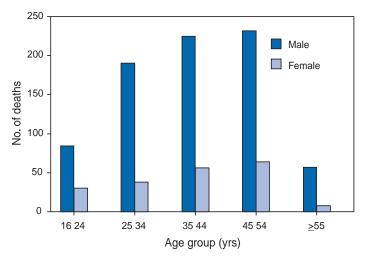
<sup>†</sup>City of St. Louis (21 deaths); St. Louis County (39 deaths).

FIGURE 1. Number of reported deaths (N = 1,013) related to nonpharmaceutical fentanyl (NPF), by month of death — CDC/ Drug Enforcement Administration (DEA) surveillance system, United States, April 2005–April 2007



Medical Examiner, Cook County; R Weiskopf, State Methadone Authority, Div of Alcoholism and Substance Abuse, Illinois Dept of Human Svcs. M Reid, MD, Detroit-Wayne County Community Mental Health Agency; C Schmidt, MD, Office of the Chief Medical Examiner, Wayne County; J Fiedler, Michigan Dept of Community Health. IM Topolski, PhD, Missouri Institute of Mental Health; M Graham, MD, R Psara, City of St. Louis Medical Examiner's Office; M Case, MD, S McCune, St. Louis County Medical Examiner's Office, Missouri. SM Marcus, MD, New Jersey Poison Information and Education System/ New Jersey Medical School, Univ of Medicine and Dentistry of New Jersey; VW Weedn, MD, New Jersey Office of the State Medical Examiner; K Hempstead, PhD, Center for Health Statistics, New Jersey Dept of Health and Senior Svcs. SJ Klein, MS, AIDS Institute, New York State Dept of Health. G Roseborough, Office of the Attorney General; S Alles, MD, Philadelphia Dept of Public Health; K Nalluswami, MD, Pennsylvania Dept of Health. S Kelly, T Zobeck, PhD, Office of National Drug Control Policy. T McCormick, Chicago office; D Peters, M Wilson, Office of Diversion Control; E Regula, Philadelphia office, Drug Enforcement Admin. K Hoffman, MD, Div of Pharmacologic Therapies, Center for Substance Abuse Treatment, Substance Abuse and Mental Health Svcs Admin. D Lentine, MPH, Div of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC.

Editorial Note: The findings in this report indicate that, during April 4, 2005–March 28, 2007, a total of 1,013 deaths in six jurisdictions were attributed to NPF, making this the largest NPF epidemic ever reported. An earlier epidemic in the 1980s resulted in at least 110 fatal overdoses caused by 10 different fentanyl analogs (*3*). The NPF epidemic described in this report was multifocal, with the largest numbers of deaths occurring in metropolitan Chicago, Detroit, and Philadelphia. In addition to the NPF-related deaths identified by the CDC/DEA surveillance system, other NPF-related deaths were reported in suburban and rural areas of Illinois, Michigan, and Pennsylvania and in Kentucky, Maine, Maryland, Massachusetts, New Hampshire, Ohio, and Virginia during the same period (*1*). FIGURE 2. Number of reported nonpharmaceutical fentanylrelated deaths (n = 984\*), by sex and age group — CDC/Drug Enforcement Administration surveillance system, United States, April 4, 2005–March 28, 2007



\* Data not available for 29 deaths.

The pattern of NPF overdoses likely was related to illicit drug distribution networks. For example, the NPF used in Chicago and Detroit is believed to have come from clandestine production at a site in Mexico (1). However, why active surveillance in other areas with high rates of heroin use (e.g., New York City) did not find NPF-related deaths is unknown.

The NPF epidemic described in this report was part of a larger pattern of drug overdoses and poisonings in the affected jurisdictions. For example, in 2006, in Wayne County, Michigan, fentanyl contributed to 195 (32.4%) of 602 deaths resulting from drug use (C. Schmidt, MD, Wayne County Medical Examiner's Office, personal communication, 2007). Although the number of NPF-related deaths identified by the CDC/DEA surveillance system declined substantially in 2007, the relative ease of illicit production and low cost of NPF compared with heroin suggest that future epidemics of NPF overdoses are likely to occur (*3*).

Nationally, drug overdoses and deaths are well documented among users of heroin and other illicit drugs (5). In the United States, from 1999 to 2005, the age-adjusted death rate from unintentional drug poisoning (primarily overdoses associated with pharmaceutical and/or nonpharmaceutical drugs) increased 87.5%, from 4.0 to 7.5 per 100,000 population; the corresponding number of deaths increased from 11,155 to 22,448, including a substantial increase in the number of deaths attributed to poisoning with opioid prescription medications (6–8).

The findings in this report are subject to at least four limitations. First, the number of NPF-related deaths was likely underreported because 1) the surveillance system captured events from participating medical examiners in only six jurisdictions and 2) for some participating medical examiners, not all NPF-related deaths were included. For example, the surveillance system identified 86 NPF-related deaths from New Jersey. However, a later review of New Jersey medical examiner reports found an additional 92 NPF-related deaths in 2006 that had not been recorded by the surveillance system. Second, for fatal drug overdoses, interpretation of toxicology findings and medical examiner determination of cause of death have not been standardized (2). Third, some pharmaceutical fentanyl-related deaths might have been misclassified as NPFrelated deaths because no evidence of pharmaceutical fentanyl use was found and because testing cannot determine whether fentanyl found in body fluids came from NPF or pharmaceutical fentanyl. Finally, in addition to fentanyl, some decedents had consumed other drugs and/or alcohol that might have contributed to their deaths.

The fentanyl outbreak described in this report suggests a need to improve methods for identifying and reporting of drug-related deaths to detect increases in drug overdoses and enable prompt response by law enforcement (e.g., seizing implicated drugs) and by public health agencies (e.g., providing intensified outreach) (9). The findings further support 1) development of national standards to guide toxicologic testing and cause-of-death determination in drug overdoses and poisonings; 2) establishment of professional norms, modeled on those for attempted suicide, to refer drug overdose survivors for drug addiction treatment and education regarding overdose prevention; and 3) expansion of public health programs to help drug users obtain addiction treatment, understand overdose risks, and learn strategies for avoiding and responding to overdoses (10).

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# Use of Mass Tdap Vaccination to Control an Outbreak of Pertussis in a High School — Cook County, Illinois, September 2006–January 2007

On September 6, 2006, the Cook County Department of Public Health (CCDPH) was notified that a local high school student aged 17 years had pertussis. During September 2006-January 2007, 36 pertussis cases directly linked to the high school were identified. Because Bordetella pertussis immunity from childhood vaccinations wanes over time, outbreaks of pertussis can periodically occur among students and staff at middle and high schools. School settings facilitate transmission of pertussis, disrupting school and community activities and putting vulnerable populations, such as unvaccinated infants, at risk (1-4). A pertussis booster vaccine suitable for adolescents and adults became available in the United States in 2005, when two new tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccines were licensed for persons aged 10-18 years and 11-64 years, respectively. In 2006, the Advisory Committee on Immunization Practices (ACIP) recommended that all adolescents and adults receive a one-time Tdap booster vaccination (5,6). This report summarizes strategies used to control the pertussis outbreak in Cook County, Illinois, including efforts to increase Tdap vaccination coverage. Despite multiple communications recommending Tdap vaccination and implementation of a cough exclusion policy during the pertussis outbreak, student vaccination rates did not increase substantially until a schoolbased Tdap vaccination clinic was implemented. Because persons at risk for pertussis might not seek vaccination from their usual health-care provider, even during an outbreak, local health departments might consider early implementation of a cough exclusion policy and on-site Tdap vaccination clinic as control measures.

At the time of the pertussis outbreak, the high school in Cook County had 4,154 students and 651 staff members on two campuses. The index patient at the school was a symptomatic student epidemiologically linked to the primary patient, involving a younger sibling who had cough onset August 10 and was confirmed to have pertussis by polymerase chain reaction (PCR). Both cases were reported to the school by the siblings' physician on September 6. On the day the index case was reported, CCDPH responded by sending a letter to parents of 12th-grade students and to teachers at the high school, urging them to seek medical care for any cough illness consistent with pertussis. The letters also recommended that eligible persons receive Tdap vaccination. An informational letter and a copy of the parent letter were faxed to 31 physician practices identified by school nurses as providing medical care for students at the school. The physician letter reviewed the recent ACIP recommendations for Tdap vaccine administration to adolescents and adults, and included guidelines for diagnosis, treatment, and chemoprophylaxis. A separate letter with similar information was given to staff members to take to their physicians.

For this outbreak, all four probable cases met standard CDC clinical criteria (i.e., a cough illness lasting at least 2 weeks with one of the following: paroxysms of coughing, inspiratory "whoop," or post-tussive vomiting, without other apparent cause, as reported by a health professional). The 32 confirmed cases had either 1) laboratory confirmation by a positive PCR test result for *B. pertussis* from a nasopharyngeal specimen, or 2) an epidemiologic link to a laboratory-confirmed case (4). At the time of this outbreak, the Illinois Department of Public Health laboratory used a single-tier PCR test for laboratory confirmation of pertussis cases; culture was not performed.

By October 31, approximately 6 weeks into the outbreak, 10 cases of pertussis had been diagnosed at the high school. At that point, active surveillance for cough illness was begun. On November 1, the 31 physician offices were telephoned by CCDPH to ensure physicians had Tdap vaccine on hand, were aware of plans to exclude students for cough illness, and that those students would need a note from a physician for clearance to return to school. An update letter regarding the outbreak also was faxed to the physician offices. A notice was sent to all parents and faculty on Friday, November 3, stating that students and staff with "persistent cough in the absence of an apparent cause" would be excluded from school and extracurricular activities until they could be evaluated by a physician. This notification emphasized the importance of all eligible students and staff members receiving Tdap vaccination. Teachers were responsible for identifying students exhibiting symptoms and sending them to school nurses to determine whether further medical assessment and exclusion were warranted. Students were given a form to be completed by their physician and then submitted to the school nurses as documentation.

During the first week the policy was in force (November 6–10), 159 students (3.8% of the student body) were excluded from school for cough illness. The number of students with cough illness arriving at school in subsequent weeks declined substantially.

Several of the larger physician practices sent direct mailings to the parents of their patients who were students at the school, urging that those children be brought in for Tdap vaccination. Over time, however, these practices and others reported that few students from the school had come to their offices for vaccination. In addition, a national shortage of the adult formulation of Tdap proved to be a substantial barrier to school faculty seeking vaccination. On November 16, CCDPH asked that school administrators anonymously survey 11th- and 12th-grade students and school staff members via e-mail to obtain a rough estimate of Tdap vaccination coverage. The overall response rate was 63.3%. The survey indicated that approximately 30% of students and 17% of staff members had been vaccinated.

Sixteen additional pertussis cases (three probable and 13 laboratory confirmed) at the school were diagnosed during November 6-December 1. During September 6-November 22, CCDPH and school administrators sent a series of 11 letters\* to parents urging Tdap vaccination, but many persons at risk for exposure failed to obtain Tdap vaccinations. Faced with ongoing transmission within the school, CCDPH elected to hold a voluntary Tdap vaccination clinic at the school. The clinic was held December 5-8, immediately before a 2-week winter break. Students and staff members were eligible to receive Tdap vaccination if they had not received a Td-containing vaccination (i.e., tetanus and diphtheria toxoids) in the preceding 2 years. Students were required to present a signed parental consent form. Over the 4-day period, 1,084 students (26.1% of the student body) and 416 staff members (63.9% of all staff members) received Tdap. Cook County government incurred all costs of the student vaccination clinic. CCDPH staff vaccinated the students, and local medical practices sent nurses and donated supplies to vaccinate the high school staff on-site, using Tdap vaccine provided by CCDPH.

During December 5–8, all students were required to submit documentation of their Tdap immunization status, including date of vaccination. However, Tdap vaccination was

<sup>\*</sup>All letters to parents urged vaccination and contained an update about the outbreak. Later letters discussed the need for the cough exclusion policy, and the results of the survey showing that few persons at risk were receiving vaccination. The letters were faxed and e-mailed. Parents quickly responded to the letters with details about the vaccination clinics once those were distributed. A separate survey conducted by CDC after the outbreak indicated that parents thought they had received sufficient information.

not required for school attendance, and students were not excluded from school if they did not receive vaccination. School nurses entered the vaccination information into an electronic database managed by the school. CCDPH then reviewed the data to evaluate the effect of public health recommendations on vaccination rates. The overall pre-outbreak Tdap vaccination rate among students was 16.4%. Tdap coverage after the mass vaccination clinic ranged from 65.0% among 10th-grade students to 71.0% among 9th-grade students (Table, Figure). At the end of the vaccination campaign, 1,331 students (32% of the student body) had not received Tdap vaccination. Of students who did not receive vaccination, 558 (42%) were not eligible because they had received Td-containing vaccine within the preceding 2 years. The majority (81%) of those students were in the 9th- or 10th-grade classes. An additional 66 students were exempted from vaccination for various reasons. Ultimately, 707 (20%) of eligible students did not receive vaccination. The final two cases of pertussis were diagnosed on December 12 and December 19 in students who received Tdap at the school clinic. Both students had onset of illness 5 days after vaccination, which likely indicated that the infections occurred before immunity had developed.

