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Balamuthia mandrillaris Transmitted Through Organ Transplantation — Mississippi, 2009

On December 14, 2009, a physician in Mississippi contacted CDC to report possible transplant-transmitted encephalitis in two kidney transplant recipients who shared the same organ donor. Histopathologic testing of donor autopsy brain tissue at CDC showed amebae, and subsequent testing of specimens from the donor and the two kidney recipients confirmed transmission by transplantation of *Balamuthia* granulomatous amebic encephalitis (GAE), a rare disease caused by *Balamuthia mandrillaris*, a free-living ameba found in soil (*1*). One kidney recipient, a woman aged 31 years, died; the other recipient, a man aged 27 years, survived with neurologic sequelae. Recipients of the heart and liver from the same donor received preemptive therapy and have shown no signs of infection. The donor, a previously healthy boy aged 4 years, was presumed to have died from acute disseminated encephalomyelitis (ADEM), an autoimmune neurologic disease, after infection with influenza A. An investigation was conducted by the state health departments in Mississippi, Kentucky, Florida, and Alabama and CDC to characterize the cases, elucidate possible exposures in the donor, and develop recommendations for early detection and prevention. This is the first reported transmission of *Balamuthia* by organ transplantation. Clinicians should be aware of *Balamuthia* infection as a potentially fatal cause of encephalitis. Organ procurement organizations (OPOs) and transplant centers should be aware of the potential for *Balamuthia* infection in donors with encephalitis of uncertain etiology, and OPOs should communicate this elevated risk for infection to transplant centers so they can make an informed risk assessment in the decision to accept an organ.

Organ Donor

The organ donor, a boy aged 4 years from Kentucky, was living with relatives in Mississippi in October 2009, when he developed a transient febrile illness. He was diagnosed with influenza A infection by rapid influenza test on October 25 and prescribed antivirals; his symptoms resolved without hospitalization. On November 3, the boy had sudden onset of headache and seizures and was hospitalized (Table 1). Cerebrospinal fluid (CSF) demonstrated lymphocytic pleocytosis (170 white blood cells/mm^3) and normal protein (29 mg/dL); magnetic resonance imaging (MRI) of the brain showed numerous small enhancing lesions and edema (Table 2). An extensive search for viral, bacterial, and fungal etiologies of encephalitis was unrevealing. His clinical presentation, CSF findings, and MRI were thought to be most consistent with a diagnosis of ADEM, an immune-mediated encephalitis that can follow influenza or other infections. He was treated symptomatically and discharged on November 6.

The boy was readmitted on November 10 with recurrent seizures. MRI of the brain demonstrated progression of several of the enhancing lesions; CSF again demonstrated lymphocytic pleocytosis (150 cells/mm^3) and normal protein (44 mg/dL) (Table 2). He was treated for presumed worsening ADEM with intravenous corticosteroids and immunoglobulin. He developed subarachnoid hemorrhage and brain stem herniation on November 18 and was pronounced brain dead the next day. His heart, liver, and kidneys were transplanted into four recipients at three different transplant centers on November 20. On December 16, histopathologic examination of the donor's

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brain tissue at CDC revealed the presence of abundant amebae morphologically suggestive of *Balamuthia* (Figure); empiric treatment for both kidney recipients was initiated later that day, in consultation with CDC. On December 17, immunohistochemical and indirect immunofluorescent stains (Figure) revealed antigens of free-living amebae in the donor's brain tissue; polymerase chain reaction (PCR) results confirmed *Balamuthia* infection.

Kidney Recipient A

Kidney recipient A, a woman aged 31 years, underwent transplantation for end-stage renal disease resulting from hypertension and diabetes. On December 10, post-transplant day (PTD) 20, she reported onset of right leg twitching and neck spasms, numbness, headache, nausea, and seeing flashing lights (Table 1). She was evaluated in an emergency department, where she was treated with benzodiazepines and discharged with muscle relaxants; no neuroimaging or lumbar puncture was performed. On December 12, she was found unresponsive at home and taken back to the emergency department, where she had a generalized seizure and was admitted; the next day, she was transferred to the intensive-care unit. MRI of the brain demonstrated numerous ring-enhancing lesions. CSF initially showed a normal white blood cell count (3 cells/mm^3) and elevated protein (75 mg/dL); however, another specimen collected on December 15 revealed a neutrophilic pleocytosis (507 cells/mm^3) and increased protein (142 mg/dL) (Table 2). On December 16, she underwent brain biopsy. On December 18, histopathologic examination of the brain tissue at CDC revealed amebae; immunohistochemical stains detected antigens of free-living amebae, and PCR confirmed *Balamuthia* infection. She was treated with pentamidine, sulfadiazine, flucytosine, fluconazole, and azithromycin. Miltefosine, an antileishmanial and antineoplastic agent, was added on December 25 under an emergency investigational new drug (IND) protocol. Despite several weeks of intensive care, she deteriorated neurologically and died on February 3 (PTD 75).

Kidney Recipient B

Kidney recipient B, a man aged 27 years, underwent transplantation for end-stage renal disease resulting from focal segmental glomerulosclerosis. On December 10 (PTD 20), he had sudden onset

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TABLE 1. Timeline of events involving transmission of *Balamuthia* infection from an organ donor to two kidney recipients — Mississippi, 2009–2010

Date	Donor	Kidney recipient A	Kidney recipient B
2009			
November 3	Hospitalized with headaches and seizures.		
November 5	Initial brain MRI performed.		
November 6	Discharged from hospital.		
November 10	Hospitalized after recurrence of seizures.		
November 18	Developed subarachnoid hemorrhage and brain stem herniation.		
November 19	Pronounced brain dead.		
November 20	Heart, liver, and kidneys transplanted into four recipients.	Received kidney from donor.	Received kidney from donor.
December 10		Onset of right leg twitching and neck spasms, numbness, headache, nausea, and seeing flashing lights.	Onset of severe headache and vomiting.
December 11			Onset of altered mental status and seizures. Hospitalized.
December 12		Found unresponsive at home. Hospitalized.	
December 13		Admitted to intensive-care unit.	Admitted to intensive-care unit. Initial brain MRI performed.
December 15		Initial brain MRI performed.	
December 16	Histopathologic examination of brain tissue at CDC revealed amebae suggestive of *Balamuthia*.	Underwent brain biopsy. Started on multiple drug regimen.	Started on multiple drug regimen.
December 17	*Balamuthia* infection confirmed by PCR.	Amebae seen on brain histopathlolgy at CDC.	
December 18		*Balamuthia* infection confirmed by PCR of brain tissue at CDC.	
2010			
January 5			*Balamuthia* infection confirmed by PCR on CSF specimen drawn December 29.
February 2			*Balamuthia* infection cultured from CSF specimen drawn December 29.
February 3		Died after 7 weeks of intensive care.	
April 28			Discharged to a rehabilitation facility.
June 11			Discharged home with neurologic sequelae.

Abbreviations: MRI = magnetic resonance imaging; PCR = polymerase chain reaction; CSF = cerebrospinal fluid.

of severe headache and vomiting and was examined at a local emergency department early the next morning, where he was diagnosed with sinusitis and discharged on amoxicillin-clavulanic acid (Table 1). Later that day, he developed altered mental status and seizures and was admitted to a regional hospital. A lumbar puncture was performed; CSF demonstrated 1 white blood cell/mm^3 and slightly elevated protein (69 mg/dL) (Table 2). On December 13, he was transferred to the intensive-care unit at the same hospital as kidney recipient A. CSF that day revealed mild pleocytosis (19 cells/mm^3) and slightly increased protein (74 mg/dL). MRI of the brain showed numerous ring-enhancing lesions. The man was treated with the same combination of drugs as kidney recipient A, including miltefosine obtained under IND. *Balamuthia* infection was confirmed by PCR and culture on a CSF specimen drawn December 29. After 2 months in a coma, the man had a slow but significant recovery of cognitive and motor function and was discharged to a rehabilitation facility on April 28 (PTD 159). He was discharged home June 11. His neurologic sequelae included residual right arm paralysis, bilateral leg weakness, and intermittent vision loss; however, he performed most activities of daily living independently.

Heart Recipient

The heart recipient, a boy aged 2 years, underwent transplantation for restrictive cardiomyopathy. When the

TABLE 2. Demographic, clinical, and laboratory features of cases involving transmission of *Balamuthia* infection from an organ donor to two kidney recipients — Mississippi, 2009–2010

Patient	Age/Sex	Race/ Ethnicity	Time from transplant to symptom onset	Initial clinical symptoms	Initial lumbar puncture (LP) results (2nd LP results) WBC*	Protein†	Glucose§	Neuroimaging results	Mode of initial *Balamuthia* GAE diagnosis	Preliminary diagnosis	Outcome
Donor	4 yrs/male	White, non-Hispanic	N/A	Personality changes, loss of appetite, muscle twitching, headache, seizure	170 (150)	29 (44)	49 (46)	Multiple focal enhancing lesions	Autopsy	ADEM	Death
Kidney recipient A	31 yrs/female	Black, non-Hispanic	20 days	Paresthesias, muscle spasms, headache, nausea, altered mental status, seizure	3 (507)	75 (142)	114 (67)	Multiple large ring-enhancing lesions	PCR of brain biopsy	Muscle spasms	Death
Kidney recipient B	27 yrs/male	Black, non-Hispanic	20 days	Headache, nausea, altered mental status, seizure	1 (19)	69 (74)	77 (62)	Ring-enhancing lesions	PCR and culture of CSF	Sinusitis	Survived, but with neurologic sequelae¶

Abbreviations: GAE = granulomatous amebic encephalitis; ADEM = acute disseminated encephalomyelitis; PCR = polymerase chain reaction; CSF = cerebrospinal fluid.
* White blood cells per mm^3; normal range: 0–5 (aged >12 yrs), 0–20 (aged 1–4 yrs).
† mg/dL; normal range: 12–60.
§ mg/dL; normal range: 40–70.
¶ Including intermittent hemianopsia, bilateral leg weakness, and right arm paralysis.

kidney recipients were diagnosed with *Balamuthia* GAE, the boy was asymptomatic. On December 17 (PTD 27), he was hospitalized for evaluation. MRI of the brain was normal, and testing of CSF, serum, and endomyocardial tissue at CDC showed no evidence of *Balamuthia* infection. The boy was treated for presumed *Balamuthia* exposure with a 6-week course of intravenous pentamidine, azithromycin, and fluconazole, followed by 5 weeks of oral azithromycin. He remains well.

Liver Recipient

The liver recipient, a boy aged 7 years, underwent transplantation for end-stage liver disease resulting from alpha-1-antitrypsin deficiency. The boy was asymptomatic when the kidney recipients were diagnosed with *Balamuthia* GAE, and he was hospitalized for evaluation on December 17. MRI of the boy's brain was normal, and testing of CSF, serum, and liver tissue at CDC showed no evidence of *Balamuthia* infection. He was treated for presumed *Balamuthia* exposure with a 1-month course of intravenous pentamidine, fluconazole, azithromycin, and sulfadiazine. He remains well.

Public Health Investigation

Interviews with the donor's family revealed that he had lived in Kentucky, Florida, and Mississippi during the 2 years before his death. He frequently played outdoors and had soil exposure in all of these locations. He occasionally played in a wading pool; the water supply for drinking and recreation in Florida was untreated well water. No environmental sampling was performed because *Balamuthia* is thought to be ubiquitous in the environment.

Approximately 4 months before his first seizure, the boy had become more irritable and emotionally labile. His family also noted regression of toilet training and an infrequent, sporadic tremor of the right hand that began at about the same time. He had no history of immunocompromising conditions. No medical evaluation of family members was conducted.