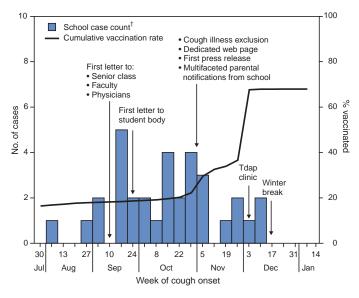
In all, 36 cases were identified in 33 students, one teacher, and two family members. None of the persons with pertussis required hospitalization. Of the 36 cases, four (11.1%) were probable, 29 (80.6%) were confirmed by PCR, and three (8.3%) were confirmed by epidemiologic link. Among confirmed cases, mean time to diagnosis after cough onset was 18.3 days (range: 1–58 days) before the cough exclusion policy was implemented, and 4.6 days (range: 1-14 days) after the policy was implemented (p<0.001, unpaired t-test). Overall, the 36 persons who became ill included four of 1,050 9th-grade students (attack rate [AR] = 0.4%), 12 of 1,030 10th-grade students (AR = 1.2%), 12 of 1,055 11th-grade

TABLE. Percentage of high school students who received Tdap\* vaccination, by grade and pertussis outbreak phase - Cook County, Illinois, 2006

		Gr	ade		
	9th	10th	11th	12th	Overall
Phase	(n = 1,050)	(n = 1,030)	(n = 1,055)	(n = 1,018)	(N = 4,153)
Pre-outbreak	46.9 <sup>†</sup>	2.1	7.1	8.9	16.4
Notification	51.0	9.7	12.8	15.1	22.2
Cough-exclusion	56.9	27.9	30.0	31.5	36.6
Tdap clinic	70.5	64.1	66.4	68.7	67.4
Post-outbreak	71.0	65.0	67.0	68.8	68.0

\* Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis. <sup>+</sup> At the Cook County high school, Tdap vaccination coverage before the outbreak was much greater among 9th-grade students (46.9%) than among students in higher grades (10th grade = 2.1%, 11th grade = 7.1%, and 12th grade = 8.9%) because the vaccine was available at the time 9th-grade students were receiving physicals for high school. Illinois requires tetanus and diphtheria toxoids (Td) vaccination for entry to high school.

FIGURE. Number of pertussis cases and Tdap\* vaccination coverage among high school students, by week of cough onset — Cook County, Illinois, 2006



Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis. <sup>†</sup> Includes one nonjurisdictional case residing outside of Cook County.

students (AR = 1.1%), seven of 1,018 12th-grade students (AR = 0.7%), and one of 651 staff members (AR = 0.2%).

Reported by: C Counard, MD, D Nimke, MPH, M Vernon, DrPH, Cook County Dept of Public Health, Oak Park, Illinois. A Cohn, MD, Div of Bacterial Diseases, National Center for Immunization and Respiratory Diseases, CDC.

Editorial Note: Because a pertussis vaccine suitable for adolescents and adults was not available until 2005, pertussis outbreak control measures historically relied on rapid identification of cases for treatment and chemoprophylaxis of close contacts (4). In the Cook County outbreak, pertussis spread

quickly to all grades within the high school, making this control strategy difficult to implement; only seven (19.4%) of the 36 cases had a clear epidemiologic link to another case.

Strict enforcement of exclusion for cough illness was likely an important factor in controlling the outbreak. This measure limited exposure to persons with respiratory illness within the school, encouraged timely medical evaluation and treatment of cases, and promoted prompt administration of chemoprophylactics to close contacts. The time between cough onset and diagnosis for cases was reduced significantly after implementation of the policy. The exclusion measure began on November 6, after 10 cases had been reported. Additional study is needed to evaluate the point when application of more aggressive control measures, such

as exclusion for cough illness or mass Tdap vaccination clinics, might be warranted to control an outbreak.

Public health messages alone, particularly regarding the need for vaccination during the outbreak, had some effect on student vaccination rates. During the first 13 weeks after the first notices to parents and area physicians from CCDPH, Tdap vaccination coverage increased 5.8%. Before the on-site clinic at the school, Tdap vaccination coverage of students overall did not exceed 50%, even after the strict cough exclusion policy was adopted. After the on-site vaccination clinic, coverage increased another 30.8%. Which barriers prevented an earlier, more substantial increase in Tdap vaccination rates is unclear; however, the convenience of an on-site school clinic versus scheduling an appointment in a private physician's office might have played a role. Another barrier was the limited supply of Tdap vaccine for adults.

Additionally, physician concern about the 5- and 10-year intervals recommended between Td-containing vaccines might have contributed to less compliance with vaccination early on in the outbreak. Tdap is recommended 5 years after Td vaccination in adolescents and after 10 years for adults. Shorter intervals between administration of vaccine doses containing tetanus and diphtheria toxoids have been associated with moderate to severe local reactions. However, clinicians may administer Tdap at an interval as short as 2 years from the last Td vaccination during outbreaks or other instances when risk for infection is a concern (5,6). CCDPH initially received many calls from area physicians requesting a reference for administering Tdap within a shorter interval and outside of typical prescribing practices. In response, CCDPH faxed portions of relevant reports (5,6) to those physicians.

Although the effect of the Tdap vaccination clinic in shortening the duration of the outbreak is unclear, this experience shows that school-based Tdap vaccination clinics can quickly achieve high coverage during a pertussis outbreak. More experience with large Tdap vaccination clinics as part of the response to school pertussis outbreaks is needed to develop new recommendations for outbreak control. Preventing outbreaks of pertussis by increasing routine Tdap vaccination rates remains an important public health goal. As an initial step to prevent pertussis outbreaks, health-care providers, public health officials, and schools should promote routine Tdap vaccination before outbreaks occur.

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## Brief Report

# Lymphocytic Choriomeningitis Virus Transmitted Through Solid Organ Transplantation — Massachusetts, 2008

Lymphocytic choriomeningitis virus (LCMV) is a rodent-borne arenavirus found worldwide. House mice (Mus musculus) are the natural reservoir, but LCMV also can infect other wild, pet, and laboratory rodents (e.g., rats, mice, guinea pigs, and hamsters). Humans can be infected through exposure to rodent excreta. Person-to-person transmission has occurred only through maternal-fetal transmission and solid organ transplantation (1-3). LCMV infection in humans can be asymptomatic or cause a spectrum of illness ranging from isolated fever to meningitis and encephalitis. Overall case fatality is <1%. Fetal infections can result in congenital abnormalities or death. Immunosuppressed patients, such as organ transplant recipients, can develop fatal hemorrhagic fever-like disease. Transmission of LCMV and an LCMV-like arenavirus via organ transplantation has been documented in three previous clusters (1,2). Of 11 recipients described in those clusters, 10 died of multisystem organ failure, with LCMVassociated hepatitis as a prominent feature. The surviving patient was treated with ribavirin (an antiviral with in vitro activity against LCMV) and reduction of immunosuppressive therapy. On April 15, 2008, an organ procurement organization (OPO) notified CDC of severe illness in two kidney transplant recipients from a common donor; at the time of notification, one of the recipients had died. Samples from the donor and both recipients were tested at CDC; on April 22, test results revealed evidence of acute LCMV infection in the donor and both recipients. This report summarizes the results of the subsequent public health investigation.

## **Organ Donor**

The organ donor was a man aged 49 years with a history of alcohol abuse who was hospitalized in early March 2008 after a seizure. On admission, he was awake but confused and had a fever of 101.9°F (38.8°C). Chest radiography, lumbar puncture, and blood cultures were performed. The chest radiograph showed no evidence of pneumonia. Cerebrospinal fluid (CSF) contained 478 white blood cells/mm<sup>3</sup> (96% lymphocytes), one red blood cell/mm<sup>3</sup>, 161 mg/dL protein, and 60 mg/dL glucose. The patient was treated empirically for possible herpes simplex encephalitis and bacterial meningitis with acyclovir, ceftriaxone, and vancomycin. Gram stain and culture for bacterial pathogens and herpes simplex virus-1/2 polymerase chain reaction (PCR) were negative in CSF. Blood cultures grew methicillin-resistant Staphylococcus aureus in one of four bottles. Two days later, on March 9, the patient experienced cardiac arrest; he was resuscitated but never regained consciousness. Nonsurvivable anoxic brain injury was determined, and life support was withdrawn.

Standard serologic donor screening tests showed no evidence of active infection with human immunodeficiency virus (HIV), hepatitis B and C viruses (HBV and HCV), human T-lymphotropic virus, and syphilis. In addition, HIV, HBV, and HCV nucleic acid tests were negative. An autopsy was not performed. After the donor met OPO criteria for organ donation and consent was obtained from the family, two kidneys were recovered for transplantation on March 13. No other organs or tissues were recovered for transplantation. On April 22, archived serum collected the day before death tested positive for anti-LCMV immunoglobulin M (IgM) and immunoglobulin G (IgG) antibodies by enzyme-linked immunosorbent assay (ELISA).

# **Kidney Recipient A**

Kidney recipient A was a woman aged 70 years with endstage renal disease caused by nephrotic syndrome; she received a kidney transplant from the donor in mid-March. She was readmitted 3 weeks posttransplant with lethargy and anorexia; she developed low-grade fever and shock, followed by hepatic insufficiency and multisystem organ failure. She died 4 weeks posttransplant. On April 22, archived whole blood collected on the day of death had evidence of acute LCMV infection by PCR and virus isolation. Multiple autopsy specimens, including liver, kidney, and spleen, stained positive for LCMV antigens by immunohistochemistry.

# **Kidney Recipient B**

Kidney recipient B was a man aged 57 years with end-stage renal disease caused by hypertension; he received a kidney transplant from the donor in mid-March. He was readmitted 2 weeks posttransplant with fever and developed multisystem organ failure with severe hepatitis. His immunosuppressive medications were discontinued, he was given 1 dose of intravenous immunoglobulin, and ribavirin was started after acute LCMV infection was confirmed on April 22 (6 weeks posttransplant), when his serum tested positive for anti-LCMV IgM by ELISA. The serum also tested positive for LCMV by virus isolation, and a liver biopsy was positive for LCMV by virus for LCMV by PCR, and the sequence was an exact match to the fragment amplified from the first kidney recipient. The patient had severe coagulopathy and developed multiple bacteremias in addition to LCMV viremia. He died 10 weeks posttransplant despite intensive supportive care.

# **Public Health Investigation**

Results of laboratory testing indicated that the donor was the source of LCMV infection. The subsequent public health investigation included an assessment of the donor's potential sites of exposure to rodents, medical record review, and dissemination of educational information about LCMV to the general, medical, and public health communities. No test for LCMV infection is approved by the Food and Drug Administration for organ donor screening. In addition to LCMV, other pathogens have been transmitted by organ transplantation with fatal results; in some of these clusters, the donors have been asymptomatic. However, donors with aseptic meningitis or encephalitis pose a recognizable risk for transmitting infections that might be fatal to recipients. Risks and benefits to potential transplant recipients in offering and accepting organs from such donors should be considered carefully.

Health-care providers should consider LCMV infection in patients with aseptic meningitis and encephalitis and in organ transplant recipients with unexplained fever, hepatitis, or multisystem organ failure. Transplant centers and OPOs should be aware of the risk for organ transplant-transmitted infections, report poor outcomes promptly, and initiate appropriate testing.

Persons with rodent contact should be aware of LCMV and take measures to prevent infection. Clinicians should ask about history of rodent contact in patients with aseptic meningitis.

Specific guidelines for rodent control are available at http:// www.cdc.gov/rodents. Additional information about LCMV and its prevention is available at http://www.cdc.gov/ncidod/ dvrd/spb/mnpages/dispages/lcmv.htm. Information regarding organ donation is available at http://www.optn.org/about/ donation. **Reported by:** A Barry, MD, J Gunn, P Tormey, T McCarthy, MD, J Pendarvis, MPH, Boston Public Health Commission; F Delmonico, MD, L Sussman, S Fitzpatrick, MSPA, New England Organ Bank, Newton; A Gautam, MD, C Sulis, MD, Boston Medical Center; M Wong, MD, S Pillai, MD, M Arya, MD, I Stillman, MD, SB Wright, MD, S Karp, MD, P Goodell, MD, Beth Israel Deaconess Medical Center; Boston; A DeMaria, MD, C Brown, DVM, M Cumming, MS, B Matyas, MD, Massachusetts Dept of Public Health; M Hull, MD, Office of Chief Medical Examiner, Commonwealth of Massachusetts. Special Pathogens Br, Infectious Diseases Pathology Br, Div of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases; Office of Blood, Organ, and Other Tissue Safety, Div of Healthcare Quality Promotion, National Center for Preparedness, Detection, and Control of Infectious Diseases; S Schillie, MD, EIS Officer, CDC.

### References

- Fischer SA, Graham MB, Kuehnert MJ, et al. Transmission of lymphocytic choriomeningitis virus by organ transplantation. N Engl J Med 2006;354:2235–49.
- 2. Palacios G, Druce J, Du L, et al. A new arenavirus in a cluster of fatal transplant-associated diseases. N Engl J Med 2008;358:991–8.
- Enria D, Mills JN, Flick R, et al. Arenavirus infections. In: Tropical infectious diseases: principles, pathogens, and practice. Guerrant RL, Walker DH, Weller PF, eds. Philadelphia, PA: Elsevier; 2006:734–55.

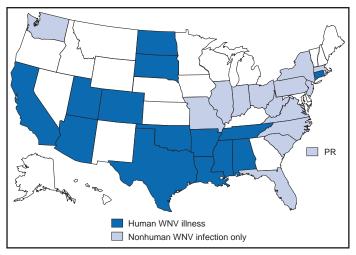
# West Nile Virus Update — United States, January 1–July 22, 2008

This report summarizes 2008 West Nile virus (WNV) surveillance data reported to CDC through ArboNET as of 3 a.m. Mountain Daylight Time, July 22, 2008. A total of 14 states have reported 43 cases of human WNV illness to CDC (Figure, Table). A total of 26 (54%) cases for which such data were available occurred in males; median age of patients was 46 years (range: 12–80 years). Dates of illness onset ranged from January 17 to July 10; none of the cases were fatal.

A total of eight presumptive West Nile viremic blood donors (PVDs) have been reported to ArboNET during 2008. Of these, four were reported from California, three from Louisiana, and one from Kentucky. Of the eight PVDs, one person (aged 47 years) subsequently had West Nile fever.

In addition, 368 dead corvids and 79 other dead birds with WNV infection have been reported in eight states during 2008. WNV infections have been reported in horses in eight states and Puerto Rico, in one squirrel in California, and in one unidentified animal species in Puerto Rico. WNV seroconversions have been reported in 38 sentinel chicken flocks in three states (Arizona, California, and Florida) and Puerto Rico. A total of 975 WNV-positive mosquito pools have been reported from 19 states and New York City.

Additional information about national WNV activity is available from CDC at http://www.cdc.gov/ncidod/dvbid/ westnile/index.htm and at http://westnilemaps.usgs.gov. FIGURE. Areas reporting West Nile virus (WNV) activity — United States, 2008\*



\* As of July 22, 2008.

TABLE. Number of human cases of West Nile virus (WNV)
illness, by state — United States, 2008*

State	Neuroinvasive disease <sup>†</sup>	West Nile fever§	Other clinical/ unspecified <sup>¶</sup>	Total reported to CDC**	Deaths
Alabama	0	1	0	1	0
Arizona	1	0	0	1	0
Arkansas	2	0	0	2	0
California	4	2	0	6	0
Colorado	1	1	0	2	0
Connecticut	0	1	0	1	0
Louisiana	0	2	0	2	0
Mississippi	5	4	0	9	0
North Dakota	a 0	5	0	5	0
Oklahoma	1	2	0	3	0
South Dakota	a 0	3	0	3	0
Tennessee	0	1	0	1	0
Texas	2	4	0	6	0
Utah	0	1	0	1	0
Total	16	27	0	43	0

\* As of July 22, 2008.

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

§ Cases with no evidence of neuroinvasion.

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

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

# Michael B. Gregg, M.D. — 1930-2008

Michael B. Gregg, M.D., a retired *MMWR* Editor, died on July 9, 2008, in Brattleboro, Vermont. He was 78. Although he was widely accomplished in epidemiology and public health, Dr. Gregg was best known for his service as Editor of *MMWR* for 21 years, and for his editorship of the widely read textbook, *Field Epidemiology*.

As MMWR Editor during 1967–1988, Dr. Gregg strengthened the publication's ability to provide accurate and timely public health information to health-care and public health professionals and oversaw expansion of MMWR to accommodate a widening scope of public health topics (1). In 1981, Dr. Gregg made the decision to publish a report in MMWR about a cluster of five cases of a then-rare disease, Pneumocystis carinii pneumonia, among previously healthy young men in Los Angeles, California. The report appeared in the June 5, 1981 issue of MMWR (2). The accompanying Editorial Note said the case histories suggested a "cellular-immune dysfunction related to a common exposure" and a "disease acquired through sexual contact." Later, the report was recognized as the harbinger of what later became known as the HIV/AIDS epidemic (3). Other benchmarks during Dr. Gregg's MMWR editorship included citation of MMWR reports in Index Medicus and increased accessibility to MMWR articles through reproduction by the Massachusetts Medical Society and collaborative reprinting in the Journal of the American Medical Association, practices that continue today.

Dr. Gregg joined CDC, then known as the Communicable Disease Center, in 1966 as Chief Epidemic Intelligence Service Officer (EISO) under Alexander Langmuir. At CDC he held a series of leadership positions until his retirement in 1990 as Acting Director of the Epidemiology Program Office. He was author of approximately 80 publications and book chapters, and his textbook, Field Epidemiology, now near publication in its third edition, has remained a standard in the discipline. Among his enduring legacies was his influence on hundreds of young EISOs, many of whom later served in key positions in medicine, epidemiology, and public health. Dr. Gregg was known for his skill at imbuing each incoming class of EISOs with an understanding of applied epidemiology and especially the epidemic investigation. He is remembered by his students as a mentor who was kind, polite, and gentlemanly, but also direct in imparting his high expectations of excellence.



Michael B. Gregg, M.D.

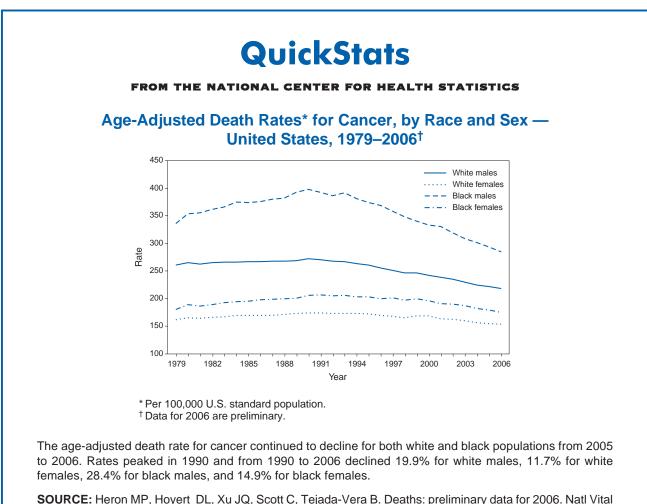
#### Photo/CDC

Dr. Gregg was born in Paris, France, in 1930 and was educated at Stanford University and Western Reserve University School of Medicine. He completed a residency in internal medicine at Columbia Presbyterian Hospital in New York City before entering the Public Health Service in 1959, and first served at the National Institutes of Health Rocky Mountain Laboratory. After further training in infectious diseases and work in Lahore, Pakistan, he began his career at CDC. During his years at CDC, he served as CDC's unofficial poet laureate, and he was an avid jazz drummer. He is survived by his wife Lila, three daughters, two brothers, a sister, seven grandchildren, and many nieces and nephews.

A memorial service will be held at 2 p.m. on August 3 at Guilford Community Church in Guilford, Vermont. Contributions in the memory of Dr. Gregg can be made to the Epidemic Intelligence Service Association fund in care of the CDC Foundation at http://www.cdcfoundation.org, or by mail at The CDC Foundation, 55 Park Place, Suite 400, Atlanta, GA 30303.

### References

- CDC. Michael B. Gregg, M.D., in honor of 21 years' service as Editor, MMWR. MMWR 1989;38:15.
- 2. CDC. Pneumocystis pneumonia—Los Angeles. MMWR 1981;30:250-2.
- 3. CDC. First report of AIDS. MMWR 2001;50:429.



**SOURCE:** Heron MP, Hoyert DL, Xu JQ, Scott C, Tejada-Vera B. Deaths: preliminary data for 2006. Natl Vital Stat Rep 2008;56(16). Available at http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56\_16.pdf and http://www.cdc.gov/nchs/data/statab/hist001r.pdf.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending July 19, 2008 (29th Week)\*

	Current	Cum	5-year weekly	Total o	ases rep	orted for	previou	s years	
Disease	week	2008	average <sup>†</sup>	2007	2006	2005	2004	2003	States reporting cases during current week (No.)
Anthrax		_	—	1	1	_	_	_	
Botulism:									
foodborne	_	5	0	32	20	19	16	20	
infant	_	38	2	85	97	85	87	76	
other (wound & unspecified)	_	6	1	27	48	31	30	33	
Brucellosis	—	41	3	131	121	120	114	104	
Chancroid	_	23	1	23	33	17	30	54	
Cholera	_	—	0	7	9	8	6	2	
Cyclosporiasis§	1	69	7	92	137	543	160	75	FL (1)
Diphtheria	—	_	—	—	—	_	—	1	
Domestic arboviral diseases <sup>§,¶</sup> :									
California serogroup	—	5	5	53	67	80	112	108	
eastern equine	_	1	1	4	8	21	6	14	
Powassan	—	_	0	7	1	1	1	—	
St. Louis	_	3	1	9	10	13	12	41	
western equine	_	_	_	—	—	_	—	—	
Ehrlichiosis/Anaplasmosis <sup>§,**</sup> :									
Ehrlichia chaffeensis	20	116	19	828	578	506	338	321	ME (1), OH (1), MN (3), DE (1), MD (9),
									GA (1), FL (1), TN (3)
Ehrlichia ewingii	1	1	_	—	—	—	—	—	MN (1)
Anaplasma phagocytophilum	12	88	24	834	646	786	537	362	ME (2), MN (10)
undetermined	—	3	8	337	231	112	59	44	
Haemophilus influenzae,††									
invasive disease (age <5 yrs):									
serotype b	—	17	0	22	29	9	19	32	
nonserotype b	_	94	2	199	175	135	135	117	
unknown serotype	2	128	3	180	179	217	177	227	NC (1), FL (1)
Hansen disease§	_	36	2	101	66	87	105	95	
Hantavirus pulmonary syndrome§	_	7	1	32	40	26	24	26	
Hemolytic uremic syndrome, postdiarrheal§	1	75	6	292	288	221	200	178	WA (1)
Hepatitis C viral, acute	11	405	16	849	766	652	720	1,102	NC (8), TX (1), WA (2)
HIV infection, pediatric (age <13 yrs) <sup>§§</sup>	_	_	4	—	—	380	436	504	
Influenza-associated pediatric mortality <sup>§,¶¶</sup>	1	87	1	77	43	45	—	N	WA (1)
Listeriosis	3	273	21	808	884	896	753	696	NY (1), VA (1), GA (1)
Measles***	—	123	2	43	55	66	37	56	
Meningococcal disease, invasive <sup>†††</sup> :									
A, C, Y, & W-135	1	164	3	324	318	297	_	_	VA (1)
serogroup B	2	101	3	167	193	156	—	—	MN (1), GA (1)
other serogroup	—	20	0	35	32	27	—	—	
unknown serogroup	3	381	9	550	651	765	—	—	NY (1), OH (1), VA (1)
Mumps	_	248	14	799	6,584	314	258	231	
Novel influenza A virus infections	_	_	—	1	Ν	N	N	N	
Plague	_	1	0	7	17	8	3	1	
Poliomyelitis, paralytic	—	_	_	—	—	1	_	_	
Poliovirus infection, nonparalytic§	_	_	—	—	Ν	N	N	N	
Psittacosis§	_	4	0	12	21	16	12	12	
Q fever <sup>§,§§§</sup> total:	1	55	3	171	169	136	70	71	
acute	—	49	_	—	—	_	_	_	
chronic	1	6	_	—	—	_	_	_	OH (1)
Rabies, human	—	_	0	1	3	2	7	2	
Rubella <sup>¶¶¶</sup>	_	9	0	12	11	11	10	7	
Rubella, congenital syndrome	_	_	_	—	1	1	_	1	

-: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts.

Incidence data for reporting years 2007 and 2008 are provisional, whereas data for 2003, 2004, 2005, and 2006 are finalized.

<sup>†</sup> 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.

<sup>¶</sup> 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).

<sup>††</sup> 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.

11 Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Eighty-five cases occurring during the 2007–08 influenza season have been reported.

No measles cases were reported for the current week.

<sup>†††</sup> 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.

<sup>¶¶¶</sup> 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.