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Editorial Note

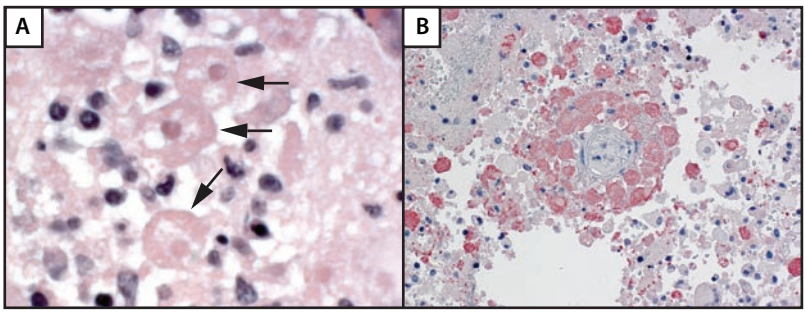
This report is the first to describe transmission of *Balamuthia* through organ transplantation. However, a second cluster of patients with transplant-transmitted *Balamuthia* was confirmed at CDC on August 27, 2010 (*2*). *Balamuthia* infection is extremely rare, with fewer than 200 human cases recognized worldwide since *Balamuthia* was found to be a human pathogen in 1990 (*3,4*). The true magnitude of disease caused by *Balamuthia* is unknown because *Balamuthia* GAE often is misdiagnosed as other neurologic diseases (*1,3*). Once infection progresses to encephalitis, it is almost always fatal. Infection occurs in both immunocompromised and otherwise healthy persons, and often in children, although cases have occurred in patients across the age spectrum (*5*). Because of the rarity of *Balamuthia* GAE, risk factors are poorly defined, but might include exposure to soil or stagnant water, young age, and Hispanic ethnicity (*3*).

Balamuthia has been isolated from soil and dust and is thought to be present worldwide (*6*). Routes of infection might include exposure of mucous membranes or nonintact skin to cysts or trophozoites in soil. *Balamuthia* has not been isolated from water, but water also might serve as a vehicle for infection (*1*). Cutaneous lesions have preceded *Balamuthia* GAE in some cases, primarily those reported in South America (*7*). These lesions often are on the central face, suggesting nasal exposure; but they also have been reported on the extremities. Extension to the brain might occur through hematogenous spread or by direct extension through the nasal cavity or sinuses (*1*). Why some patients develop cutaneous lesions before onset of neurologic disease and others do not is unknown. In a series of 10 *Balamuthia* cases in California, common signs and symptoms of *Balamuthia* GAE were headache, altered mental status, and cranial nerve abnormalities (*3*). Although the incubation period for *Balamuthia* GAE has been postulated as ranging from weeks to 2 years, the two kidney recipients in this report had onset of symptoms only 20 days after transplantation.

Successful treatment of *Balamuthia* GAE has been reported in some, but not all, patients administered a combination of flucytosine, pentamidine, sulfadiazine, fluconazole or amphotericin B, azithromycin or clarithromycin, and miltefosine (*3,8*). However, optimal therapy has not been determined. Optimal preemptive therapy for asymptomatic recipients after transplant of an infected organ also is unknown. Miltefosine is active against *Balamuthia* in vitro and was recently used with success in combination therapy for *Balamuthia* GAE in Peru (*9*). Miltefosine is not marketed in the United States but can be available through single patient IND.*

Balamuthia is one of several agents of severe or fatal encephalitis (e.g., West Nile virus, lymphocytic choriomeningitis virus, and rabies virus) that have been transmitted through organ transplantation in recent years (*10*). Organ donors are screened to identify infectious risks in accordance with policies set by the Organ Procurement and Transplantation Network,† which is overseen by the United Network for Organ Sharing through a contract with the Health Resources and Services Administration. However, the number of pathogens screened is limited and creating standards that eliminate all risk for infectious disease transmission is not feasible. Therefore, physicians and organ procurement organizations should be aware of the possibility of transmitting *Balamuthia* and other potentially fatal infections from donors with encephalitis of uncertain etiology, even after testing for usual agents of encephalitis has shown negative results (*10*). *Balamuthia* infection should be considered in patients who might have an infectious encephalitis,

FIGURE. Organ donor brain tissue revealing amebae suggestive of *Balamuthia* (indicated by arrows) (A), and immunohistochemical staining showing antigens (red) of free-living amebae (B)*



Photomicrographs/CDC

* Original magnifications: 158x (A), 100x (B).

* For information regarding a single patient IND for miltefosine, contact the Food and Drug Administration's Division of Special Pathogen and Transplant Products at 301-796-1600 (1-888-INFO-FDA after hours).

† Additional information available at http://optn.transplant.hrsa.gov/policiesandbylaws/policies.asp.

What is already known on this topic?

Balamuthia madrillaris is a free-living ameba found in soil worldwide that causes skin lesions and *Balamuthia* granulomatous amebic encephalitis (GAE), a rare central nervous system infection that usually is fatal; because of its rarity, *Balamuthia* GAE is likely to be misdiagnosed as another neurologic disease.

What is added by this report?

This is the first report of *Balamuthia madrillaris* transmission through organ transplantation; two of four recipients from an organ donor thought to have a noninfectious encephalitis developed GAE 20 days after transplantation, one of whom died.

What are the implications for public health practice?

Organ procurement organizations (OPOs) and transplant centers should be aware of the potential for *Balamuthia* infection in donors with encephalitis of uncertain etiology, and OPOs should communicate this elevated risk for infection to transplant centers so they can make an informed risk assessment in the decision to accept an organ.

particularly those with elevated CSF protein, CSF pleocytosis (white blood cells >5/mm^3), and enhancing lesions on MRI (*3*).

Clinicians should be aware of *Balamuthia* as a cause of skin lesions and encephalitis and should report all suspected cases of transplant-transmitted infection to public health departments and organ procurement organizations to enable prompt evaluation and treatment of all recipients from an infected donor. OPOs and transplant centers should be aware of the potential for *Balamuthia* infection in donors with encephalitis of uncertain etiology, and OPOs should communicate this elevated risk for infection to transplant centers so they can make an informed risk assessment in the decision to accept an organ.[§]

[§] Additional information available at http://www.cdc.gov/balamuthia.

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National, State, and Local Area Vaccination Coverage Among Children Aged 19–35 Months — United States, 2009

Since 1994, the National Immunization Survey (NIS) has been collecting data to monitor childhood immunization coverage. This report describes the 2009 NIS coverage estimates for children born during January 2006–July 2008 and focuses on the more recently recommended vaccines (i.e., hepatitis B [HepB] vaccine birth dose, hepatitis A vaccine [HepA], pneumococcal conjugate vaccine [PCV], and rotavirus vaccine) for children aged 19–35 months. The most recent NIS data indicate that vaccination coverage increased in 2009 compared with 2008 for HepB birth dose (from 55.3% to 60.8%) and HepA (from 40.4% to 46.6%), but coverage for PCV (≥4 doses) remained stable (80.4%). Full coverage for rotavirus vaccine was 43.9% among children born within 2 years of licensure (*1*). Coverage for poliovirus (92.8%), measles, mumps, and rubella (MMR) (90.0%), hepatitis B (HepB) (92.4%), and varicella (VAR) (89.6%) vaccines continued to be at or near the national health objective of 90%, although coverage for MMR and HepB vaccines decreased slightly in 2009. The percentage of children who have not received any vaccines remained low (<1%). Parents and primary-care providers continued to ensure that children were vaccinated, in spite of interim recommendations to suspend the booster dose of *Haemophilus influenzae* type b vaccine (Hib) because of a national shortage, and heightened public awareness of controversies in vaccine safety (*2,3*).

To estimate coverage for all age-eligible children, NIS uses a quarterly, random-digit–dialed sample of telephone numbers for the 50 states and selected urban areas and territories,* followed by a mail survey of the children's vaccination providers to collect vaccination information. Data were weighted to represent the population of children aged 19–35 months, with adjustments for households with multiple telephone lines, household nonresponse, and exclusion of households without landline telephones.† During 2009, the household response rate§ was 63.9%; a total of 17,313 children with provider-reported vaccination records were included in this report, representing 70.7% of all children with completed household interviews. Because the number of Hib¶ and rotavirus** vaccine doses required differs according to manufacturer, coverage estimates for these vaccines now take into account the brand of vaccine used. Logistic regression was used to examine differences among racial/ethnic groups, controlling for poverty status. Statistical analyses were conducted using t-tests based on weighted data and accounting for the complex survey design. All tests with $p<0.05$ were regarded as statistically significant.

During 2009, national coverage with the first dose of HepB within 3 days of birth (birth dose)

* The 13 local areas separately sampled for the 2009 NIS included six areas that receive federal immunization grant funds and are included in the NIS sample every year (District of Columbia; Chicago, Illinois; New York, New York; Philadelphia County, Pennsylvania; Bexar County, Texas; and Houston, Texas); six previously sampled areas (Los Angeles County, California; Marion County, Indiana; Baltimore, Maryland; Dallas County, Texas; El Paso County, Texas; and eastern/western counties, Washington); and one area sampled for the first time (Lake County, Indiana). Local areas sampled in the NIS might change yearly as state immunization programs target local assessments where they are most needed. For the first time, the U.S. Virgin Islands (including St. Croix, St. Thomas, St. John, and Water Island) was included in the NIS sample.

† Since the inception of NIS in 1994, its methodology has undergone several revisions. A report of revisions implemented during 1994–2002 that includes a description of the sampling design, response rates, and the precision of key monitoring statistics is available at http://www.cdc.gov/nchs/data/series/sr_02/sr02_138.pdf. NIS conducts quarterly surveys in each state and local area to produce annual estimates within each area. For 2009, the U.S. Virgin Islands survey was conducted only for the second quarter for annual estimates. National estimates exclude the territory of the U.S. Virgin Islands.

§ The Council of American Survey Research Organization (CASRO) household response rate, calculated as the product of the resolution rate (percentage of the total telephone numbers called that were classified as either nonworking, nonresidential, or residential), screening completion rate (percentage of known households that were successfully screened for the presence of age-eligible children), and the interview completion rate (percentage of households with one or more age-eligible children that completed the household survey). Additional information is available at http://www.casro.org/codeofstandards.cfm.

¶ Coverage for Hib vaccine for the primary series was based on receipt of ≥2 or ≥3 doses, depending on product type received. The Merck Hib vaccines require a 2-dose primary series with doses at ages 2 months and 4 months, and the Sanofi Pasteur Hib vaccines require a 3-dose primary series with doses at ages 2, 4, and 6 months. Coverage for the full series, which includes the primary series and a booster dose, was based on receipt of ≥3 or ≥4 doses, depending on product type received. Both Merck and Sanofi Pasteur Hib vaccines require a booster dose at age 12–15 months.

** Coverage for rotavirus vaccine was based on ≥2 or ≥3 doses, depending on product type received (≥2 doses for Rotarix [RV1], licensed in April 2008, and ≥3 doses for RotaTeq [RV5], licensed in February 2006).

increased to 60.8% from 55.3% in 2008, the largest increase observed for the birth dose in the past 5 years (Table 1); by state, coverage ranged from 22.8% in Vermont to 80.7% in Michigan (Table 2). Coverage with ≥2 doses of HepA vaccine increased from 40.4% in 2008 to 46.6% in 2009. Coverage ranged from 19.3% in Maine to 63.2% in North Dakota. Coverage with ≥4 doses PCV at the national level changed little (from 80.1% to 80.4%), but increased significantly in Illinois (from 76.2% to 82.9%), Mississippi (from 74.7% to 85.0%), Nevada (from 63.6% to 75.1%), and Wyoming (from 69.2% to 82.3%). Across all states, PCV coverage ranged from 67.5% in Missouri to 90.7% in Connecticut. Coverage for rotavirus vaccine was 43.9% nationally, similar to previous coverage reports for newly recommended vaccines, and varied widely by state, from 20.9% in Washington to 71.2% in Rhode Island. Rotavirus vaccine coverage increased from 8.0% among children born during January–June 2006 to 60.0% among children born January–June 2008. For children born between those periods, estimated coverage ranged from 34.8% for children born July–December 2006, to 49.0% for children born January–June 2007, to 53.4% for children born July–December 2007.