#### TABLE I. (Continued) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) - United States, week ending July 19, 2008 (29th Week)\*

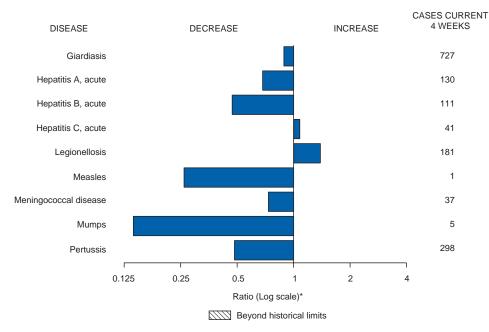
	Current	Cum	5-year weekly	Total o	cases rep	orted for	previou	s years	
Disease	week	2008	averaget	2007	2006	2005	2004	2003	States reporting cases during current week (No.)
SARS-CoV <sup>§,****</sup>	_	_	_	_	_	_	_	8	
Smallpox <sup>§</sup>	_	_		_	_	_	_	_	
Streptococcal toxic-shock syndrome§	—	86	1	132	125	129	132	161	
Syphilis, congenital (age <1 yr)	_	97	8	429	349	329	353	413	
Tetanus	1	5	1	27	41	27	34	20	PA (1)
Toxic-shock syndrome (staphylococcal)§	_	37	2	92	101	90	95	133	
Trichinellosis	_	4	0	5	15	16	5	6	
Tularemia	_	40	5	137	95	154	134	129	
Typhoid fever	2	187	8	434	353	324	322	356	NE (1), MD (1)
Vancomycin-intermediate Staphylococcus aure	eus§ —	5	0	28	6	2	_	N	
Vancomycin-resistant Staphylococcus aureus§	_	_	_	2	1	3	1	N	
Vibriosis (noncholera Vibrio species infections)	)§ 5	104	6	447	N	N	N	N	MD (1), NC (1), AZ (1), WA (2)
Yellow fever	_	_	—	_	_	_	_	_	

-: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. \*\*\*\* Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.

\* Incidence data for reporting years 2007 and 2008 are provisional, whereas data for 2003, 2004, 2005, and 2006 are finalized.

<sup>†</sup> 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.



### FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals July19, 2008, with historical data

\* Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

Notifiable Disease Data Team and 122 Cities Mortality Data Team Patsy A. Hall Deborah A. Adams Rosaline Dhara Willie J. Anderson Michael S. Wodajo Lenee Blanton Pearl C. Sharp

(29th Week)*	ek)*Chlamydia† Previous						Coccid	ioidomy	cosis			Crvi	otosporio	liosis	
		Pre						vious	00010				vious		
Reporting area	Current week	52 v Med	<u>veeks</u> Max	Cum 2008	Cum 2007	Current week	52 v Med	weeks Max	Cum 2008	Cum 2007	Current week	52 v Med	veeks Max	Cum 2008	Cum 2007
United States	9,695	21,589	28,892	573,781	598,534	56	126	341	3,678	4,219	64	88	975	2,030	1,962
New England Connecticut Maine <sup>§</sup> Massachusetts New Hampshire Rhode Island <sup>§</sup> Vermont <sup>§</sup>	279 180 — 33 51 15	682 210 48 319 39 56 17	1,516 1,093 67 660 73 98 44	19,246 5,478 1,336 9,520 1,072 1,553 287	19,053 5,550 1,420 8,698 1,106 1,715 564	N N N N	0 0 0 0 0 0	1 0 0 1 0 0	1 N N 1 N	2 N N 2 N	2 — — — _ _ _ 2	5 0 2 1 0 1	17 15 5 11 4 3 4	139 15 12 48 34 4 26	148 42 15 49 23 5 14
Mid. Atlantic New Jersey New York (Upstate) New York City Pennsylvania	1,988 215 665 681 427	2,774 409 561 980 801	5,011 524 2,177 3,140 1,033	79,723 10,577 15,139 31,568 22,439	78,364 11,933 14,153 28,234 24,044	N N N	0 0 0 0	0 0 0 0			14 	13 0 4 2 6	120 8 20 8 103	282 10 90 42 140	244 11 62 37 134
<b>E.N. Central</b> Illinois Indiana Michigan Ohio Wisconsin	957 8 203 521 126 99	3,551 1,014 390 771 881 372	4,433 1,711 656 1,223 1,530 615	94,069 25,391 11,254 24,641 22,909 9,874	99,056 28,607 11,641 21,308 26,600 10,900	N N   N	1 0 0 0 0	3 0 2 1 0	27 N 20 7 N	17 N 12 5 N	10 2 8	23 2 3 5 6 7	134 13 41 11 60 60	516 43 86 115 130 142	447 52 29 78 100 188
W.N. Central lowa Kansas Minnesota Missouri Nebraska <sup>§</sup> North Dakota South Dakota	572 	1,228 160 163 265 468 92 33 53	1,694 229 529 373 574 247 65 81	34,434 4,249 5,063 6,938 13,331 2,426 900 1,527	34,584 4,819 4,482 7,369 12,693 2,909 951 1,361	N N     N N N N N N N N N N N N N N N	0 0 0 0 0 0 0	77 0 0 77 1 0 0	N N     N N N N N N N N N N N N N N N	6 Z Z 6 Z Z Z Z	17 2 10 1 3 - 1	17 4 1 5 3 2 0 1	125 61 15 34 14 24 51 16	346 76 23 97 74 49 2 25	313 83 37 55 51 21 2 64
S. Atlantic Delaware District of Columbia Florida Georgia Maryland <sup>§</sup> North Carolina South Carolina <sup>§</sup> Virginia <sup>§</sup> West Virginia	2,989 102 126 1,148 2 383 — 661 555 12	3,950 64 129 1,307 618 469 198 472 508 59	7,609 150 216 1,556 1,338 683 4,783 3,063 1,062 96	106,162 2,064 4,010 38,057 5,617 12,417 10,305 15,051 16,993 1,648	116,249 1,927 3,239 29,557 23,077 11,353 15,952 15,274 14,131 1,739		0 0 0 0 0 0 0 0 0 0	1 0 1 0 1 0 0 0 0	Z Z   Z Z Z Z	3 1 N 2 N N N N	10 4 4 1 1 	18 0 9 4 0 1 1 0	65 4 2 35 14 3 18 15 6 5	379 7 3 177 115 3 16 23 27 8	412 3 1 182 93 16 44 33 36 4
<b>E.S. Central</b> Alabama <sup>§</sup> Kentucky Mississippi Tennessee <sup>§</sup>	938  225 275 438	1,541 477 227 358 514	2,394 605 361 1,048 715	43,554 12,114 6,220 10,399 14,821	45,858 14,005 4,186 12,357 15,310	N N N	0 0 0 0	0 0 0 0	N N N N		2 2 	4 1 1 0 1	64 14 40 11 18	62 24 12 6 20	96 27 31 20 18
<b>W.S. Central</b> Arkansas <sup>§</sup> Louisiana Oklahoma Texas <sup>§</sup>	1,434 316  137 981	2,712 239 369 231 1,829	4,426 455 646 416 3,923	77,665 7,899 7,909 6,229 55,628	66,340 4,922 10,803 6,987 43,628	N N N	0 0 0 0	1 0 1 0	1 N 1 N	1 N 1 N	2 2	5 1 0 1 3	37 8 4 11 28	77 14 4 22 37	103 14 29 17 43
Mountain Arizona Colorado Idaho <sup>§</sup> Montana <sup>§</sup> Nevada <sup>§</sup> New Mexico <sup>§</sup> Utah Wyoming <sup>§</sup>	341 86 60 — — 195 —	1,387 475 292 60 49 183 138 119 5	1,836 679 488 259 363 416 561 209 34	31,519 10,880 5,309 2,072 1,496 5,152 3,252 3,347 11	40,556 13,530 9,646 1,936 1,538 5,293 5,039 2,883 691	56 56 N N 	90 88 0 0 1 0 0 0	170 168 0 0 7 3 7 1	2,497 2,446 N N 32 14 4 1	2,627 2,544 N N 35 16 31 1	7 1 5 1 —	10 1 2 1 0 2 2 0	567 4 26 71 7 6 9 484 8	191 22 48 31 26 8 29 19 8	152 22 37 9 18 5 46 5 10
Pacific Alaska California Hawaii Oregon <sup>§</sup> Washington	197 67  130 	3,365 94 2,837 110 189 29	4,676 129 4,115 152 402 498	87,409 2,550 76,389 2,812 5,545 113	98,474 2,714 76,703 3,171 5,304 10,582	N N N N	30 0 30 0 0	217 0 217 0 0 0	1,152 N 1,152 N N N	1,563 N 1,563 N N N	 	2 0 0 2 0	20 2 0 4 16 0	38 1 1 36 —	47 1 
American Samoa C.N.M.I. Guam Puerto Rico U.S. Virgin Islands		0  9 115 7	22 — 26 612 21	73  3,848 339	73 472 4,177 111	N  N	0 0 0 0	0 0 0 0	N  N	N 	N  	0  0 0 0	0 0 0 0	N  N	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 years 2007 and 2008 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly. Chamydia refers to genital infections caused by *Chlamydia trachomatis*. S Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

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	Giardiasis Previous Current <u>52 weeks</u> Cum C							onorrhe	a		Нае		s influen s, all ser	<i>zae</i> , invas otypes†	ive
	0			0	0	0		evious	0	0	0		vious	0	0
Reporting area	week	Med	Max	2008	Cum 2007	Current week	Med	weeks Max	Cum 2008	Cum 2007	Current week	Med	veeks Max	Cum 2008	Cum 2007
United States	259	299	1,158	7,641	8,209	2,978	6,322	8,913	161,292	191,838	17	46	173	1,520	1,475
New England Connecticut Maine <sup>§</sup> Massachusetts New Hampshire Rhode Island <sup>§</sup>	9 8  1	24 6 4 10 1	58 18 10 27 4 15	625 144 71 254 51 42	625 165 79 268 10 31	52 38 — — 12	97 48 2 45 2 7	227 199 7 127 6 13	2,729 1,204 50 1,201 64 194	3,060 1,137 69 1,494 87 237	  	3 0 2 0 0	12 9 3 5 2 2	98 21 8 49 6 7	109 27 7 56 12 6
Vermont <sup>§</sup>		3	9	63	72	2	1	5	16	36	_	0	3	7	1
Mid. Atlantic New Jersey New York (Upstate) New York City Pennsylvania	39 — 23 3 13	61 7 23 16 14	131 15 111 29 29	1,449 132 549 400 368	1,475 207 493 457 318	500 94 133 169 104	623 112 129 176 227	1,028 174 545 523 394	17,744 2,997 3,379 5,388 5,980	19,955 3,398 3,375 5,956 7,226	4 — — 4	10 1 3 1 4	31 7 22 6 9	302 42 90 51 119	285 45 76 58 106
E.N. Central Illinois Indiana Michigan Ohio Wisconsin	16 — 4 11 1	47 12 0 11 16 9	96 34 0 21 36 26	1,147 270 N 263 425 189	1,351 429 N 334 364 224	321 4 82 184 34 17	1,335 377 158 301 341 119	1,638 589 296 657 685 214	33,040 8,245 4,553 9,140 8,337 2,765	39,964 10,427 4,849 8,805 12,153 3,730	  	8 2 1 0 2 1	28 7 20 3 6 4	231 64 47 13 86 21	223 73 31 18 65 36
W.N. Central Iowa Kansas Minnesota Missouri Nebraska <sup>§</sup> North Dakota South Dakota	84 1 2 68 11 2 	27 5 3 0 9 4 0 1	621 24 11 575 23 8 36 6	833 145 54 259 221 103 14 37	498 107 68 213 57 10 37	196 	325 30 43 62 168 25 2 5	440 56 130 92 235 51 7 11	8,796 683 1,237 1,583 4,423 667 48 155	11,022 1,083 1,253 1,901 5,778 808 60 139		3 0 0 1 0 0	24 1 4 21 6 3 2 0	120 2 12 32 49 18 7	81 9 30 29 11 1
S. Atlantic Delaware District of Columbia Florida Georgia Maryland <sup>§</sup> North Carolina South Carolina <sup>§</sup> Virginia <sup>§</sup> West Virginia	35   25   5   4   	53 1 24 11 0 3 8 0	102 6 5 47 29 18 0 7 39 8	1,178 23 22 625 259 9 N 63 152 25	1,428 21 38 617 306 127 N 41 259 19	1,010 23 49 385 1 107 <u>-</u> 251 189 5	1,444 22 48 474 233 123 133 190 143 16	3,072 44 104 564 561 237 1,949 833 486 34	36,330 638 1,476 12,981 2,107 3,366 4,378 5,504 5,504 5,489 391	44,100 771 1,300 12,352 9,394 3,449 7,529 5,529 3,274 502	7 1 5 	11 0 3 3 0 1 1 0	29 1 10 8 3 9 7 6 3	340 5 5 112 88 2 44 31 41 12	377 5 1 100 72 57 41 34 52 15
E.S. Central Alabama <sup>§</sup> Kentucky Mississippi Tennessee <sup>§</sup>	4 1 N 3	9 5 0 0 4	23 11 0 16	213 117 N 96	251 127 N N 124	320 — 98 96 126	567 192 86 131 169	945 287 161 401 261	15,751 4,834 2,438 3,834 4,645	17,631 6,038 1,581 4,627 5,385	 	3 0 0 2	8 2 1 2 6	82 15 2 11 54	82 20 4 6 52
<b>W.S. Central</b> Arkansas <sup>§</sup> Louisiana Oklahoma Texas <sup>§</sup>	5 1 4 N	7 3 1 3 0	41 11 14 35 0	127 63 13 51 N	173 69 48 56 N	463 105  69 289	1,008 82 176 91 649	1,355 167 297 171 1,102	26,314 2,565 3,586 2,352 17,811	27,469 2,303 6,291 2,627 16,248	2  _2	2 0 0 1 0	29 3 2 21 3	71 5 3 58 5	64 6 3 50 5
Mountain Arizona Colorado Idaho <sup>§</sup> Montana <sup>§</sup> Nevada <sup>§</sup> New Mexico <sup>§</sup> Utah Wyoming <sup>§</sup>	47 1 16 5 4 16 16	30 3 11 3 2 3 2 6 1	68 11 26 19 8 6 5 32 3	680 60 259 75 37 58 45 132 14	769 100 248 70 45 73 66 146 21	96 16 68 — — 12 —	236 78 60 4 1 44 28 11 0	330 130 91 19 48 130 104 36 4	5,630 1,626 1,648 90 47 1,289 640 290	7,502 2,819 1,844 129 47 1,297 882 443 41	2 2 — — — —	5 2 1 0 0 0 0 1 0	14 11 4 1 1 4 6 1	195 88 37 10 2 11 20 27 	$ \begin{array}{r} 163 \\ 63 \\ 41 \\ - \\ 7 \\ 26 \\ 19 \\ 3 \end{array} $
Pacific Alaska California Hawaii Oregon <sup>§</sup> Washington	20 4 — 8 8	57 2 37 1 9 9	185 5 91 5 19 87	1,389 42 934 17 224 172	1,639 34 1,122 45 217 221	20 15 — 5	625 10 552 11 23 4	809 24 683 22 63 97	14,958 277 13,681 291 692 17	21,135 291 17,734 376 618 2,116	2   2	2 0 0 1 0	7 4 3 2 4 3	81 12 15 14 37 3	91 6 36 6 42 1
American Samoa C.N.M.I. Guam Puerto Rico U.S. Virgin Islands	 	0  0 2 0	0 0 31 0	  	2 160 	 	0 1 _5 _2	1 12 23 6	3 45 141 64	3  70 178 26	  N	0 0 0 0	0  1 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 years 2007 and 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).

(29th week)				Hepat	itis (viral, a	icute), by ty	pe⁺					_			
		Broy	A				Prev	B					egionello: vious	sis	
	Current		eeks	Cum	Cum	Current		eeks	Cum	Cum	Current		veeks	Cum	Cum
Reporting area	week	Med	Max	2008	2007	week	Med	Max	2008	2007	week	Med	Max	2008	2007
United States	24	53	171	1,375	1,528	32	74	259	1,765	2,369	61	51	117	1,115	1,092
New England	—	3	7	63	63	—	1	6	35	67	1	3	14	55	61
Connecticut Maine <sup>§</sup>	_	0 0	3 1	14 4	9 1	_	0 0	6 2	10 9	24 3	1	1 0	4 2	15 2	14 1
Massachusetts	—	1 0	5 2	27 5	31 10	—	0 0	3 1	8	27	—	1 0	3	11 8	21
New Hampshire Rhode Island <sup>§</sup>	_	0	2	5 11	8	_	0	3	4 3	4 8	_	0	2 5	15	1 20
Vermont§	—	0	1	2	4	—	0	1	1	1	—	0	2	4	4
Mid. Atlantic New Jersev	4	6	18	139	238	—	9	18 7	205	304	33	15	37	318	312
New York (Upstate)	3	1 1	6 6	22 36	71 40	_	2 2	7	36 37	90 46	 15	1 4	13 16	21 109	40 85
New York City	1	2 1	7 6	44 37	81 46	_	2 3	5 7	45 87	69 99	 18	2 6	11 21	29 159	68 119
Pennsylvania E.N. Central	I	6	16	177	40 174	2	3 7	7 18	07 199	99 274	20	11	35	252	241
Illinois	_	2	10	56	72		1	6	41	91	20	1	16	19	50
Indiana Michigan	_	0 2	4 7	8 69	4 41	_	0 2	8 6	23 65	26 68	7	1 3	7 11	19 76	25 81
Ohio	_	1	5	27	37	2	2	7	64	73	13	4	17	134	75
Wisconsin	—	0	2	17	20	—	0	1	6	16	—	0	5	4	10
W.N. Central Iowa	10 2	5 1	29 7	185 78	99 25	1	2 0	9 2	56 8	67 13	1	2 0	8 2	60 8	55 7
Kansas	_	0	3	9	3	_	0	1	4	6	_	0	1	1	6
Minnesota Missouri	6 2	0	23 3	26 31	46 12	_	0 1	5 4	4 35	13 24	_	0 1	4 4	8 28	11 23
Nebraska§		1	5	39	8	1	0	1	5	8	1	0	4	14	5
North Dakota South Dakota	_	0	2 1	2	5	_	0 0	1 2	_	3	_	0 0	2 1	1	3
S. Atlantic	2	8	17	175	255	13	16	60	430	571	4	7	28	157	206
Delaware	_	0	1	4	3	_	0	3	7	10	—	0	2	5	6
District of Columbia Florida	1	0 3	0 8	80	75	8	0 6	0 12	181	195	3	0 3	1 10	6 76	8 76
Georgia	_	1	3	25	43	3	3	8	67	78		1	3	13	22
Maryland <sup>§</sup> North Carolina	1	0 0	3 9	3 35	45 29	2	0	6 17	4 50	63 75	1	0 0	5 7	3 11	37 24
South Carolina§	—	0	4	6	5	—	1	6	35	38	—	0	2	5	9
Virginia <sup>§</sup> West Virginia	_	1 0	5 2	19 3	51 4	_	2 1	16 30	57 29	83 29	_	1 0	6 3	30 8	21 3
E.S. Central	_	2	9	42	55	1	7	13	182	198	_	2	10	68	54
Alabama§	_	0 0	4 2	5 14	10 9	_	2 2	5 5	49 53	72 35	_	0 1	1 3	8 33	6 25
Kentucky Mississippi	_	0	2	4	9 6	_	0	3	18	22	_	0	1	1	
Tennessee§	—	1	6	19	30	1	2	8	62	69	—	1	5	26	23
W.S. Central Arkansas <sup>§</sup>	6	5 0	55 1	133 4	121 8	10	17 1	131 3	367 19	479 43	—	2 0	23 2	33 6	51 6
Louisiana	_	0	3	4	17	_	1	4	20	59	_	0	2	_	2
Oklahoma Texas§	3 3	0 5	7 53	7 118	3 93	3 7	2 11	37 107	53 275	26 351	_	0 1	3 18	3 24	2 41
Mountain	2	4	10	118	140	4	3	10	111	130	2	2	5	42	50
Arizona	1	2	6	56	100	—	1	4	29	57	1	1	5	13	12
Colorado Idaho§	1	0 0	3 3	24 15	17 2	1	0 0	3 2	15 6	20 7	_	0 0	2 1	3 2	11 4
Montana§	_	0	2		4	_	0	1	_	_	_	0	1	2	3
Nevada <sup>§</sup> New Mexico <sup>§</sup>	_	0 0	2 3	5 14	7 5	2	1 0	3 2	27 8	29 9	_	0 0	2 1	6 3	6 6
Utah	—	0	2	2	3	1	0	5	23	4	1	0	3	13	5
Wyoming <sup>§</sup>	_	0	1	2	2		0	1	3	4	_	0	0	- 120	3
<b>Pacific</b> Alaska	_	12 0	51 1	343 2	383 2	1	8 0	30 2	180 8	279 4	_	4 0	18 1	130 1	62
California Hawaii	_	10 0	42 1	284 4	342 5	_	5 0	19 2	122 3	203 8	_	3 0	14 1	100 4	48 1
Oregon§	_	1	3	20	13	_	1	3	23	36	_	0	2	10	4
Washington	_	1	7	33	21	1	1	9	24	28	_	0	3	15	9
American Samoa C.N.M.I.	_	0	0	_	—	_	0	0	_	14	N	0	0	N	N
Guam	_	0	0	_	_	_	0	1	_	2	_	0	0	_	_
Puerto Rico U.S. Virgin Islands	_	0 0	4 0	12	46	_	1 0	5 0	22	44	_	0 0	1 0	1	3
o.o. virgin Islands		U	U				U	U	_	_		U	U	_	

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 years 2007 and 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).

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(29th Week)*		1	vme disea	150			N	Ialaria			Men		cal disea	se, invasi	ve†
		Prev	ious				Prev	ious				Pre	vious		
Reporting area	Current week	52 w Med	eeks Max	Cum 2008	Cum 2007	Current week	52 w Med	eeks Max	Cum 2008	Cum 2007	Current week	52 v Med	veeks Max	Cum 2008	Cum 2007
United States	545	341	1,555	7,268	13,548	9	22	136	443	624	6	19	52	666	680
New England Connecticut Maine <sup>§</sup> Massachusetts New Hampshire Rhode Island <sup>§</sup>	5  -   2	53 0 4 16 11 0	523 193 61 252 58 77	941 	4,644 2,069 74 1,878 552 2	1 	1 0 0 0 0	35 27 2 2 1 8	25 6 14 1	33 1 4 21 7		0 0 0 0 0	3 1 3 0 1	17 1 3 13 	34 6 5 16 3
Vermont§	3	2	12	64	69	1	0	2	4	_	_	0	1	_	3
Mid. Atlantic New Jersey New York (Upstate) New York City Pennsylvania	421 324  97	170 36 63 1 55	662 160 453 27 293	4,871 876 1,583 5 2,407	5,076 1,934 1,086 187 1,869	 	5 0 1 3 1	18 7 8 9 4	95 — 15 62 18	176 32 33 95 16	1 	2 0 0 1	6 1 3 2 5	74 3 21 17 33	83 10 25 17 31
<b>E.N. Central</b> Illinois Indiana Michigan Ohio Wisconsin	2 2 	6 0 1 0 2	154 13 7 5 4 132	73 12 10 24 12 15	1,374 100 17 23 9 1,225	  	2 1 0 0 0	7 6 2 2 3 3	72 28 4 10 20 10	76 38 5 9 13 11	1   1	3 1 0 1 0	9 3 4 2 4 2	106 32 17 17 31 9	102 41 15 16 24 6
W.N. Central lowa Kansas Minnesota Missouri Nebraska <sup>§</sup> North Dakota South Dakota	51 — 51 — — —	3 1 0 0 0 0 0 0	740 7 1 731 3 1 9 1	321 21 280 14 3 1 1	213 82 8 114 5 4 	2 2 	0 0 0 0 0 0 0 0	9 1 8 4 2 2 0	33 2 3 16 6 	22 2 1 11 3 4 —	1 — 1 —	2 0 0 0 0 0 0	8 3 7 3 2 1 1	64 12 19 21 9 1	42 10 2 10 13 2 2 3
S. Atlantic Delaware District of Columbia Florida Georgia Maryland <sup>§</sup> North Carolina South Carolina <sup>§</sup> Virginia <sup>§</sup> West Virginia	62 14 6 3 4 28 2 5 5	51 12 2 1 0 9 0 0 12 1	221 35 8 4 2 136 8 4 68 9	863 436 75 27 7 7 7 7 8 212 20	2,116 401 74 6 7 1,203 21 14 373 17	3 — — 1 1 1	4 0 1 1 0 0 0 1	15 1 7 3 7 1 7 1	100 1 27 24 5 16 4 22	131 3 24 24 21 34 13 5 29 —	3 — 1 — 2	3 0 1 0 0 0 0 0	7 1 3 2 4 3 2 1	100 1 	103 1 
E.S. Central Alabama <sup>§</sup> Kentucky Mississippi Tennessee <sup>§</sup>	3  -   3	1 0 0 0	5 3 1 1 3	28 9 1 1 17	$ \begin{array}{r} 30\\ 9\\ 2\\ -\\ 19\\ 19\end{array} \end{array} $	 	0 0 0 0 0	3 1 1 1 2	10 3 3 1 3	21 3 4 1 13	 	1 0 0 0	6 2 2 2 3	37 5 7 9 16	36 7 7 10 12
<b>W.S. Central</b> Arkansas <sup>§</sup> Louisiana Oklahoma Texas <sup>§</sup>		1 0 0 1	11 1 0 1 10	25 — — 25	40  2  38	 	1 0 0 1	64 1 1 4 60	16 — 2 14	54 — 13 5 36	 	2 0 0 0 1	13 1 3 5 7	65 6 12 10 37	71 8 23 14 26
Mountain Arizona Colorado Idaho <sup>§</sup> Montana <sup>§</sup> Nevada <sup>§</sup> New Mexico <sup>§</sup> Utah Wyoming <sup>§</sup>	1 1 — — —	0 0 0 0 0 0 0 0 0 0	3 1 2 2 2 1 1 1	17 2 3 5 2 2 2 2 1	18 — 5 1 6 4 1	1 — — — — 1	1 0 0 0 0 0 0 0 0	5 1 2 2 0 3 1 1 0	15 5 3  4 1 2	33 6 12 		1 0 0 0 0 0 0 0 0	4 2 2 1 2 1 2 1 2	36 5 9 2 4 6 5 3 2	47 11 16 4 1 3 2 8 2
Pacific Alaska California Hawaii Oregon <sup>§</sup> Washington	  	4 0 3 0 0 0	8 2 7 0 4 7	129 3 108 N 18 	37 2 32 N 3 	2 — —  2	3 0 2 0 0 0	10 2 8 1 2 3	77 3 59 2 4 9	78 2 52 2 12 10	 	4 0 3 0 1 0	17 2 17 2 3 5	167 3 121 1 23 19	162 1 117 5 24 15
American Samoa C.N.M.I. Guam Puerto Rico U.S. Virgin Islands	N  N	0 0 0 0	0 0 0 0	N 	N  -   N		0 0 0 0	0 1 0	 1 1	 1 		0  0 0	0 	2	 6