The seven-vaccine series (i.e., 4:3:1:3:3:1:4) reported in the 2009 NIS added ≥4 doses of PCV to the combined 4:3:1:3:3:1[††] series reported in previous years. Because of changes in measurement of the Hib vaccine and the vaccine shortage that occurred from December 2007 to September 2009 (*2*), state coverage estimates included in this report were based on the series that excludes Hib. Using this modified seven-vaccine series (minus Hib), coverage remained stable in 2009 (70.5%) compared with 2008 (70.6%) (Table 1). In 2009, modified series coverage ranged from 56.2% in Missouri to 78.1% in Iowa (Table 2). Significant increases were observed in Wyoming (69.6% versus 58.9%), Idaho (70.5% versus 60.4%), Oklahoma (66.3% versus 57.4%), Nevada (62.6% versus 55.2%), and North Dakota (77.0% versus 69.1%). Among the 13 local areas, coverage ranged from 61.4% in the eastern/western counties of Washington to 73.5% in Los Angeles, California. The percentage of children aged 19–35 months receiving no vaccinations remained at 0.6%.

Coverage differed by race/ethnicity.[§§] Among the more recently recommended vaccines, PCV and rotavirus coverage was lower among black and multiracial children than among white children (Table 3). Coverage for PCV also was lower among Asian children. Coverage for HepA was lower among black children and American Indian/Alaska Native children than among white children. Except for rotavirus coverage among black children, these differences persisted after controlling for poverty status. HepB birth dose coverage was higher among Hispanic children than among white children. For vaccines with longer-standing recommendations, differences were observed for diphtheria, tetanus toxoid, and acellular pertussis (DTaP) vaccine. Compared with coverage among white children, coverage was lower for black children for ≥3 and ≥4 DTaP doses and lower for Hispanic children for ≥4 doses only. The difference in coverage between white and black children for ≥4 doses remained statistically significant after controlling for poverty status.

Coverage also differed by poverty status.[¶¶] Coverage for HepB birth dose was higher among children living below poverty level than for those living at or above poverty level (by 3.8 percentage points). Among children living below poverty level, coverage was lower for ≥4 doses of PCV (by 8.4 percentage points) and rotavirus vaccine (by 9.4 percentage points) than for other children. Among the longer-standing recommendations, coverage for ≥4 doses of DTaP also was lower (by 5.6 percentage points).

[††] The combined 4:3:1:3:3:1 series includes ≥4 doses of diphtheria, tetanus toxoid, and cellular pertussis vaccine, which can include diphtheria and tetanus toxoid vaccine or diphtheria, tetanus toxoid, and pertussis vaccine (DTaP), ≥3 doses of poliovirus vaccine; ≥1 doses of MMR vaccine; ≥3 doses of Hib vaccine; ≥3 doses of HepB vaccine; and ≥1 doses of VAR vaccine.

[§§] Race was self-reported. Persons identified as white, black, Asian, or American Indian/Alaska Native are all non-Hispanic. Persons identified as Hispanic might be of any race. Children identified as multiracial selected more than one race category.

[¶¶] Poverty status categorizes income into 1) at or above the poverty level and 2) below the poverty level. Poverty level was based on 2008 U.S. Census poverty thresholds, available at http://www.census.gov/hhes/www/poverty.html.

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TABLE 1. Estimated vaccination coverage among children aged 19–35 months, by selected vaccines and dosages — National Immunization Survey, United States, 2005–2009*

Vaccine	2005		2006		2007		2008		2009	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
DTP/DT/DTaP										
≥3 doses	96.1	(±0.5)	95.8	(±0.5)	95.5	(±0.5)	96.2	(±0.5)	95.0	(±0.6)
≥4 doses	85.7	(±0.9)	85.2	(±0.9)	84.5	(±0.9)	84.6	(±1.0)	83.9	(±1.0)
Poliovirus	91.7	(±0.7)	92.8	(±0.6)	92.6	(±0.7)	93.6	(±0.6)	92.8	(±0.7)
MMR ≥1 doses	91.5	(±0.7)	92.3	(±0.6)	92.3	(±0.7)	92.1	(±0.7)	90.0	(±0.8)
Hib†										
≥3 doses	93.9	(±0.6)	93.4	(±0.6)	92.9	(±0.7)	90.9	(±0.7)	83.6	(±1.0)
Primary series	N/A		N/A		N/A		N/A		92.1	(±0.8)
Full series	N/A		N/A		N/A		N/A		54.8	(±1.4)
Hepatitis B										
≥3 doses	92.9	(±0.6)	93.3	(±0.6)	92.7	(±0.7)	93.5	(±0.7)	92.4	(±0.7)
1 dose by 3 days (birth)§	49.6	(±1.2)	50.1	(±1.1)	53.2	(±1.3)	55.3	(±1.3)	60.8	(±1.3)
Varicella ≥1 doses	87.9	(±0.8)	89.2	(±0.7)	90.0	(±0.7)	90.7	(±0.7)	89.6	(±0.8)
PCV										
≥3 doses	82.8	(±1.0)	86.9	(±0.8)	90.0	(±1.0)	92.8	(±0.6)	92.6	(±0.7)
≥4 doses	53.7	(±1.3)	68.4	(±1.1)	75.3	(±1.3)	80.1	(±1.1)	80.4	(±1.2)
Hepatitis A (≥2 doses)¶	N/A		N/A		N/A		40.4	(±1.2)	46.6	(±1.4)
Rotavirus**	N/A		N/A		N/A		N/A		43.9	(±1.4)
Combined series										
4:3:1:3:3:1††	76.1	(±1.1)	76.9	(±1.0)	77.4	(±1.1)	76.1	(±1.1)	69.9	(±1.2)
4:3:1:3:3:1 with Hib excluded	76.6	(±1.1)	77.6	(±1.0)	78.3	(±1.1)	78.7	(±1.1)	77.5	(±1.1)
4:3:1:3:3:1:4§§	47.2	(±1.3)	60.1	(±1.2)	66.5	(±1.3)	68.4	(±1.2)	63.6	(±1.2)
4:3:1:3:3:1:4 with Hib excluded	47.3	(±1.3)	60.4	(±1.2)	67.0	(±1.3)	70.6	(±1.2)	70.5	(±1.2)
Children who received no vaccinations	0.4	(±0.1)	0.4	(±0.1)	0.6	(±0.1)	0.6	(±0.2)	0.6	(±0.1)

Abbreviations: CI = confidence interval; DTP/DT/DTaP = diphtheria, tetanus toxoids and pertussis vaccines, diphtheria and tetanus toxoids, and diphtheria, tetanus toxoids and acellular pertussis vaccine; Hib = *Haemophilus influenzae* type b vaccine; MMR = measles, mumps, and rubella vaccine; N/A = not available; PCV = pneumococcal conjugate vaccine.

* For 2005, includes children born during February 2002–July 2004; for 2006, children born during January 2003–June 2005; for 2007, children born during January 2004–July 2006; for 2008, children born during January 2005–June 2007; and for 2009, children born during January 2006–July 2008.

† Primary series: receipt of ≥2 or ≥3 doses, depending on product type received. Full series: receipt of ≥3 or ≥4 doses, depending on product type received (primary series and booster dose). Hib coverage for primary or full series not available until 2009.

§ Hepatitis B vaccine administered between birth and age 3 days.

¶ Hepatitis A vaccine coverage not available before 2008.

** Rotavirus vaccine includes ≥2 or ≥3 doses, depending on product type received (≥2 doses for Rotarix [RV1] and ≥3 doses for RotaTeq [RV5]). Estimates of rotavirus vaccine coverage not available before 2009.

†† 4:3:1:3:3:1 Series, referred to as routine, includes ≥4 doses of DTP/DT/DTaP, ≥3 doses of poliovirus vaccine, ≥1 doses of measles-containing vaccine, ≥3 doses of Hib vaccine, ≥3 doses of hepatitis B vaccine, and ≥1 doses of varicella vaccine.

§§ 4:3:1:3:3:1:4 Series, referred to as routine, includes ≥4 doses of DTP/DT/DTaP, ≥3 doses of poliovirus vaccine, and ≥1 doses of measles-containing vaccine, ≥3 doses of Hib vaccine, ≥3 doses of hepatitis B vaccine, ≥1 doses of varicella vaccine, and ≥4 doses of PCV.

Editorial Note

NIS is the only population-based survey to provide national, state, local area, and territorial estimates of provider-reported vaccination coverage among children aged 19–35 months in the United States. Coverage levels for poliovirus, MMR, HepB, and VAR continued to hold at or above 90%, the national health objective for specific vaccines. PCV, first recommended in 2000, has now reached coverage levels comparable to those for DTaP, a vaccine also requiring 4 doses but with longer-standing recommendations. For the more recently recommended vaccines, coverage for the birth dose of the HepB series and the full series of HepA increased. These findings demonstrate the ability of immunization programs at state and local levels to incorporate newly recommended vaccines while sustaining coverage at or above national target levels for most longer-standing recommended vaccines. Careful monitoring of uptake of new vaccines overall and in subpopulations (e.g., by race/ethnicity and geographically) will be important to ensure that all children are protected adequately against vaccine-preventable diseases.

The Hib shortage and interim recommendation to suspend the booster dose for healthy children (*2*) occurred during a period when 70% of the children in the 2009 NIS would have been eligible for the booster dose of Hib vaccine. Not surprisingly, Hib vaccine coverage measured by receipt of ≥3 doses

TABLE 2. Estimated vaccination coverage for vaccination series (modified)* and selected individual vaccines among children aged 19–35 months, by state and local area — National Immunization Survey, United States, 2009†