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 years 2007 and 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).

	h Week)*Pertussis Previous						Rab	ies, anim	nal		Ro	ocky Mo	untain sp	otted feve	er
				•				vious	-				vious	-	
Reporting area	Current week	<u>52 w</u> Med	<u>eeks</u> Max	Cum 2008	Cum 2007	Current week	Med	veeks Max	Cum 2008	Cum 2007	Current week	Med	veeks Max	Cum 2008	Cum 2007
United States	96	145	849	3,698	5,202	45	83	177	2,087	3,243	53	29	195	651	953
New England	_	22	49	374	802	1	7	20	178	301	_	0	2	1	7
Connecticut Maine <sup>†</sup>	_	0 1	5 5	16	45 43	_	3 1	17 5	96 28	123 46	N	0 0	0 0	Ν	Ν
Massachusetts New Hampshire	_	17 1	34 5	315 16	651 38	N 1	0 1	0 4	N 21	N 28	_	0 0	2 1	1	7
Rhode Island <sup>†</sup>	_	1	25	21	4	Ν	0	0	N	N	—	0	0	_	—
Vermont <sup>†</sup> Mid. Atlantic	— 19	0 20	6 43	6 417	21 696		2 20	5 32	33 566	104 552	2	0 1	0 5	31	43
New Jersey	—	1	9	3	118	_	0	0	_	_	_	0	2	2	16
New York (Upstate) New York City	14	6 2	23 7	176 34	334 75	20	9 0	20 2	253 10	264 30	1	0 0	2 2	9 10	3 16
Pennsylvania	5	7	23	204	169	—	10	23	303	258	1	0	2	10	8
E.N. Central Illinois	10	20 3	190 8	699 69	954 103	5	3 0	43 0	50 32	68 30	1	1 0	4 3	15 2	31 20
Indiana	1	0 4	12 16	23 101	31 155	3	0	1 32	2 28	6 38	—	0	1	2	4
Michigan Ohio	9	6	176	467	423	2	1	11	20	24	1	0	4	2	3 4
Wisconsin	_	2	9	39	242	N	0	0	N	N	_	0	1	—	—
<b>W.N. Central</b> Iowa	8	11 1	142 5	342 32	360 109	2	4 0	13 3	79 9	153 18	5	4 0	34 5	160 1	204 13
Kansas Minnesota	6	1 0	5 131	25 110	61 59	1	0 0	7 7	 27	79 11	_	0 0	2 4	_	9 1
Missouri	1	2	18	124	54	1	0	5	22	21	4	3	25	149	170
Nebraska† North Dakota	1	1 0	12 5	43 1	27 3	_	0 0	0 8	14	11	1	0 0	3 0	8	8
South Dakota		0	2	7	47	_	0	2	7	13		0	1	2	3
S. Atlantic Delaware	22	14 0	50 2	351 6	545 7	12	35 0	94 0	929	1,270	33	8 0	109 2	217 7	425 10
District of Columbia Florida	 17	0 3	1 9	2 121	7 132	_	0 0	0 77		128	1	0 0	2 4	6 8	2 7
Georgia	—	0	3	21	28	_	6	37	187	142	4	0	6	24	45
Maryland <sup>†</sup> North Carolina	1 1	0 0	6 38	6 77	67 180	 11	0 9	18 16	12 272	225 277	4 23	0 0	6 96	6 107	31 247
South Carolina <sup>†</sup>	3	2 2	22	57	49	_	0	0	—	46	1	1	4	16	30
Virginia <sup>†</sup> West Virginia	- 3	2	11 12	57 4	64 11	1	12 0	27 11	321 60	413 39	_	0	3	40 3	51 2
E.S. Central	6	7	31 6	134	193	3	2 0	7 0	71	90	3	4	16	111	153
Alabama <sup>†</sup> Kentucky	1	1 1	5	20 27	45 13	3	0	3	21	10	_	1 0	10 1	32	40 4
Mississippi Tennessee <sup>†</sup>	1 4	3 1	29 4	54 33	74 61	_	0 2	1 6	2 48	80	3	0 2	3 11	4 75	10 99
W.S. Central	18	19	198	447	580	_	8	40	62	617	8	2	153	101	65
Arkansas† Louisiana	1	1 0	11 2	38 3	122 13	_	1 0	6 2	36	17 3	_	0 0	15 2	13 2	14 3
Oklahoma	5	0	26	19	3	_	0	32	25	45	8	0	132	80	34
Texas <sup>†</sup> Mountain	12 5	17 19	179 37	387 471	442 631	2	0 1	34 8	1 32	552 30	_	0 0	8 2	6 12	14 22
Arizona	1	3	10	113	152	N	0	0	N	N	_	0	2	6	4
Colorado Idaho†	2 1	4 0	13 4	81 19	171 26	_	0 0	0 4	_	_	_	0 0	2 1	_	3
Montana <sup>†</sup> Nevada <sup>†</sup>	—	0	11 7	59 17	31 25	2	0	3 2	3 3	6 5	_	0	1 0	_2	1
New Mexico <sup>†</sup>	_	1	7	26	41	_	0	3	18	6	_	0	1	1	4
Utah Wyoming <sup>†</sup>	1	6 0	27 2	150 6	170 15	_	0 0	2 4	2 6	6 7	_	0 0	0 2	3	10
Pacific	8	19	303	463	441	_	4	10	88	132	1	0	1	3	3
Alaska California	8	1 8	29 129	58 174	32 258	_	0 3	4 8	12 73	36 91	N	0 0	0 1	N 1	N 1
Hawaii Oregon <sup>†</sup>	—	0 2	2 14	4 75	14 54	—	0 0	0 1		5	N 1	0 0	0	N 2	N 2
Washington	_	2 5	169	152	54 83	_	0	0		5	N	0	0	N	N
American Samoa C.N.M.I.	_	0	0	_	—	<u>N</u>	0	0	Ν	Ν	N	0	0	N	Ν
Guam	_	0	0	—	_		0	0			Ν	0	0	Ν	N
Puerto Rico U.S. Virgin Islands	_	0 0	0 0	_	_	N	1 0	4 0	33 N	30 N	N N	0 0	0 0	N N	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 years 2007 and 2008 are provisional. Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

(29th Week)*		s	almonello	osis		Shiga t	oxin-pro	ducing E	. <i>coli</i> (ST	EC)†		:	Shigellos	is	
	Current		/ious /eeks	Cum	Cum	Current		/ious /eeks	Cum	Cum	Current		vious weeks	Cum	Cum
Reporting area	week	Med	Max	2008	2007	week	Med	Max	2008	2007	week	Med	Max	2008	2007
United States	493	830	2,110	18,210	21,316	77	79	247	1,990	1,946	260	401	1,227	9,368	8,476
New England Connecticut	3	23 0	253 224	932 224	1,421 431	2	4 0	19 15	93 15	177 71	2	3 0	24 22	99 22	160 44
Maine <sup>§</sup> Massachusetts	1	2 15	14 60	69 494	62 739	1	0 2	4 7	6 46	17 70	2	0 2	1 7	6 61	13 91
New Hampshire Rhode Island <sup>§</sup>	_	3	10 13	57 44	90 51	_	0	5	13 7	10 3	_	0	1	1	4
Vermont§	2	1	7	44	48	1	0	3	6	6	_	0	1	2	2
Mid. Atlantic New Jersey	78	90 16	212 48	2,237 314	2,966 646	17	8 1	192 6	392 7	225 59	10	29 6	81 30	1,128 283	352 70
New York (Upstate)	41	25	73	645	699	11	4	188	300	67	9	7	36	368	61
New York City Pennsylvania	6 31	23 30	48 83	549 729	654 967	6	1 2	5 11	27 58	25 74	1	9 2	35 65	410 67	124 97
E.N. Central	21	90	197	2,255	3,149	9	11	36	256	248 41	75	73	145	1,741	1,249
Illinois Indiana	_	24 9	58 52	600 268	1,215 291	_	1 1	13 12	22 22	25	_	18 10	37 83	442 423	304 36
Michigan Ohio	7 14	17 27	43 65	423 687	465 659	1 7	2 2	12 17	63 87	38 63	1 44	2 21	7 104	48 570	37 486
Wisconsin	_	14	37	277	519	1	3	16	62	81	30	9	39	258	386
W.N. Central Iowa	46 1	51 8	106 18	1,314 203	1,391 252	22	13 2	39 13	335 65	299 64	26	21 2	57 10	488 73	1,198 44
Kansas Minnesota	3 25	7 13	18 73	159 384	211 330	2 9	0 3	3 22	16 95	29 93	 13	0 4	2 25	8 150	17 136
Missouri Nebraska <sup>§</sup>	15 2	14 5	29 13	342 137	366 122	7 4	3	12 6	88 45	53 35	12 1	9	37 3	149 1	892 12
North Dakota	_	0	35	23	18	—	0	20	2	6	_	0	15	32	3
South Dakota S. Atlantic		2 243	11 442	66 4,509	92 5,021	 10	1 12	5 40	24 292	19 302	 27	1 72	10 149	75 1,761	94 2,628
Delaware	4	2	8	73	78	_	0	2	7	10	_	0	2	8	6
District of Columbia Florida	132	1 100	4 181	29 2,214	32 1,971	1 2	0 2	1 18	7 90	73	15	0 22	3 75	7 514	11 1,443
Georgia Maryland <sup>§</sup>	25 22	37 9	86 44	793 90	817 400	1 3	1 1	7 5	41 14	37 42	5	26 1	49 7	702 8	936 53
North Carolina South Carolina <sup>§</sup>	18 6	19 20	228 52	458 405	653 421	3	1 0	24 3	39 20	46 6	3 3	1 8	12 32	60 369	40 54
Virginia <sup>§</sup>	4	18	49	368	569	_	3	9 3	59	82	1	4	14	86	78
West Virginia E.S. Central	36	4 61	25 144	79 1,261	80 1,447	5	0 5	3 21	15 131	6 123		0 50	61 178	7 1,114	7 837
Alabama§	12 10	16 9	50 21	346 199	377		1 1	17 12	37	44 36	3	12 7	43	257 186	311 185
Kentucky Mississippi	1	17	57	369	391	_	0	2	4	3	1	16	35 112	236	242
Tennessee <sup>§</sup> W.S. Central	13 51	16 98	34 894	347 1,790	402 1,841	2 3	3 5	12 25	62 112	40 141	16 80	13 58	32 748	435 1,984	99 1,035
Arkansas§	34	13	50	308	279	_	1	4	23	23	11	3	27	264	52
Louisiana Oklahoma	17	7 12	44 72	80 317	399 199	1	0 0	1 14	 17	8 14	4	4 2	17 32	78 60	306 55
Texas <sup>§</sup>		58	794	1,085	964	2	3	11	72	96	65	43	702	1,582	622
<b>Mountain</b> Arizona	30 17	57 19	98 35	1,541 472	1,320 443	5 2	9 1	42 8	217 39	248 60	17 9	18 10	40 30	400 190	416 211
Colorado Idaho§	6 3	11 3	43 13	407 94	300 68	1 2	2 2	17 16	66 45	54 47	3	2 0	6 2	48 5	60 9
Montana <sup>§</sup> Nevada <sup>§</sup>	1	2 5	10 13	49 117	46 137	_	0 0	3 3	15 13	 17	4	0 3	1 13	3 116	14 17
New Mexico§		6	28	228	137	_	1	5	18	22	_	1	6	23	63
Utah Wyoming <sup>§</sup>	3	5 1	17 5	152 22	144 45	_	1 0	9 2	17 4	36 12	1	1 0	5 2	12 3	16 26
<b>Pacific</b> Alaska	17	109 1	399 5	2,371 27	2,760 49	4	9 0	40 1	162 4	183	1	30 0	79 1	653	601 7
California	1	77	286	1,715	2,071	_	5	34	91	104	_	27	61	564	484
Hawaii Oregon <sup>§</sup>	1	5 6	14 16	116 214	139 183	1	0 1	5 11	6 21	19 22	1	1 1	43 5	22 30	16 36
Washington	15	12	103	299	318	3	2	13	40	38	_	2	20	37	58
American Samoa C.N.M.I.	_	0	1	1	_	_	0	0	_	_	_	0	1	1	3
Guam Puerto Rico	_	0 11	2 55	8 213	11 458	_	0 0	0 1	2	_	_	0 0	3 2	14 6	10 19
U.S. Virgin Islands	_	0	0		_	_	Ő	0 0		_	—	Ő	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 years 2007 and 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).

	Stre	ptococcal	disease,	invasive, g	oup A	Streptococcus pneumoniae, invasive disease, nondrug resistant <sup>†</sup> Age <5 years								
	Current	Prev 52 w		Cum	Cum		Current	Prev 52 w	ious eeks	Cum	Cum			
Reporting area	week	Med	Max	2008	2007		week	Med	Max	2008	2007			
United States	54	89	259	3,372	3,525		13	36	166	955	1,084			
New England	1	6	33	262	281		_	2	14	48	87			
Connecticut Maine <sup>§</sup>	1	0 0	28 3	78 19	83 21		_	0 0	11 1	1	11 1			
Massachusetts	_	3	8	125	139		—	1	5	37	57			
New Hampshire Rhode Island <sup>§</sup>	_	0 0	2 7	17 13	21 2		_	0 0	1 1	7 2	8 8			
Vermont§	_	0	2	10	15		_	0	1	1	2			
Mid. Atlantic	12	16	43	703	683		1	4	19	117	195			
New Jersey	8	3 6	9 17	108 242	128 207		1	1 2	6 14	21 63	40 66			
New York (Upstate) New York City	<u> </u>	3	10	122	168		_	1	14	33	89			
Pennsylvania	4	5	16	231	180		Ν	0	0	Ν	Ν			
E.N. Central	3	18	64	740	711		—	6	23	209	197			
Illinois Indiana	_	5 2	16 11	185 93	214 81		_	1 0	6 14	46 23	47 12			
Michigan	1	3	10	115	149		_	1	5	50	56			
Ohio	2	5	14	201	171		—	1	5	36	41			
Wisconsin	_	2	43	146	96		_	1	9	54	41			
W.N. Central lowa	3	4 0	39 0	268	230		1	2 0	16 0	81	56 —			
Kansas	2	0	6	35	26		_	0	3	12	_			
Minnesota Missouri	1	0 2	35 10	121 63	111 61		1	0 1	13 2	30 24	35 15			
Nebraska§		2	3	26	15		_	0	2	24 6	5			
North Dakota	—	0	5	9	11		—	0	2	4	1			
South Dakota		0	2	14	6		_	0	1	5	_			
S. Atlantic Delaware	18	18 0	34 2	562 6	815 6		4	5 0	13 0	113	186			
District of Columbia	_	0	2	14	16		_	0	1	1	2			
Florida	7	6	11	163	181		2	1 1	4	40	37			
Georgia Maryland <sup>§</sup>	4 4	5 0	10 6	141 4	157 144		1 1	0	5 4	11 1	41 47			
North Carolina	3	2	10	92	110		Ň	0	0	Ν	N			
South Carolina <sup>§</sup> Virginia <sup>§</sup>	_	1 3	5 12	38 82	76 105		_	1 0	4 6	31 24	23 31			
West Virginia	_	0	3	22	20		_	0	1	5	5			
E.S. Central	1	4	9	110	142		2	2	11	65	56			
Alabama§	N	0	0	N	N		N	0	0	N	N			
Kentucky Mississippi	N	0 0	3 0	22 N	31 N		N	0 0	0 3	N 16	N 5			
Tennessee§	1	3	7	88	111		2	2	9	49	51			
W.S. Central	13	7	85	285	199		4	5	66	152	147			
Arkansas <sup>§</sup> Louisiana	_	0 0	2 1	4 3	16 14		_	0 0	2 2	4 2	9 26			
Oklahoma	2	1	19	74	48		_	1	7	47	33			
Texas§	11	5	65	204	121		4	3	58	99	79			
Mountain	3	11	22	362	379		1	5	12	160	149			
Arizona Colorado	2 1	4 2	9 8	136 99	140 97		1	2 1	8 4	81 44	70 31			
Idaho§	_	0	2	11	8		—	0	1	3	2			
Montana <sup>§</sup> Nevada <sup>§</sup>	N	0 0	0 2	N 6	N 2		N	0 0	1 0	3 N	1 N			
New Mexico <sup>§</sup>	_	2	7	66	65			0	3	13	27			
Utah	—	1	5	39	62		—	0	3	15	18			
Wyoming§	_	0	2	5	5		_	0	1	1	—			
Pacific Alaska	_	2 0	10 3	80 21	85 15		N	0 0	2 0	10 N	11 N			
California	_	0	0	_	_		N	0	0	Ν	N			
Hawaii	N	2 0	10 0	59 N	70 N		N	0 0	2 0	10 N	11 N			
Oregon <sup>§</sup> 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 Puerto Rico	N	0 0	3 0	N	7 N		N	0 0	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. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data for reporting years 2007 and 2008 are provisional. f. Incidence data reported through the National Electronic Disease Surveillance System (NEDSS).

$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$
Peporting area         week         New
Pepporting area         week         Med         Max         2008         2007         week         Max         2008         2008         2007         Max         2008
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{l l l l l l l l l l l l l l l l l l l $
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Vermont <sup>5</sup> -         0         2         10         11         -         0         1         2         2         -         0         5         1         2           Mid. Atlantic         2         3         10         135         94         -         0         2         16         22         22         32         45         937         872           New York (Upstate)         1         1         4         37         30         -         0         2         5         8         4         3         13         83         77           New York (Upstate)         1         1         4         37         30         -         0         0         -         -         16         17         30         587         55           Pennsylvania         1         1         8         59         64         -         0         2         11         14         -         5         19         79         252           Indiana         -         2         15         57         79         -         0         6         14         25         7         13         158         97
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
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New York City-0053900161730587535Pennsylvania11185964-021114-512154154Indiana-2155779-061425-51979252Indiana-22813498-011171242677232Ohio4715239262-144033741315897Wisconsin-0000144033741315897Wisconsin-0000144033741315897Waa-000000121617121613168Wisconsin-00001143010108Iowa-000-1-013333333<
E.N. Central41350440440-2147371171631463470Illinois-2155779-061425-51979252Michigan-02101-011171242677233Michigan-02101-011171242677233Ohio4715239262-144033741315897Wisconsin-0000142736Wisconsin-00001423168Iowa-00001423169Iowa-000014101121441010Wisconi-15577777-11555336Minesota-002510130108Nebraska <sup>8</sup> -00
Illinois       -       2       15       57       79       -       0       6       14       25       -       5       19       79       222         Indiana       -       2       28       134       98       -       0       11       17       12       4       2       6       77       23         Michigan       -       0       2       10       1       -       0       1       2       1       6       2       17       122       62         Ohio       4       7       15       239       262       -       1       4       40       33       7       4       13       158       97         Wisconsin       -       0       0       -       -       -       1       4       27       31       168         Iowa       -       0       0       -       -       0       0       -       -       10       10       10       10         Kansas       -       1       5       47       61       -       0       1       2       -       1       15       5       10       130       108
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
W.N. Central3106108114098232815213169lowa0000021010Kansas154761013405179Minnesota010510915155336Missouri1861430122510130108North Dakota000001South Dakota0000033S. Atlantic32041648687441011214831502151,3231,260Delaware0110486666District of Columbia03122001221166105Horda311263613822226747761834505417Georgia719211
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Kansas154761013405179Minnesota010510915155336Missouri1861430122510130108Nebraska <sup>§</sup> 00201340133North Dakota00000133S. Atlantic32041648687441011214831502151,3231,260Delaware01350110486District of Columbia031212001221166105Florida311263613822226747761834505417Georgia719211243216326110175205203North Carolina <sup>§</sup> 007618171192South Carolina <sup></sup>
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
South Dakota-02-7-0134-03-3S. Atlantic32041648687441011214831502151,3231,260Delaware-0135-01-1-04866District of Columbia-031212-00-1221166105Florida311263613822226747761834505415Georgia-7192112432163261-10175205203Maryland <sup>§</sup> -00-1-007618171192South Carolina <sup>§</sup> -00001254753Virginia <sup>§</sup> N00NNN00NN6517144115West Virginia-176144-0268-00-6E.S. Central-514161132-1432201220 <td< td=""></td<>
S. Atlantic       3       20       41       648       687       4       4       10       112       148       31       50       215       1,323       1,260         Delaware $-$ 0       1 $-$ 0       1 $-$ 1 $-$ 0       4       8       66         District of Columbia $-$ 0       3       12       12 $-$ 0 $-$ 1 $2$ 2       11       66       105         Florida       3       11       26       361       382       2       2       6       74       77       6       18       34       505       417         Georgia $-$ 7       19       211       243       2       1       6       32       61 $-$ 10       175       205       205       413         Maryland <sup>§</sup> $-$ 0       0 $-$ 1 $-$ 0       0 $ -$ 7       6       14       177       163         North Carolina       N       0       0       N       N       0       0
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
North Carolina         N         0         0         N         N         0         0         N         N         9         6         18         171         192           South Carolina <sup>§</sup> 0         0           0         0          1         2         5         47         53           Virginia <sup>§</sup> N         0         0         N         N         0         0         N         N         6         5         17         144         115           West Virginia          1         7         61         44          0         2         6         8          0         0          6           E.S. Central          5         14         161         132          1         4         32         20         12         20         31         579         442
Virginia <sup>§</sup> N         0         0         N         N         0         0         N         N         6         5         17         144         115           West Virginia          1         7         61         44          0         2         6         8          0         0          6           E.S. Central          5         14         161         132          1         4         32         20         12         20         31         579         442
West Virginia         —         1         7         61         44         —         0         2         6         8         —         0         0         —         6           E.S. Central         —         5         14         161         132         —         1         4         32         20         12         20         31         579         442
Alahama§ N 0 0 N N N 0 0 N N _ 8 17 235 180
Kentucky $-1$ 4 44 17 $-0$ 2 8 2 1 1 7 49 36
Mississippi — 0 5 1 34 — 0 0 — — 3 15 77 59
Tennessee <sup>§</sup> — 3 12 116 81 — 1 3 24 18 11 8 14 218 167
W.S. Central         -         1         5         26         52         -         0         2         8         7         26         39         62         1,072         948           Arkansas <sup>§</sup> -         0         2         9         1         -         0         1         3         2         6         2         19         87         68
Louisiana — 0 5 17 51 — 0 2 5 5 — 9 22 189 252
Oklahoma N 0 0 N N N 0 0 N N − 1 5 44 36 Texas <sup>§</sup> − 0 0 − − − 0 0 − − 20 26 49 752 592
Mountain — 1 6 19 30 — 0 2 4 9 1 9 29 204 238
Arizona – 0 0 – – – 0 0 – – 5 21 78 123
Colorado         —         0         —         —         0         0         —         1         1         7         64         27           Idaho <sup>§</sup> N         0         N         N         N         0         N         N         —         0         1         2         1
Montana <sup>§</sup> - 0 0 0 0 0 3 - 1
Nevada <sup>§</sup> N         0         N         N         0         N         N         -         2         6         43         53           New Mexico <sup>§</sup> -         0         1         1         -         0         0         -         -         1         3         17         24
Utah       -       0       6       18       19       -       0       2       4       8       -       0       2       -       8         Wyoming <sup>§</sup> -       0       1       -       1       -       0       1       -       1       -       0       1       -       1       -       0       1       -       1
Pacific $ 0$ $  0$ $1$ $ 0$ $1$ $ 0$ $1$ $ 0$ $1$ $ 0$ $1$ $ 0$ $1$ $ 0$ $1$ $2$ $3$ $40$ $71$ $1,052$ $1,248$
Alaska N 0 0 N N N 0 0 N N — 0 1 — 5
California         N         0         0         N         N         0         0         N         —         37         59         929         1,157           Hawaii         —         0         0         —         —         0         1         1         2         —         0         2         11         5
Oregon <sup>§</sup> N 0 0 N N N 0 0 N N — 0 2 9 9
Washington         N         0         N         N         0         N         N         3         3         13         103         72
American Samoa         N         0         0         N         N         0         0         N         —         0         0         —         4           C.N.M.I.
Guam — 0 0 — — 0 0 — — 0 0 — — 0 0 — —
Puerto Rico         —         0         —         —         0         0         —         —         3         10         90         77           U.S. Virgin Islands         —         0         0         —         —         0         0         —         —         3         10         90         77

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 years 2007 and 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).