State/Area	MMR (≥1 doses)		PCV (≥4 doses)		Hep B (birth)§		HepA (≥2 doses)¶		Rotavirus**		Vaccine series (modified)	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
United States	90.0	(±0.8)	80.4	(±1.1)	60.8	(±1.3)	46.6	(±1.4)	43.9	(±1.4)	70.5	(±1.2)
Alabama	95.4	(±2.9)	73.3	(±9.2)	68.1	(±7.0)	43.6	(±8.0)	50.8	(±8.4)	63.9	(±8.9)
Alaska	85.2	(±5.8)	73.2	(±7.3)	65.4	(±7.6)	45.9	(±8.2)	32.3	(±7.4)	56.6	(±8.3)
Arizona	90.8	(±3.6)	77.8	(±5.6)	77.6	(±5.7)	51.9	(±6.8)	39.8	(±6.5)	66.4	(±6.5)
Arkansas	81.8	(±6.0)	69.2	(±6.8)	70.7	(±6.7)	25.1	(±5.7)	27.3	(±5.8)	61.5	(±6.9)
California	89.8	(±3.7)	79.8	(±5.1)	49.8	(±6.3)	51.5	(±6.3)	43.9	(±6.1)	72.2	(±5.5)
Los Angeles County	88.9	(±5.4)	79.4	(±6.7)	51.5	(±8.1)	51.7	(±8.0)	51.5	(±8.1)	73.5	(±7.2)
Rest of state	90.1	(±4.7)	79.9	(±6.5)	49.1	(±8.1)	51.5	(±8.0)	41.1	(±7.8)	71.7	(±7.1)
Colorado	83.6	(±7.0)	77.5	(±7.6)	52.5	(±8.8)	38.9	(±8.5)	44.8	(±8.8)	66.1	(±8.4)
Connecticut	93.7	(±3.3)	90.7	(±5.4)	46.8	(±9.6)	46.9	(±9.8)	46.4	(±9.6)	76.0	(±7.7)
Delaware	90.2	(±4.2)	81.6	(±5.9)	62.8	(±7.4)	52.3	(±7.3)	56.4	(±7.4)	69.2	(±6.8)
District of Columbia	91.2	(±4.5)	77.6	(±7.1)	67.9	(±6.8)	54.1	(±7.2)	39.3	(±7.1)	63.8	(±7.5)
Florida	91.2	(±3.8)	79.5	(±5.5)	47.8	(±6.8)	44.6	(±6.6)	36.4	(±6.5)	68.7	(±6.1)
Georgia	91.3	(±4.2)	79.4	(±5.9)	71.2	(±6.6)	58.1	(±7.1)	48.5	(±7.1)	73.1	(±6.5)
Hawaii	86.7	(±5.3)	80.7	(±5.9)	65.4	(±7.3)	47.1	(±7.7)	39.4	(±7.5)	71.0	(±6.9)
Idaho	88.1	(±4.8)	82.5	(±6.0)	70.3	(±7.1)	37.3	(±7.5)	30.3	(±7.2)	70.5	(±7.0)
Illinois	88.2	(±3.9)	82.9	(±4.6)	58.6	(±5.7)	38.0	(±5.5)	37.9	(±5.4)	72.8	(±5.2)
City of Chicago	90.4	(±4.0)	84.7	(±5.0)	69.8	(±7.1)	47.2	(±7.5)	39.9	(±7.1)	71.4	(±6.9)
Rest of state	87.5	(±5.1)	82.3	(±5.9)	54.7	(±7.3)	34.8	(±6.8)	37.2	(±6.8)	73.2	(±6.6)
Indiana	86.6	(±4.6)	78.6	(±5.6)	74.8	(±5.4)	46.1	(±6.5)	50.8	(±6.5)	67.3	(±6.3)
Lake County	82.7	(±6.4)	75.5	(±7.3)	69.9	(±7.6)	22.6	(±6.8)	33.4	(±7.4)	61.5	(±8.0)
Marion County	87.4	(±5.0)	81.0	(±6.0)	77.4	(±6.0)	45.1	(±7.3)	44.3	(±7.3)	69.5	(±6.9)
Rest of state	86.8	(±6.1)	78.4	(±7.4)	74.8	(±7.0)	48.8	(±8.5)	54.2	(±8.5)	67.4	(±8.2)
Iowa	93.2	(±3.8)	83.8	(±5.3)	46.7	(±7.2)	47.8	(±7.0)	51.1	(±7.1)	78.1	(±6.0)
Kansas	92.5	(±4.6)	78.6	(±7.4)	72.6	(±7.7)	43.8	(±8.5)	39.7	(±8.1)	71.7	(±8.0)
Kentucky	88.9	(±3.8)	75.2	(±5.4)	76.6	(±5.0)	37.9	(±5.7)	45.3	(±5.8)	67.5	(±5.7)
Louisiana	94.4	(±3.0)	81.6	(±5.9)	63.0	(±6.9)	52.2	(±7.4)	50.9	(±7.4)	74.9	(±6.5)
Maine	91.4	(±3.9)	82.5	(±5.2)	68.6	(±6.2)	19.3	(±5.2)	28.5	(±6.3)	72.3	(±6.1)
Maryland	89.7	(±5.2)	83.4	(±6.7)	67.6	(±7.8)	44.9	(±8.1)	44.5	(±7.9)	77.9	(±7.0)
City of Baltimore	91.0	(±4.4)	80.1	(±6.5)	67.8	(±7.0)	46.1	(±7.3)	37.5	(±6.7)	70.4	(±7.0)
Rest of state	89.5	(±5.9)	83.9	(±7.6)	67.6	(±8.9)	44.7	(±9.1)	45.5	(±9.0)	79.0	(±7.9)
Massachusetts	93.7	(±3.2)	86.0	(±5.3)	62.5	(±6.8)	47.1	(±7.1)	45.2	(±7.0)	76.0	(±6.3)
Michigan	90.9	(±5.1)	87.0	(±4.3)	80.7	(±6.1)	43.2	(±7.4)	46.0	(±7.4)	76.5	(±6.4)
Minnesota	93.6	(±3.0)	83.8	(±5.7)	34.1	(±6.2)	49.4	(±6.6)	50.1	(±6.6)	71.6	(±6.3)
Mississippi	91.6	(±3.3)	85.0	(±4.3)	68.0	(±6.2)	41.3	(±6.6)	43.4	(±6.5)	75.2	(±5.4)
Missouri	88.8	(±5.0)	67.5	(±6.9)	59.9	(±6.7)	33.6	(±6.5)	46.9	(±7.1)	56.2	(±7.0)
Montana	87.2	(±5.0)	74.6	(±6.7)	65.2	(±7.2)	31.1	(±7.0)	30.7	(±6.8)	61.7	(±7.5)
Nebraska	93.6	(±3.1)	79.2	(±6.5)	45.4	(±7.4)	52.7	(±7.3)	62.3	(±7.4)	65.4	(±7.3)
Nevada	86.3	(±4.6)	75.1	(±5.7)	72.3	(±5.8)	49.1	(±6.8)	34.4	(±6.4)	62.6	(±6.5)
New Hampshire	92.0	(±3.8)	85.8	(±5.2)	63.7	(±7.1)	49.7	(±7.4)	54.8	(±7.5)	73.3	(±6.5)
New Jersey	86.9	(±4.3)	79.6	(±6.0)	39.0	(±6.1)	34.5	(±6.0)	42.4	(±6.3)	67.2	(±6.4)
New Mexico	89.1	(±4.1)	79.9	(±5.4)	51.2	(±6.8)	40.8	(±6.5)	43.6	(±6.6)	70.2	(±6.4)
New York	90.3	(±3.2)	80.1	(±4.3)	48.6	(±5.4)	34.6	(±5.2)	39.5	(±5.3)	67.2	(±5.0)
City of New York	91.9	(±4.4)	77.2	(±6.5)	41.1	(±7.8)	35.0	(±7.4)	38.6	(±7.7)	67.5	(±7.2)
Rest of state	88.7	(±4.5)	82.9	(±5.5)	55.8	(±7.4)	34.2	(±7.3)	40.4	(±7.3)	67.0	(±6.8)
North Carolina	92.9	(±4.0)	84.0	(±5.8)	76.6	(±6.7)	47.5	(±7.7)	41.1	(±7.4)	76.7	(±6.5)
North Dakota	94.4	(±3.2)	84.0	(±5.5)	78.3	(±6.0)	63.2	(±7.0)	62.6	(±7.1)	77.0	(±6.2)
Ohio	89.4	(±4.2)	82.1	(±5.3)	63.6	(±7.5)	46.7	(±7.4)	48.9	(±7.4)	72.4	(±6.2)
Oklahoma	94.2	(±2.7)	74.0	(±6.1)	66.0	(±6.3)	59.0	(±6.5)	33.4	(±6.3)	66.3	(±6.5)
Oregon	88.1	(±4.3)	81.9	(±5.3)	59.4	(±6.7)	49.5	(±6.6)	31.6	(±6.0)	69.9	(±6.2)
Pennsylvania	89.3	(±4.4)	82.6	(±4.7)	69.1	(±5.8)	52.0	(±6.1)	59.0	(±6.1)	69.4	(±5.9)
Philadelphia County	90.7	(±4.0)	77.6	(±6.0)	72.2	(±6.6)	50.0	(±6.8)	52.6	(±7.2)	68.5	(±6.7)
Rest of state	89.1	(±5.1)	83.6	(±5.5)	68.5	(±6.7)	52.4	(±7.1)	60.2	(±7.1)	69.6	(±6.9)
Rhode Island	90.8	(±4.2)	83.6	(±6.5)	69.5	(±7.3)	55.5	(±7.8)	71.2	(±7.3)	69.7	(±7.5)
South Carolina	86.9	(±4.9)	79.7	(±5.9)	62.5	(±6.8)	43.9	(±6.8)	42.5	(±6.7)	70.9	(±6.4)
South Dakota	92.8	(±3.5)	80.6	(±5.9)	53.0	(±7.2)	43.0	(±7.2)	38.6	(±7.0)	69.6	(±6.7)
Tennessee	94.7	(±2.7)	81.2	(±5.3)	49.7	(±6.7)	47.3	(±6.7)	53.1	(±6.8)	72.5	(±5.9)

See Table 2 footnotes on next page.

TABLE 2. (*Continued*) Estimated vaccination coverage for vaccination series (modified)* and selected individual vaccines among children aged 19–35 months, by state and local area — National Immunization Survey, United States, 2009†

State/Area	MMR (≥1 doses)		PCV (≥4 doses)		Hep B (birth)§		HepA (≥2 doses)¶		Rotavirus**		Vaccine series (modified)	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Texas	88.5	(±3.2)	80.8	(±4.2)	69.8	(±4.8)	55.0	(±5.5)	45.8	(±5.4)	71.3	(±5.0)
Bexar County	87.6	(±5.6)	76.3	(±7.4)	58.3	(±7.5)	51.2	(±8.0)	49.9	(±8.0)	65.4	(±7.8)
City of Houston	86.9	(±4.9)	75.7	(±6.8)	62.3	(±7.9)	57.3	(±7.9)	46.6	(±8.4)	67.9	(±7.4)
Dallas County	84.9	(±6.1)	78.0	(±7.1)	70.5	(±7.0)	46.4	(±8.2)	47.4	(±8.1)	69.7	(±7.8)
El Paso County	87.1	(±4.4)	72.7	(±5.7)	71.5	(±5.8)	56.6	(±6.2)	56.5	(±6.3)	63.9	(±6.1)
Rest of state	89.5	(±4.6)	83.1	(±6.0)	72.1	(±7.0)	56.5	(±8.1)	44.5	(±7.9)	73.3	(±7.2)
Utah	91.3	(±4.1)	79.2	(±5.9)	77.8	(±6.1)	51.3	(±7.2)	43.6	(±7.4)	69.3	(±6.9)
Vermont	91.9	(±3.2)	80.9	(±5.0)	22.8	(±5.1)	43.4	(±6.2)	34.5	(±5.8)	59.9	(±6.1)
Virginia	85.8	(±6.8)	76.4	(±7.9)	60.8	(±7.9)	37.8	(±7.5)	53.1	(±8.1)	68.6	(±8.0)
Washington	90.8	(±3.0)	82.2	(±4.1)	70.1	(±5.4)	52.3	(±5.9)	20.9	(±4.7)	64.9	(±5.7)
Eastern/Western Washington	87.8	(±4.4)	72.9	(±6.0)	73.0	(±6.1)	41.1	(±6.4)	25.5	(±5.5)	61.4	(±6.5)
Rest of state	92.1	(±3.8)	86.2	(±5.2)	68.8	(±7.3)	57.1	(±7.8)	18.9	(±6.3)	66.4	(±7.6)
West Virginia	89.2	(±5.7)	74.4	(±7.5)	53.7	(±8.2)	51.7	(±8.1)	40.9	(±7.9)	60.9	(±8.0)
Wisconsin	94.4	(±2.7)	86.9	(±4.7)	63.1	(±6.6)	52.5	(±6.6)	46.7	(±6.8)	75.9	(±6.0)
Wyoming	91.3	(±3.6)	82.3	(±5.1)	61.2	(±6.8)	32.2	(±6.3)	34.7	(±6.3)	69.6	(±6.5)
U.S. Virgin Islands	71.2	(±6.4)	46.5	(±7.1)	81.8	(±5.5)	15.9	(±5.5)	5.6	—††	37.0	(±6.8)

Abbreviations: CI = confidence interval; DTP/DT/DTaP = diphtheria, tetanus toxoids and pertussis vaccines, diphtheria and tetanus toxoids, and diphtheria, tetanus toxoids, and acellular pertussis vaccine; HepB = hepatitis B vaccine; Hib = *Haemophilus influenzae* type b vaccine; MMR = measles, mumps, and rubella vaccine; PCV = pneumococcal conjugate vaccine.

* Includes ≥4 doses of DTP/DT/DTaP, ≥3 doses of poliovirus vaccine, ≥1 doses of any measles-containing vaccine, ≥3 doses of HepB, ≥1 doses of varicella vaccine, and ≥4 doses of PCV; Hib vaccine is excluded.

† Children in the 2009 National Immunization Survey were born during January 2006–July 2008.

§ ≥1 doses of HepB vaccine administered between birth and age 3 days.

¶ ≥2 doses hepatitis A vaccine and measured among children aged 19–35 months.

** ≥2 or ≥3 doses of rotavirus vaccine, depending on product type received (≥2 doses for Rotarix [RV1] and ≥3 doses for RotaTeq [RV5]).

†† The asymmetric CI of 3.1–10.0 is reported instead of the confidence width.

dropped from 90.9% in 2008 to 83.6% in 2009, in part because of the shortage and interim recommendation. Starting in 2009, coverage estimates are reported based on a more accurate measurement of Hib vaccination status that takes into account vaccine product type (Hib vaccine products vary in the number of recommended doses) (*2*). Concerns that providers were not vaccinating children adequately with the primary series during the shortage and temporary suspension of the booster vaccine proved unfounded; nationally, 92.1% of eligible children completed the primary series for Hib.

Since the 2006 introduction of live rotavirus vaccine, hospitalizations for gastroenteritis during the rotavirus season have declined markedly, beginning in 2007, as have emergency department and physician office visits for gastroenteritis (*4*). NIS estimates of rotavirus coverage in this report reflect early vaccinations, primarily among children born during the first 2 years of licensure of rotavirus vaccine. Analysis by birth cohort of the 2009 NIS showed rotavirus vaccination for the full vaccine series has increased steadily and reached 60.0% among children born during January–June 2008; overall vaccination coverage for rotavirus likely will continue to increase.

The Vaccines for Children program,*** a federal entitlement program that provides vaccine at no cost for eligible children, has been effective in reducing potential gaps in coverage levels resulting from poverty status; however, some gaps persist that reflect other barriers that must be addressed. Race/ethnicity was associated with vaccination status in the 2009 NIS data, independent of poverty status, for HepA, 4 doses of PCV, and 4 doses of DTaP. In the 2008 NIS data, racial/ethnic disparities for 4 doses of PCV and 4 doses of DTaP were observed but did not persist after controlling for poverty status (*5*). Associations of race/ethnicity and poverty with vaccination status will continue to be monitored, and further research will explore reasons for disparities.

State variation in vaccine coverage persists year to year. Many factors that potentially could affect

*** Additional information on the Vaccines for Children program is available at http://www.cdc.gov/vaccines/programs/vfc/default.htm.

TABLE 3. Estimated vaccination coverage among children aged 19–35 months, by selected vaccines and dosages by race/ethnicity* and poverty level† — National Immunization Survey, United States, 2009§

	Race/Ethnicity												Poverty level			
	White, non-Hispanic		Black, non-Hispanic		Hispanic		American Indian/ Alaska Native		Asian		Multiracial, non-Hispanic		Below		At or above	
Vaccine	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
DTP/DT/DTaP																
≥3 doses	95.6	(±0.6)	93.3	(±2.0)¶	94.6	(±1.6)	94.5	(±4.8)	95.9	(±2.4)	95.9	(±2.4)	94.1	(±1.2)	95.6	(±0.7)
≥4 doses	85.8	(±1.1)	78.6	(±3.1)¶	82.9	(±2.5)¶	82.1	(±8.1)	86.6	(±5.5)	81.8	(±4.1)	80.1	(±2.3)**	85.7	(±1.1)
Poliovirus	93.3	(±0.8)	90.9	(±2.3)	92.5	(±1.8)	92.2	(±5.5)	94.0	(±3.4)	92.8	(±3.0)	92.0	(±1.5)	93.3	(±0.8)
MMR ≥1 doses	90.8	(±0.9)	88.3	(±2.7)	89.3	(±2.0)	94.9	(±3.1)¶	90.7	(±4.3)	88.5	(±3.8)	88.8	(±1.8)	90.6	(±0.9)
Hib††																
≥3 doses	82.9	(±1.2)	80.4	(±3.1)	86.4	(±2.2)¶	88.3	(±5.9)	81.4	(±6.4)	83.7	(±4.0)	82.0	(±2.1)	84.3	(±1.1)
Primary series	92.6	(±0.8)	91.0	(±2.2)	92.3	(±1.8)	91.8	(±5.2)	86.5	(±5.6)¶	91.9	(±2.6)	90.1	(±1.7)**	93.1	(±0.8)
Full series	55.3	(±1.6)	51.2	(±3.7)	55.4	(±3.3)	62.5	(±3.1)	54.6	(±8.8)	53.7	(±5.9)	51.4	(±3.0)**	56.5	(±1.5)
Hepatitis B																
≥3 doses	92.3	(±0.9)	91.6	(±2.2)	92.6	(±1.7)	92.5	(±5.2)	93.1	(±3.2)	93.3	(±2.6)	92.3	(±1.4)	92.7	(±0.9)
1 dose by 3 days (birth)§§	58.8	(±1.6)	61.7	(±3.7)	64.7	(±3.1)¶	N/A¶¶		53.3	(±9.2)	60.7	(±5.9)	63.2	(±2.9)**	59.4	(±1.5)
Varicella ≥1 doses	89.2	(±1.0)	88.2	(±2.7)	90.7	(±1.9)	89.2	(±6.3)	89.5	(±5.3)	90.6	(±3.1)	89.0	(±1.8)	90.2	(±0.9)
PCV																
≥3 doses	93.2	(±0.8)	91.5	(±2.2)	92.7	(±1.7)	94.4	(±4.3)	88.5	(±5.0)	91.1	(±3.0)	91.2	(±1.5)	93.5	(±0.8)
≥4 doses	83.4	(±1.2)	73.2	(±3.4)¶	80.6	(±2.5)	76.2	(±9.2)	72.5	(±9.5)¶	73.1	(±5.7)¶	74.8	(±2.6)**	83.2	(±1.1)
Hepatitis A (≥2 doses)	46.2	(±1.6)	41.3	(±3.7)¶	49.3	(±3.3)	33.2	(±9.8)¶	50.9	(±9.1)	47.8	(±5.9)	47.3	(±3.0)	46.2	(±1.5)
Rotavirus* **	46.4	(±1.6)	38.0	(±3.6)¶	43.7	(±3.2)	N/A¶¶		41.7	(±8.6)	38.4	(±5.6)¶	37.7	(±2.8)**	47.1	(±1.5)
Combined series																
4:3:1:3:3:1†††	69.2	(±1.5)	66.6	(±3.5)	72.8	(±2.8)¶	73.4	(±9.4)	69.9	(±7.4)	67.1	(±5.2)	68.4	(±2.6)	70.4	(±1.3)
4:3:1:3:3:1 with Hib excluded	78.1	(±1.3)	73.7	(±3.3)	78.2	(±2.7)	76.6	(±9.0)	80.3	(±6.2)	74.8	(±4.8)	75.5	(±2.4)	78.5	(±1.2)
4:3:1:3:3:1:4§§§	64.1	(±1.5)	58.2	(±3.7)¶	67.1	(±3.0)	N/A¶¶		55.0	(±8.9)	57.2	(±5.8)	60.7	(±2.8)**	64.8	(±1.4)
4:3:1:3:3:1:4 with Hib excluded	72.4	(±1.4)	64.3	(±3.6)¶	72.0	(±2.9)	N/A¶¶		62.5	(±9.1)¶	63.4	(±5.8)¶	66.9	(±2.7)**	72.1	(±1.4)

Abbreviations: CI = confidence interval; DTP/DT/DTaP = diphtheria, tetanus toxoids and pertussis vaccines, diphtheria and tetanus toxoids, and diphtheria, tetanus toxoids and acellular pertussis vaccine; Hib = *Haemophilus influenzae* type b vaccine; MMR = measles, mumps, and rubella vaccine; N/A = not available; PCV = pneumococcal conjugate vaccine.

* Native Hawaiian or other Pacific Islanders were not included in the table because of small sample sizes.

† Poverty level was determined for all children. Children were classified as below poverty if their total family income was less than the poverty threshold specified for the applicable family size, and number of children aged <18 years. All others were classified as at or above poverty. Poverty thresholds reflect yearly changes in the Consumer Price Index. Thresholds and guidelines available at http://www.census.gov/hhes/www/poverty.html.

§ Children in the 2009 National Immunization Survey were born during January 2006–July 2008.

¶ Estimates are statistically significant at p<0.05. White, non-Hispanic children were the reference group.

** Estimates are statistically significant at p<0.05. Children living at or above poverty were the reference group.

†† Primary series: receipt of ≥2 or ≥3 doses, depending on product type received; full series: primary series and booster dose includes receipt of ≥3 or ≥4 doses depending on product type received.

§§ Hepatitis B vaccine administered between birth and age 3 days.

¶¶ Estimate not available if the unweighted sample size for the numerator was <30 or CI half width / estimate >0.5 of CI half width >10.

*** Includes ≥2 or ≥3 doses, depending on product type received (≥2 doses for Rotarix [RV1], ≥3 doses for RotaTeq [RV5]).

††† 4:3:1:3:3:1 series includes ≥4 doses of DTP/DT/DTaP, ≥3 doses of poliovirus vaccine, ≥1 doses of any measles-containing vaccine, ≥3 doses of Hib vaccine, ≥3 doses of hepatitis B vaccine, and ≥1 doses of varicella vaccine.

§§§ 4:3:1:3:3:1:4 series includes ≥4 doses of DTP/DT/DTaP, ≥3 doses of poliovirus vaccine, ≥1 doses of any measles-containing vaccine, ≥3 doses of Hib vaccine, ≥3 doses of hepatitis B vaccine, ≥1 doses of varicella vaccine, and ≥4 doses of PCV.

vaccination coverage rates vary across states. Such factors include population characteristics, health system characteristics, state policies (e.g., child care vaccination requirements), vaccine financing policies that might affect speed with which new vaccine recommendations can be adopted and the degree to which underinsured children can receive publicly purchased vaccine, reimbursement of providers for immunization services, and immunization program activities (*6–8*). How these various factors interact to influence observed differences in vaccination coverage is unclear. Further work is needed to understand factors that most strongly influence vaccination coverage and to identify best practices among states.

The findings in this report are subject to at least three limitations. First, NIS is a landline-based telephone survey, and statistical adjustments might not fully compensate for nonresponse and households without landline or only cellular telephones. Vaccination coverage estimates that include

What is already known on this topic?

By estimating vaccination coverage among U.S. children aged 19–35 months, the National Immunization Survey (NIS) is used to monitor efforts to reduce the burden and prevent a resurgence of vaccine-preventable diseases.

What is added by this report?

The 2009 NIS findings demonstrate 1) the ability of state and local immunization programs to incorporate newly recommended vaccines while sustaining coverage at or above national target levels for most longer-standing recommended vaccines, and 2) the existence of racial/ethnic disparities in coverage for some vaccines, independent of poverty status.

What are the implications for public health practice?

Continued partnerships among national, state, local, private, and public entities are needed to sustain coverage levels, increase coverage with the more recently recommended vaccines, implement targeted vaccination programs to address disparities in coverage, and support research to explore reasons for disparities and understand barriers to implementing proven methods to improve coverage.

nonlandline households might be lower than NIS estimates (*9*). Second, underestimates of vaccination coverage might have resulted from the exclusive use of provider-reported vaccination histories because completeness of these records is unknown. Finally, although national coverage estimates are precise, annual estimates and trends for state and local areas should be interpreted with caution because of smaller sample sizes and wider confidence intervals.

Achieving and maintaining high vaccination coverage levels is important to reduce the burden of vaccine-preventable diseases and prevent a resurgence of these diseases in the United States, particularly in undervaccinated populations. Continued partnerships among national, state, local, private, and public entities are needed to sustain vaccination coverage levels and ensure that coverage levels for the more recently recommended vaccines continue to increase. CDC encourages the use of evidence-based methods of improving coverage, which include parent and provider reminders, reducing out-of-pocket costs, increasing access to vaccination, and multicomponent interventions that include education (*10*). Research is under way to understand barriers to implementing proven methods of improving coverage and identify approaches to promoting more widespread implementation.

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CDC Grand Rounds: Radiological and Nuclear Preparedness

Radiological and nuclear disasters are infrequent, but when they occur, they result in large and demonstrable health burdens. Several scenarios can result in the public's exposure to radiation. For example, radiation sources used in health care or other industries can be lost or misused. Incidents in the nuclear power industry, such as those at Chernobyl and Three Mile Island, require significant public health response. In addition, radiological terrorism can involve the use of a radiological dispersal device (RDD) or an improvised nuclear device (IND). State and local health agencies are expected to perform essential public health functions in response to any of these emergencies (*1,2*) (Box 1).

Recent events illustrate that the public health sector will be essential in a radiological or nuclear response. For example, in August 2004, the day before the Republican National Convention, the New York City Department of Health and Mental Health (DOHMH) responded to a radiation incident at a mid-town Manhattan post office. A radiation source failed to retract into its protective shielding, resulting in dangerously high radiation levels near the radiation source. Police and fire departments evacuated the building and closed off nearby streets. The DOHMH response included conducting extensive environmental surveys outside and throughout the building, assisting with shielding the source, conducting press conferences, providing approximately 2,000 copies of fact sheets to residents in nearby buildings, and conducting dose estimates for the contractor and postal service employees. It took over 24 hours to remove the radiation source safely. The public's maximal risk for exposure was less than that received from a single chest radiograph because of their distance from the radiation source.