(29th Week)		West Nile virus disease <sup>†</sup>													
			Neur	oinvasiv		Nonneuroinvasive <sup>§</sup>									
			vious				Prev	vious				Pre	vious		
Dementing and	Current		eeks	Cum	Cum	Current		eeks	Cum	Cum	Current		veeks	Cum	Cum
Reporting area	week	Med	Max	2008	2007	week	Med	Max	2008	2007	week	Med	Max	2008	2007
United States	187	653	1,660	17,654	26,210	_	1 0	143	16	157	_	2 0	307	27 1	356
New England Connecticut	1	15 0	68 38	321	1,617 921	_	0	2 1	_	_	_	0	2 1	1	_
Maine <sup>¶</sup>	—	0	26	—	208	—	0	0	—	—	—	0	0	_	—
Massachusetts New Hampshire	_	0 5	0 18	142	221	_	0	2 0	_	_	_	0	2	_	_
Rhode Island <sup>1</sup>	_	0	0			_	0	0	_	_	_	0	1	_	_
Vermont <sup>®</sup>	1	6	17	179	267	—	0	0	_	_	_	0	0	—	_
Mid. Atlantic	32	58 0	117 0	1,469	3,200	—	0 0	3	_	1	_	0	3	—	2
New Jersey New York (Upstate)	N N	0	0	N N	N N	_	0	1 2	_	_	_	0 0	0 1	_	_
New York City	N	0	0	N	Ν	—	0	3	—		—	0	3	—	
Pennsylvania	32	58	117	1,469	3,200	_	0	1	_	1	_	0	1	_	2
E.N. Central Illinois	35 1	164 13	378 124	4,258 641	7,529 660	_	0 0	19 14	_	10 7	_	0 0	12 8	_	4 3
Indiana	_	0	222	_		_	Ő	4	_	_	_	Ő	2	_	_
Michigan	16	63	154	1,838	2,839	_	0	5	_	1	_	0	1	_	
Ohio Wisconsin	18	55 7	128 32	1,532 247	3,241 789	_	0 0	4 2	_	1 1	_	0 0	3 2	_	1
W.N. Central	26	21	145	747	1,113	_	0	41	_	40	_	0	118	8	125
lowa	N	0	0	N	Ń	—	0	4	—	1	—	0	3	_	2
Kansas Minnesota	2	6 0	36 0	240	409	—	0	3 9	_	3 9	_	0	7 12	_	1 6
Missouri	24	11	47	439	640	_	0	8	_	9	_	0	3	_	3
Nebraska <sup>1</sup>	Ν	0	0	N	Ν	—	0	5	—	2	—	0	16	_	28
North Dakota South Dakota	_	0	140 5	48 20	64	_	0	11 7	_	8 15	_	0	49 32	5 3	49 36
S. Atlantic	18	89	162	2,795	3,379	_	0	12	_	5	_	0	6	_	4
Delaware		1	6	<sup>′</sup> 31	25	_	0	1	_	_	_	0	0	_	
District of Columbia Florida	 10	0 29	3 87	17 1,116	21 773	—	0	0 1	_	2	—	0 0	0 0	_	_
Georgia	N	29	0	1,110 N	N	_	0	8	_	2	_	0	5	_	2
Maryland <sup>®</sup>	N	0	0	N	N	_	0	2	_		_	0	2	_	_
North Carolina South Carolina <sup>¶</sup>	N	0 16	0 66	N 545	N 694	_	0	1 2	_	1	_	0 0	2 1	_	2
Virginia <sup>¶</sup>	_	21	73	639	1,140	_	0	1	_	1	_	Ő	1	_	
West Virginia	8	15	66	447	726	_	0	0	_	_	_	0	0	_	_
E.S. Central Alabama <sup>¶</sup>	1 1	18 18	101 101	822 813	329 328	_	0 0	11 2	5	15 6	_	0 0	14 1	6 1	13 1
Kentucky	Ň	0	0	N	520 N	_	0	1	_	_	_	0	Ó	_	_
Mississippi		0	2	9	1	—	0	7	5	8	—	0	12	4	12
Tennessee <sup>¶</sup>	N	0	0	N	N		0	1		1		0	2	1	
W.S. Central Arkansas <sup>1</sup>	57 27	181 10	886 42	5,919 393	7,195 502	_	0 0	36 5	5 2	16 3	_	0	19 2	8	10
Louisiana	—	1	7	27	89	_	0	5	—	—	_	Ō	3	2	_
Oklahoma Texas <sup>¶</sup>	N 30	0 166	0 852	N 5,499	N 6,604	_	0 0	11 19	1 2	1 12	_	0 0	8 11	2 4	1 9
Mountain	30 12	40	105	1,276	1,805		0	36	2	31		0	148	4	125
Arizona	12	40	0	1,270	1,005	_	0	8	1	12	_	0	10		4
Colorado	10	17	43	567	697	_	0	17	1	8	—	0	67	1	68
Idaho <sup>1</sup> Montana <sup>1</sup>	N	0 6	0 27	N 204	N 278	_	0	3 10	_	1 1	_	0	22 30	_	23 4
Nevada <sup>¶</sup>	Ν	0	0	N	N	_	0	1	_	_	_	0	3	_	1
New Mexico <sup>¶</sup> Utah	2	4 9	22 55	131 369	287 525	_	0	8 8	_	5 1	—	0 0	6 9	1	1 3
Wyoming <sup>¶</sup>		9	55 9	369 5	525 18	_	0	8	_	3	_	0	9 34	1	21
Pacific	5	1	7	47	43	_	0	18	4	39	_	0	23	2	73
Alaska	5	1	4	40	25	—	0	0		_	—	0	0	_	
California Hawaii	_	0	0 6	7	 18	_	0	18 0	4	38	_	0 0	20 0	2	68
Oregon <sup>¶</sup>	N	0	0	N	N	_	0	3	_	1	_	0	4	_	5
Washington	Ν	0	0	N	Ν	—	0	0	—	—	—	0	0	—	—
American Samoa	Ν	0	0	N	Ν	_	0	0	_	—	_	0	0	_	_
C.N.M.I. Guam	_	2	17	 55	184	_	0	0	_	_	_	0	0	_	_
Puerto Rico	_	10	37	268	458	—	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 years 2007 and 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 sergoroup, 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).

### TABLE III. Deaths in 122 U.S. cities,\* week ending July 19, 2008 (29th Week)

TABLE III. Deaths	<u>in 122 0.</u>	All causes, by age (years)					All causes, by age (years)								
	All				-		P&I <sup>†</sup>		All						P&I <sup>†</sup>
Reporting Area	Ages	<u>&gt;</u> 65	45-64	25-44	1-24	<1	Total	Reporting Area	Ages	<u>&gt;</u> 65	45-64	25-44	1-24	<1	Total
New England Boston, MA	521 118	382 81	95 27	23 6	14 2	7 2	42 6	S. Atlantic Atlanta, GA	1,013 87	598 45	292 29	65 6	22 3	34 4	47 2
Bridgeport, CT	35	23	7	3	2		3	Baltimore, MD	162	45 75	29 64	13	5	4 5	19
Cambridge, MA	14	14	_	_	_	_	4	Charlotte, NC	U	U	U	U	Ŭ	Ŭ	U
Fall River, MA	24	19	4	1	—	_	3	Jacksonville, FL	161	93	50	12	3	3	1
Hartford, CT	55	40	12	1	_	2	9	Miami, FL	76	51	14	8	2	1	1
Lowell, MA Lynn, MA	19 11	16 9	3 1	1	_	_	1	Norfolk, VA Richmond, VA	52 59	34 36	11 15	2 4	2	5 2	3
New Bedford, MA	38	32	4	1	1	_	4	Savannah, GA	42	31	6	1	2	2	2
New Haven, CT	U	U	U	U	U	U	U	St. Petersburg, FL	60	35	16	2	1	6	2
Providence, RI	73	43	19	5	4	2	6	Tampa, FL	228	144	58	16	4	5	16
Somerville, MA Springfield, MA	5 42	4 30	1 9	2	1	_	3	Washington, D.C. Wilmington, DE	72 14	45 9	24 5	1	_	1	1
Waterbury, CT	31	27	2	1	1	_	1								
Worcester, MA	56	44	6	2	3	1	2	E.S. Central	853 169	549 109	207 39	68 13	18 5	11	52
Mid. Atlantic	1,868	1,236	409	144	42	36	85	Birmingham, AL Chattanooga, TN	89	54	26	8	1	3	12 4
Albany, NY	55	33	18	1	2	1	1	Knoxville, TN	119	79	28	8	3	1	4
Allentown, PA	15	10	5	_	_	—	1	Lexington, KY	57	38	17	2	_	_	2
Buffalo, NY	58	37	14	5	2 2	2	1	Memphis, TN	165	95	38	23	6	3	12
Camden, NJ Elizabeth, NJ	26 16	18 9	3 6	1 1			1 1	Mobile, AL Montgomery, AL	65 43	45 31	15 9	4 2	_	1 1	5 2
Erie, PA	53	41	5	6	_	1	5	Nashville, TN	146	98	35	8	3	2	11
Jersey City, NJ	16	11	5	—	—	—	1	W.S. Central	1,595	902	446	150	51	43	78
New York City, NY	1,000	686	198	81	21	13	41	Austin, TX	74	41	23	7	3		4
Newark, NJ Paterson, NJ	72 13	27 5	25 3	9	4 2	7 3	4	Baton Rouge, LA	98	43	25	20	10	_	_
Philadelphia, PA	166	85	54	20	2	4	6	Corpus Christi, TX	53	37	16		_		3
Pittsburgh, PA§	32	19	9	2	1	1	5	Dallas, TX El Paso, TX	208 93	112 56	61 26	16 6	8 2	8 3	11 1
Reading, PA	29	22	5	1	1	_	2	Fort Worth, TX	93 144	88	32	18	2	4	11
Rochester, NY Schenectady, NY	127 13	93 8	24 4	6 1	1	3	8	Houston, TX	440	232	139	42	16	11	22
Scranton, PA	27	22	4 5	_	_	_	1	Little Rock, AR	80	51	15	3	6	5	4
Syracuse, NY	102	77	17	5	3	_	7	New Orleans, LA <sup>1</sup>	U 199	U 110	U 54	U	U 3	U 6	U 6
Trenton, NJ	26	15	6	4	—	1	—	San Antonio, TX Shreveport, LA	86	119 50	54 21	17 13	- 3	2	ю 8
Utica, NY Yonkers, NY	12 10	11 7	1 2	1	_	_	_	Tulsa, OK	120	73	34	8	1	4	8
								Mountain	791	552	159	48	22	10	61
E.N. Central Akron, OH	2,158 58	1,395 35	541 19	120 1	55 1	47 2	156 2	Albuquerque, NM	U	U	U	U	U	U	U
Canton, OH	35	23	10	2	_	_	4	Boise, ID	47	32	8	3	2	2	1
Chicago, IL	364	197	108	34	14	11	28	Colorado Springs, CO Denver, CO	72 67	55 42	15 14	2 6	4	1	2 9
Cincinnati, OH	101	68	20	5	5	3	19	Las Vegas, NV	273	187	59	16	8	3	15
Cleveland, OH Columbus, OH	230 237	164 156	48 56	12 9	4 6	2 10	5 17	Ogden, UT	31	23	5	3	_	_	4
Dayton, OH	147	116	23	6	2		12	Phoenix, AZ	U	U	U	U	U	U	U
Detroit, MI	165	89	53	14	5	4	6	Pueblo, CO Salt Lake City, UT	24 105	14 69	8 17	2 12	4	3	1 8
Evansville, IN	58	42	15	—	1	—	4	Tucson, AZ	172	130	33	4	4	1	21
Fort Wayne, IN Gary, IN	66 17	48 6	18 5	2	3	1	3 1	Pacific	1,727	1,191	359	109	30	38	134
Grand Rapids, MI	58	37	13	4	2	2	4	Berkeley, CA	11	7	2	2			134
Indianapolis, IN	183	120	46	11	4	2	14	Fresno, CA	106	76	21	4	3	2	4
Lansing, MI	60	46	10	3	1	_	8	Glendale, CA	41	24	10	4	_	3	7
Milwaukee, WI Peoria. IL	104 44	63 28	30 12	6 1	2 1	3 2	11 5	Honolulu, HI Long Beach, CA	52 68	38 46	7 13	6 5	3	1 1	3 10
Rockford, IL	48	32	11	3	1	1	1	Los Angeles, CA	231	145	56	19	5	6	24
South Bend, IN	47	33	8	4	2	_	1	Pasadena, CA	19	12	7	_	_	_	_
Toledo, OH	68	43	20	1	1	3	6	Portland, OR	159	108	39	8	3	1	5
Youngstown, OH	68	49	16	2	_	1	5	Sacramento, CA San Diego, CA	193 169	141 121	37 29	9 9	3 2	3 8	16 18
W.N. Central	575	364	140	36	17	18	40	San Francisco, CA	115	74	25	12	1	3	13
Des Moines, IA Duluth, MN	U 27	U 23	U 3	U	U	U 1	U	San Jose, CA	225	170	37	12	2	4	17
Kansas City, KS	33	23 17	11	4	1	_	7	Santa Cruz, CA	25	16	7	2	_	_	2
Kansas City, MO	100	64	19	8	3	6	8	Seattle, WA	131	83	33	6 1	5 1	4	8
Lincoln, NE	42	34	7	1	—	—	2	Spokane, WA Tacoma, WA	67 115	53 77	12 24	1 10	1 2	2	4 2
Minneapolis, MN	61	36	18	3	1	3	3	, ,							
Omaha, NE St. Louis, MO	71 118	47 62	17 38	4 10	2 5	1 3	7 6	Total	11,101**	7,169	2,648	763	271	244	695
St. Paul, MN	44	28	12		_	4	3								
Wichita, KS	79	53	15	6	5		4								
	1														

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.

<sup>1</sup>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. <sup>1</sup>Because of Hurricane Katrina, weekly reporting of deaths has been temporarily disrupted. \*\* Total includes unknown ages.

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