This is another in a series of occasional MMWR reports titled CDC Grand Rounds. These reports are based on grand rounds presentations at CDC on high-profile issues in public health science, practice, and policy. Information about CDC Grand Rounds is available at http://www.cdc.gov/about/grand-rounds.

BOX 1. Spectrum of potential public health roles in a radiological or nuclear emergency*

- Identify radiological agent or cause.
- Determine radiological exposure and contamination.
- Provide medical and public guidance on radiological-protective actions and medical management.
- Conduct environmental and human surveillance for potential radiological contamination or exposure.
- Conduct epidemiologic investigations, if needed.
- Conduct radiological monitoring and screening (environment and persons).
- Conduct radiological sampling and laboratory testing.
- Coordinate requests, receipt, and distribution of Strategic National Stockpile, if needed.
- Undertake mitigation and recovery.

* Additional information available at http://www.bt.cdc.gov/radiation/glossary.asp.

When Aleksander Litvinenko died in London in 2006 from poisoning with the radioisotope polonium-210, public health agencies in the United States were affected. Polonium was spread to many places in London, potentially contaminating thousands of persons, including foreign visitors. In the United Kingdom, approximately 8,000 persons contacted public health authorities, and citizens from 52 countries potentially were involved, including 160 U.S. citizens. Approximately 20 U.S. state and local public health agencies worked with CDC to notify involved citizens and to coordinate laboratory testing.

These events demonstrate that 1) radiological incidents can happen at any time and any place, 2) state and local health agencies are involved in response and communication concerning health effects of radiation, 3) communication needs arise even when there is no public risk, 4) responses require coordination with multiple agencies, and 5) planning requires multiagency input.

Current Capability of States and Localities

State and local capabilities to respond effectively to radiological or nuclear incidents vary greatly: 31 states with commercial nuclear power plants are required to have detailed response plans and drills, but only for designated zones around their power plants. Some major metropolitan areas that are considered high-probability terrorist targets (e.g., Los Angeles and New York City) have done extensive planning. Other regions have made modest planning efforts. Each state has one or more radiation control programs. In 35 states, these programs are in the state public health department; in the other states, this expertise is elsewhere, often in state environmental departments.

Enhancing Overall Public Health Capacity for Response

Public health authorities at all levels must understand the extent of their responsibilities in radiological emergencies, and they must prioritize emergency planning appropriately. Enhancing public health expertise on radiological agents is paramount for appropriate planning, drilling, and responding to radiological and nuclear incidents (Box 1).

The pre-event phase of planning includes 1) identifying preexisting radiation sources to establish a baseline, 2) developing and coordinating multiagency response plans, and 3) conducting training and exercises. These actions require strong alliances among public health entities, radiation control programs, subject matter experts, and emergency response agencies.

In the initial hours of an event, environmental characterization is critical for identifying persons and places likely to be contaminated and for driving protective actions. The capabilities of the Integrated Modeling and Atmospheric Assessment Center* can help initially to define the contaminated areas (via atmospheric plume modeling), identify potential evacuation routes, and assist with initial protective action guidance, such as recommendations for sheltering in place versus evacuation. Real-time environmental monitoring data should be used to verify the atmospheric modeling results and guide decision-making as quickly as such monitoring data become available.

During the hours to days after an event begins, besides the ongoing environmental monitoring, public health response elements fall under the rubric of population monitoring, which draws upon public health surveillance, epidemiology, laboratory analyses of biologic samples, and health physics. Some states can handle events involving a small number of casualties, such as an industrial incident, but all states are likely to face major challenges in dealing with a large mass-casualty event, such as detonation of an RDD or an IND. In these events, persons might be contaminated both on the body (external contamination) and in the body (internal contamination). An IND event also will expose thousands of persons to strong gamma rays without external or internal contamination. External radioactive contamination can be assessed with readily available radiation survey meters. Internal contamination by strong gamma emitters can be detected by whole body counters, radiation meters, or bioassays. Internal contamination by most alpha and beta emitters requires a urine bioassay. Additionally, medical countermeasures might be required for either internal contamination (such as Prussian blue) or external high-dose exposure (such as filgrastim) or both (*3*), and it will be the responsibility of public health authorities to provide access to the Strategic National Stockpile and recommendations on medical countermeasure use.

CDC has developed a guidance document to help state and local authorities evaluate their emergency response plans and prioritize allocation of existing resources. CDC and state and local partners are developing data collection and reporting tools for epidemiology, surveillance, and registry needs, as well as developing guidance for using readily available handheld instruments for internal monitoring (*4*).

Public health issues to be addressed during the recovery phase (days to months after the event begins) and clean-up process require engagement of many stakeholders. These issues include 1) safe management and identification of human remains (*5*), 2) complete identification of types and levels of contamination present (i.e., chemical, biologic, and radioactive), 3) the intended use of the restored area (e.g., residential, school, industrial, or tourism), 4) selection of the remedial action most cost-effective and acceptable to the community, and 5) establishment of a post-event acceptable level of residual radioactivity based on a pre-event background level of radioactivity.

Throughout all phases of a radiological or nuclear event, public health authorities must ensure the safety and health of the potentially large number of emergency responders, health-care workers, and recovery workers involved in the response. Many of these workers will have very little experience in radiological

*Additional information available at https://imaacweb.llnl.gov/web.

and nuclear safety and health. Responders should be trained to recognize the acute health effects of high-dose radiation, the long-term risk for cancer that can result from low-dose radiation, and the protective principles of time, distance, and shielding (*3*). Because personal protective equipment (PPE) does not protect responders from external gamma radiation exposure, responders must rely instead on monitoring equipment to alert them to such exposures and help gauge the appropriate time and distance allowed for work near a radiation source. PPE can, however, protect the responder from internal or external radionuclide contamination. The need for such equipment will vary, depending on the type of radiological or nuclear event. CDC's National Institute for Occupational Safety and Health (NIOSH) and other organizations have prepared guidance in the selection of appropriate PPE for radioactive environments (*6*).

Finally, at all times, public health authorities must provide the public with information on how to protect themselves. The communication needs during any radiological event, regardless of size, should not be underestimated.

Enhancing Laboratory Expertise and Capacity for Response

According to recent surveys by the Association of Public Health Laboratories and the Conference of Radiation Control Program Directors, state public health laboratories currently have no rapid methods for analyzing clinical samples (*7*). Such bioassays are critical for 1) defining baseline contamination, 2) identifying persons with post-event internal contamination, 3) estimating radiation dose, 4) directing short- and long-term medical care, and 5) supporting epidemiologic assessments. In response to this shortage, CDC is developing rapid urine bioassays to detect 22 radionuclides; these bioassays will include both traditional radiation counting technologies and mass spectrometry analytical methods (Box 2).† To develope the needed surge capacity, a Laboratory Response Network (Radiological) at 10 or more state public health laboratories needs to be established once resources become available. The effort should include equipment, personnel, supplies, training, technology transfer, and ongoing performance evaluation.

BOX 2. CDC radionuclide screen*

Step 1. Screen for the presence of any radionuclides:
- Identifies presence of alpha-, beta-, or gamma-emitting radionuclides.
- Results for the first 100 samples in 8 hours.
- Throughput: alpha or beta, 300 samples per day; gamma, 3,000 samples per day.

Step 2. Identify and quantify specific radionuclides:
- Goal: 22 radionuclides (current capability: eight radionuclides).
- Specific radionuclide assays.
- Throughput: 300 samples per day.

Sample requirement:
- 70 mL of urine (spot sample).
- All methods in accordance with Clinical Laboratory Improvement Amendments (CLIA) regulations.

* Additional information available at http://www.bt.cdc.gov/radiation/glossary.asp.

Ensuring Strong Partnerships in All Phases of Response

In an emergency setting, the public health system has the flexibility to reach from federal to state to local authorities to ensure that the health system response is integrated with a broader national response to an event (including responses related to transportation, commerce, agriculture, and the environment). National planners must develop broad partnerships to integrate radiological and nuclear preparedness into overall national preparedness, including 1) developing a national concept of operations (CONOPS) for post-event monitoring of exposed persons and validating that concept with stakeholders, 2) defining the resources needed to meet monitoring needs, and 3) using the CONOPS to drive interagency collaborations with partners, including the Federal Radiological Preparedness Coordinating Committee, the U.S.

† *Bioassays* are analytical technologies that detect the type and amount of radionuclides in a urine sample to determine the amount of internal radionuclide contamination that a person has received during a radiological or nuclear incident. *Traditional counting technologies* include liquid scintillation counting to detect alpha- and beta-emitting radionuclides, alpha spectrometry to detect alpha-emitting radionuclides, and gamma spectrometry to detect gamma-emitting radionuclides in urine. *Mass spectrometry technologies* detect the actual number of radionuclide atoms instead of the alpha, beta, or gamma emissions. Additional information, including a glossary of terms, is available at http://www.bt.cdc.gov/radiation/glossary.asp.

Department of Defense, the U.S. Department of Energy, the U.S. Environmental Protection Agency, the Food and Drug Administration, and the U.S. Department of Agriculture.

Radiological preparedness activities can be funded through various mechanisms, including the U.S. Department of Homeland Security's Urban Areas Security Initiative Grants, CDC's Public Health Preparedness Grants, the U.S. Department of Health and Human Services' Health Preparedness Program, and professional organizations such as the Conference of Radiation Control Program Directors. Funding and planning resources also might be available from neighboring regional or state programs.

Finally, radiological response planning should be part of all-hazards preparedness. Real-life and exercise experience can be used to strengthen coordination and performance and to define gaps that can be filled through corrective actions.

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Notes from the Field

Transplant-Transmitted *Balamuthia mandrillaris* — Arizona, 2010

On August 23, 2010, CDC was notified regarding two organ transplant recipients in Arizona who had encephalitis with multiple ring-enhancing lesions revealed by cerebral magnetic resonance imaging. The common organ donor, a Hispanic male landscaper aged 27 years, had died in Arizona from a presumed stroke on July 21. He had a large skin lesion for approximately 6 months on his back that he had attributed to an insect bite. The ill recipients, a male liver recipient aged 56 years, and a male recipient of a kidney and pancreas aged 24 years, received organ transplants on July 22. In addition, two other recipients received organs from this donor: an adult male heart recipient received his transplant in California on July 22, and an adult male kidney recipient received his transplant in Utah on July 23.

On August 8, the liver recipient had onset of diplopia and difficulty walking; he was hospitalized on August 9 and died on August 17. The kidney-pancreas recipient had onset of headache, nausea, and vomiting on August 15 and was hospitalized the same day. A brain biopsy, performed on August 23, demonstrated amebic encephalitis on histopathologic examination; empiric therapy was initiated on August 24. On August 26, *Balamuthia mandrillaris* antigens were identified in the brain biopsy from the kidney-pancreas recipient and in postmortem brain and liver tissue from the liver recipient, using immunohistochemical staining. *B. mandrillaris* DNA was detected in the brain tissue from both patients by real-time polymerase chain reaction on August 27. The kidney-pancreas recipient died on August 30. The heart and kidney recipients, who have been asymptomatic, were placed on preemptive therapy on August 26.

This is the second confirmed cluster of transplant-transmitted *Balamuthia* granulomatous amebic encephalitis (GAE). The first occurred in 2009 in two recipients of kidneys from a common donor (*1*). *Balamuthia* GAE is a rare and frequently fatal disease caused by *B. mandrillaris*, a free-living ameba found in soil (*2,3*). Persons of Hispanic ethnicity might be disproportionately affected (*2,3*). Patients can have skin lesions months to years before having encephalitis symptoms. No optimal treatment has been identified; among patients treated with combination antimicrobial therapy, few have survived (*1–3*). Amebic encephalitis might be more common than previously thought and underdiagnosed among organ donors with encephalitis of uncertain etiology or other neurologic conditions.*

*Additional information available at http://www.cdc.gov/balamuthia.

Reported by

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Announcements

National Child Passenger Safety Week — September 19–25, 2010

Motor vehicle crashes are a leading cause of death and injury among children. National Child Passenger Safety Week, September 19–25, 2010, highlights the importance of ensuring that all child passengers ride in correctly installed, age- and size-appropriate restraints.

Although most children use child safety seats or seat belts, results from CDC's Second Injury Control and Risk Survey (ICARIS-2), a nationally representative survey conducted from July 23, 2001, through February 7, 2003, estimated that approximately 600,000 U.S. children aged ≤12 years rode unrestrained at least some of the time during a 30-day period. In addition, an estimated 8 million children aged ≤7 years used only adult seat belts during the same period, despite their increased risk for abdominal, spinal cord, and brain injuries from poor-fitting seat belts (*1,2*). The National Highway Traffic Safety Administration (NHTSA) and CDC recommend the use of appropriate car or booster seats up to at least age 8 years or 57 inches tall (*3,4*). Greater effort is needed to ensure that parents correctly restrain their children on every trip.

Information about National Child Passenger Safety Week activities and child passenger safety is available from NHTSA at http://www.nhtsa.gov/Safety/CPS and from CDC at http://www.cdc.gov/motorvehiclesafety/child_passenger_safety/childseat-spot.html.

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Environmental Microbiology: Control of Foodborne and Waterborne Diseases Course — January 5–8 and 10, 2011

CDC and Emory University's Rollins School of Public Health will cosponsor a 4.5-day course, Environmental Microbiology: Control of Foodborne and Waterborne Diseases, January 5–8 and 10, 2011, at Emory University, Rollins School of Public Health in Atlanta, Georgia. This course on surveillance of foodborne and waterborne diseases is designed for public health practitioners and persons interested in the safety of food and water. The course will provide a broad overview of the major foodborne and waterborne diseases.

Course attendees will learn how information from surveillance is used to improve public health policy and practice to safeguard food and water. Course discussion will focus on the microorganisms and chemical agents responsible for food and water-transmitted diseases, including pathogenesis, clinical manifestations, reservoirs, modes of transmission, and surveillance systems. Transport, survival, and fate of pathogens in the environment, indicator organisms as surrogates for pathogens, and the removal and inactivation of pathogens and indicators by water and wastewater treatment processes also will be discussed. Additional topics covered during the course will include the public health impact of quality assurance programs, such as hazard analysis and critical control points, in controlling foodborne and waterborne diseases in industrialized and developing countries.

This course is offered to Emory University students and to public health professionals. Continuing Education credit is available. Tuition will be charged. The application deadline is December 5, 2010, or until all slots have been filled. Additional information and applications are available by mail (Emory University, Hubert Department of Global Health [Attn: Pia], 1518 Clifton Rd. NE, CNR Bldg., Rm. 7038, Atlanta, GA 30322); telephone (404-727-3485); fax (404-727-4590); Internet (http://www.sph.emory.edu/epicourses), or e-mail (pvaleri@emory.edu).

Errata

Vol. 59, No. RR-9

In the report "Use of World Health Organization and CDC Growth Charts for Children Aged 0–59 Months in the United States," errors occurred in Figures 4 and 5 on pages 10 and 11. The y axis of each figure should read **Length (cm).**

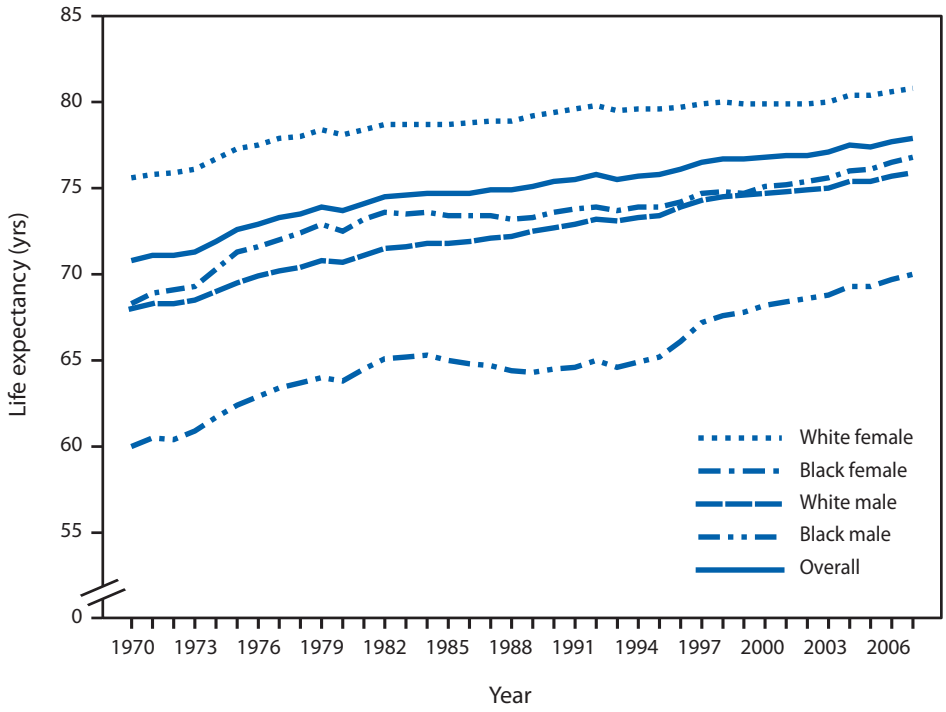
Vol. 59, No. 20

In the report "FDA Licensure of Bivalent Human Papillomavirus Vaccine (HPV2, Cervarix) for Use in Females and Updated HPV Vaccination Recommendations from the Advisory Committee on Immunization Practices (ACIP)," the second footnote under Table 2 should read as follows: "Phase III trial. According to protocol efficacy analysis included females aged 15 through 25 years who received all 3 vaccine doses, were seronegative at day 1 and HPV DNA negative at day 1 through month 6 for the respective HPV type, and had normal or low grade cytology at day 1, with case counting beginning 1 day after third vaccine dose; mean duration of follow-up post **third** vaccine dose: 34.9 months."

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Life Expectancy at Birth, by Race* and Sex — United States, 1970–2007



* Includes Hispanics and non-Hispanics.

During 1970–2007, life expectancy at birth in the United States demonstrated a long-term increasing trend for the total population, for both males and females, and for the black and white populations. In 2007, the disparities in life expectancy for males compared with females and for blacks compared with whites were the smallest ever recorded. Life expectancy at birth was highest for white females (80.8 years), followed by black females (76.8), white males (75.9), and black males (70.0).

Source: Xu J, Kochanek KD, Murphy SL, Tejada-Vera B. Deaths: final data for 2007. Natl Vital Stat Rep 2010;58(19). Available at http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_19.pdf.

Notifiable Diseases and Mortality Tables

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending September 11, 2010 (36th week)*

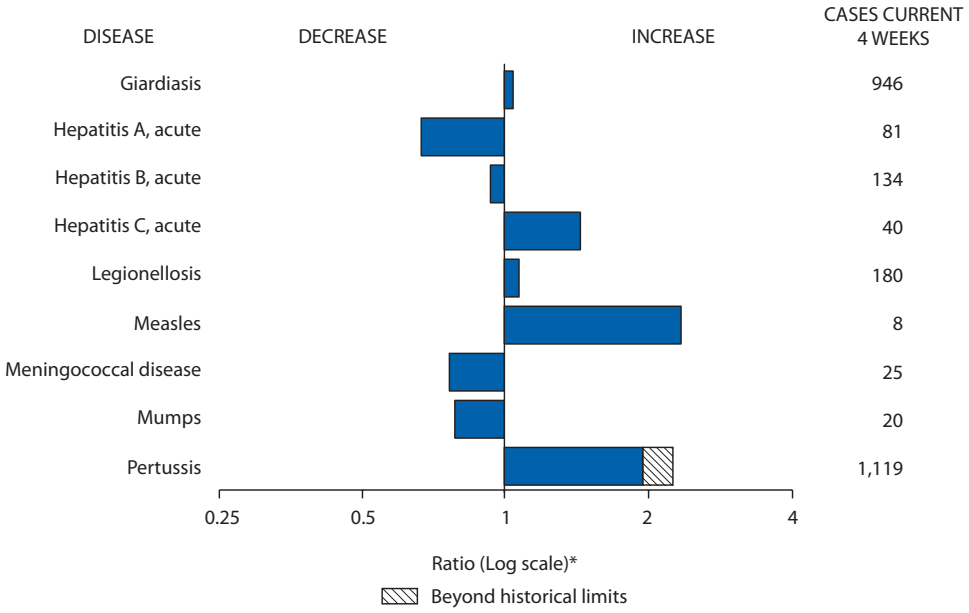
Disease	Current week	Cum 2010	5-year weekly average†	Total cases reported for previous years 2009	2008	2007	2006	2005	States reporting cases during current week (No.)
Anthrax	—	—	0	1	—	1	1	—	
Botulism, total	—	59	3	118	145	144	165	135	
foodborne	—	5	1	10	17	32	20	19	
infant	—	42	2	83	109	85	97	85	
other (wound and unspecified)	—	12	1	25	19	27	48	31	
Brucellosis	3	85	2	115	80	131	121	120	NY (1), FL (2)
Chancroid	1	32	0	28	25	23	33	17	TX (1)
Cholera	—	5	0	10	5	7	9	8	
Cyclosporiasis§	2	130	2	141	139	93	137	543	FL (1), OK (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup virus disease	—	25	4	55	62	55	67	80	
Eastern equine encephalitis virus disease	—	10	1	4	4	4	8	21	
Powassan virus disease	—	2	0	6	2	7	1	1	
St. Louis encephalitis virus disease	—	3	1	12	13	9	10	13	
Western equine encephalitis virus disease	—	—	—	—	—	—	—	—	
Haemophilus influenzae,** invasive disease (age <5 yrs):									
serotype b	—	10	0	35	30	22	29	9	
nonserotype b	—	129	2	236	244	199	175	135	
unknown serotype	—	154	2	178	163	180	179	217	
Hansen disease§	—	29	2	103	80	101	66	87	
Hantavirus pulmonary syndrome§	—	15	1	20	18	32	40	26	
Hemolytic uremic syndrome, postdiarrheal§	2	130	8	242	330	292	288	221	NE (1), MD (1)
HIV infection, pediatric (age <13 yrs)††	—	—	1	—	—	—	—	380	
Influenza-associated pediatric mortality§,§§	—	56	1	358	90	77	43	45	
Listeriosis	10	530	23	851	759	808	884	896	PA (1), OH (1), FL (3), WA (1), CA (4)
Measles¶¶	—	49	1	71	140	43	55	66	
Meningococcal disease, invasive***:									
A, C, Y, and W-135	—	175	4	301	330	325	318	297	
serogroup B	1	79	2	174	188	167	193	156	TX (1)
other serogroup	—	7	0	23	38	35	32	27	
unknown serogroup	3	268	8	482	616	550	651	765	FL (3)
Mumps	7	2,333	15	1,991	454	800	6,584	314	MI (1), TX (6)
Novel influenza A virus infections†††	—	1	0	43,774	2	4	NN	NN	
Plague	—	1	0	8	3	7	17	8	
Poliomyelitis, paralytic	—	—	—	1	—	—	—	1	
Polio virus Infection, nonparalytic§	—	—	—	—	—	—	NN	NN	
Psittacosis§	—	4	0	9	8	12	21	16	
Q fever, total§,§§§	2	80	3	114	120	171	169	136	
acute	2	62	1	94	106	—	—	—	CA (2)
chronic	—	18	0	20	14	—	—	—	
Rabies, human	—	—	0	4	2	1	3	2	
Rubella¶¶¶	—	5	0	3	16	12	11	11	
Rubella, congenital syndrome	—	—	—	2	—	—	1	1	
SARS-CoV§,****	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	123	1	161	157	132	125	129	CT (1)
Syphilis, congenital (age <1 yr)††††	—	136	9	423	431	430	349	329	
Tetanus	—	5	1	18	19	28	41	27	
Toxic-shock syndrome (staphylococcal)§	1	58	2	74	71	92	101	90	MI (1)
Trichinellosis	—	2	0	13	39	5	15	16	
Tularemia	2	68	3	93	123	137	95	154	IN (1), WA (1)
Typhoid fever	1	255	13	397	449	434	353	324	CA (1)
Vancomycin-intermediate *Staphylococcus aureus*§	2	64	1	78	63	37	6	2	MO (2)
Vancomycin-resistant *Staphylococcus aureus*§	—	1	—	1	—	2	1	3	
Vibriosis (noncholera *Vibrio* species infections)§	27	493	15	789	588	549	NN	NN	OH (1), MD (4), VA (1), GA (3), FL (2), WA (11), CA (5)
Viral hemorrhagic fever§§§§	—	1	—	NN	NN	NN	NN	NN	
Yellow fever	—	—	—	—	—	—	—	—	

See Table I footnotes on next page.

TABLE I. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending September 11, 2010 (36th week)*

—: No reported cases. N: Not reportable. NN: Not Nationally Notifiable Cum: Cumulative year-to-date counts.
* Incidence data for reporting years 2009 and 2010 are provisional, whereas data for 2005 through 2008 are finalized.
† Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. Additional information is available at http://www.cdc.gov/ncphi/disss/nndss/phs/files/5yearweeklyaverage.pdf.
§ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table except starting in 2007 for the domestic arboviral diseases, STD data, TB data, and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/ncphi/disss/nndss/phs/infdis.htm.
¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.
** Data for *H. influenzae* (all ages, all serotypes) are available in Table II.
†† Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Updates of pediatric HIV data have been temporarily suspended until upgrading of the national HIV/AIDS surveillance data management system is completed. Data for HIV/AIDS, when available, are displayed in Table IV, which appears quarterly.
§§ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Since April 26, 2009, a total of 286 influenza-associated pediatric deaths associated with 2009 influenza A (H1N1) virus infection have been reported. Since August 30, 2009, a total of 281 influenza-associated pediatric deaths occurring during the 2009–10 influenza season have been reported. A total of 133 influenza-associated pediatric deaths occurring during the 2008-09 influenza season have been reported.
¶¶ No measles cases were reported for the current week.
*** Data for meningococcal disease (all serogroups) are available in Table II.
††† CDC discontinued reporting of individual confirmed and probable cases of 2009 pandemic influenza A (H1N1) virus infections on July 24, 2009. During 2009, three cases of novel influenza A virus infections, unrelated to the 2009 pandemic influenza A (H1N1) virus, were reported to CDC. The one case of novel influenza A virus infection reported to CDC during 2010 was identified as swine influenza A (H3N2) virus and is unrelated to pandemic influenza A (H1N1) virus. Total case count for 2009 was provided by the Influenza Division, National Center for Immunization and Respiratory Diseases (NCIRD).
§§§ In 2009, Q fever acute and chronic reporting categories were recognized as a result of revisions to the Q fever case definition. Prior to that time, case counts were not differentiated with respect to acute and chronic Q fever cases.
¶¶¶ No rubella cases were reported for the current week.
**** Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.
†††† Updated weekly from reports to the Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention.
§§§§ There was one case of viral hemorrhagic fever reported during week 12. The one case report was confirmed as lassa fever. See Table II for dengue hemorrhagic fever.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals September 11, 2010, 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.

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TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	*Chlamydia trachomatis* infection					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max		
United States	10,836	22,757	26,114	793,792	869,576	127	122	272	5,032	5,026
New England	581	740	1,396	26,889	27,981	3	8	60	309	326
Connecticut	—	221	736	6,617	7,977	—	0	54	54	38
Maine†	67	50	75	1,764	1,683	1	1	7	61	36
Massachusetts	352	396	638	13,664	13,453	—	3	10	91	134
New Hampshire	60	40	116	1,636	1,487	1	1	5	42	61
Rhode Island†	95	65	120	2,377	2,578	—	0	8	9	8
Vermont†	7	23	63	831	803	1	1	9	52	49
Mid. Atlantic	2,119	3,199	4,619	115,761	108,699	16	15	37	564	566
New Jersey	—	455	698	16,750	17,051	—	0	3	—	41
New York (Upstate)	517	674	2,530	23,435	20,955	9	3	16	149	143
New York City	1,103	1,194	2,144	43,345	40,425	—	1	5	52	65
Pennsylvania	499	890	1,091	32,231	30,268	7	9	26	363	317
E.N. Central	688	3,511	4,413	118,534	140,380	24	30	101	1,308	1,230
Illinois	11	840	1,322	24,746	42,895	—	3	15	136	116
Indiana	—	336	786	12,781	16,483	—	4	10	133	206
Michigan	431	892	1,417	33,272	32,258	—	5	15	233	196
Ohio	82	964	1,077	33,455	34,067	15	7	24	326	285
Wisconsin	164	405	494	14,280	14,677	9	10	47	480	427
W.N. Central	342	1,330	1,592	45,959	49,668	35	24	61	902	746
Iowa	4	186	293	6,753	6,823	—	4	20	218	159
Kansas	17	187	235	6,502	7,618	—	2	9	100	73
Minnesota	—	273	337	9,380	10,051	—	2	30	98	190
Missouri	181	489	606	16,811	18,128	19	4	24	253	141
Nebraska†	123	93	237	3,372	3,774	16	2	16	151	77
North Dakota	—	33	93	1,083	1,171	—	0	18	16	7
South Dakota	17	60	82	2,058	2,103	—	2	7	66	99
S. Atlantic	3,216	4,499	5,681	157,071	177,111	15	19	51	720	755
Delaware	76	85	156	2,906	3,285	—	0	2	5	6
District of Columbia	94	97	177	3,386	4,938	—	0	1	2	5
Florida	709	1,402	1,661	51,089	51,825	8	8	24	270	270
Georgia	376	395	1,323	12,198	28,470	—	5	31	216	262
Maryland†	64	454	1,031	15,735	15,644	2	1	3	29	32
North Carolina	688	797	1,562	28,993	29,392	2	1	12	55	78
South Carolina†	515	523	692	18,678	19,213	3	1	8	62	43
Virginia†	603	594	902	21,531	21,787	—	2	8	69	49
West Virginia	91	68	137	2,555	2,557	—	0	2	12	10
E.S. Central	398	1,694	2,415	60,285	66,108	—	4	15	187	152
Alabama†	233	481	665	17,626	18,950	—	1	8	80	47
Kentucky	—	290	642	10,563	9,190	—	1	6	56	40
Mississippi	—	389	780	12,622	16,928	—	0	3	10	15
Tennessee†	165	572	732	19,474	21,040	—	1	5	41	50
W.S. Central	1,669	2,857	4,578	103,173	113,874	8	8	39	254	367
Arkansas†	297	238	402	7,552	10,017	3	1	4	25	36
Louisiana	—	0	1,055	2,922	20,378	—	1	5	34	37
Oklahoma	221	261	1,376	11,051	10,154	—	1	9	61	83
Texas†	1,151	2,220	3,201	81,648	73,325	5	4	30	134	211
Mountain	375	1,432	2,081	47,495	54,226	12	10	23	372	402
Arizona	175	457	713	13,370	18,077	2	0	3	25	25
Colorado	9	380	709	12,365	12,406	5	2	8	98	106
Idaho†	4	64	191	2,184	2,563	—	2	6	63	64
Montana†	—	58	75	2,031	2,108	3	1	4	36	44
Nevada†	—	175	337	6,564	7,191	—	0	2	15	15
New Mexico†	163	172	453	5,465	6,221	—	2	8	72	103
Utah	8	117	175	4,146	4,317	2	1	4	50	30
Wyoming†	16	38	78	1,370	1,343	—	0	2	13	15
Pacific	1,448	3,439	5,350	118,625	131,529	14	12	28	416	482
Alaska	—	107	147	4,002	3,717	—	0	1	2	5
California	1,158	2,736	4,406	95,946	100,735	9	8	19	239	275
Hawaii	—	112	158	3,833	4,270	—	0	0	—	1
Oregon	—	0	468	1,367	7,592	3	2	9	115	146
Washington	290	393	497	13,477	15,215	2	1	8	60	55
Territories										
American Samoa	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	4	31	179	269	—	0	0	—	—
Puerto Rico	56	95	265	3,650	5,273	N	0	0	N	N
U.S. Virgin Islands	—	10	29	323	371	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	Dengue Virus Infection									
	Dengue Fever†					Dengue Hemorrhagic Fever§				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max		
United States	—	3	24	270	NN	—	0	1	2	NN
New England	—	0	2	4	NN	—	0	0	—	NN
Connecticut	—	0	0	—	NN	—	0	0	—	NN
Maine¶	—	0	2	3	NN	—	0	0	—	NN
Massachusetts	—	0	0	—	NN	—	0	0	—	NN
New Hampshire	—	0	0	—	NN	—	0	0	—	NN
Rhode Island¶	—	0	0	—	NN	—	0	0	—	NN
Vermont¶	—	0	1	1	NN	—	0	0	—	NN
Mid. Atlantic	—	0	9	73	NN	—	0	0	—	NN
New Jersey	—	0	0	—	NN	—	0	0	—	NN
New York (Upstate)	—	0	0	—	NN	—	0	0	—	NN
New York City	—	0	7	62	NN	—	0	0	—	NN
Pennsylvania	—	0	2	11	NN	—	0	0	—	NN
E.N. Central	—	0	2	22	NN	—	0	0	—	NN
Illinois	—	0	0	—	NN	—	0	0	—	NN
Indiana	—	0	2	7	NN	—	0	0	—	NN
Michigan	—	0	1	4	NN	—	0	0	—	NN
Ohio	—	0	2	8	NN	—	0	0	—	NN
Wisconsin	—	0	1	3	NN	—	0	0	—	NN
W.N. Central	—	0	3	14	NN	—	0	0	—	NN
Iowa	—	0	1	1	NN	—	0	0	—	NN
Kansas	—	0	0	—	NN	—	0	0	—	NN
Minnesota	—	0	2	10	NN	—	0	0	—	NN
Missouri	—	0	1	3	NN	—	0	0	—	NN
Nebraska¶	—	0	0	—	NN	—	0	0	—	NN
North Dakota	—	0	0	—	NN	—	0	0	—	NN
South Dakota	—	0	0	—	NN	—	0	0	—	NN
S. Atlantic	—	1	15	137	NN	—	0	1	1	NN
Delaware	—	0	0	—	NN	—	0	0	—	NN
District of Columbia	—	0	0	—	NN	—	0	0	—	NN
Florida	—	1	14	119	NN	—	0	1	1	NN
Georgia	—	0	2	7	NN	—	0	0	—	NN
Maryland¶	—	0	0	—	NN	—	0	0	—	NN
North Carolina	—	0	1	1	NN	—	0	0	—	NN
South Carolina¶	—	0	3	8	NN	—	0	0	—	NN
Virginia¶	—	0	0	—	NN	—	0	0	—	NN
West Virginia	—	0	1	2	NN	—	0	0	—	NN
E.S. Central	—	0	1	1	NN	—	0	0	—	NN
Alabama¶	—	0	0	—	NN	—	0	0	—	NN
Kentucky	—	0	0	—	NN	—	0	0	—	NN
Mississippi	—	0	0	—	NN	—	0	0	—	NN
Tennessee¶	—	0	1	1	NN	—	0	0	—	NN
W.S. Central	—	0	1	1	NN	—	0	1	1	NN
Arkansas¶	—	0	0	—	NN	—	0	1	1	NN
Louisiana	—	0	0	—	NN	—	0	0	—	NN
Oklahoma	—	0	1	1	NN	—	0	0	—	NN
Texas¶	—	0	0	—	NN	—	0	0	—	NN
Mountain	—	0	1	9	NN	—	0	0	—	NN
Arizona	—	0	1	2	NN	—	0	0	—	NN
Colorado	—	0	0	—	NN	—	0	0	—	NN
Idaho¶	—	0	0	—	NN	—	0	0	—	NN
Montana¶	—	0	1	2	NN	—	0	0	—	NN
Nevada¶	—	0	1	4	NN	—	0	0	—	NN
New Mexico¶	—	0	1	1	NN	—	0	0	—	NN
Utah	—	0	0	—	NN	—	0	0	—	NN
Wyoming¶	—	0	0	—	NN	—	0	0	—	NN
Pacific	—	0	2	9	NN	—	0	0	—	NN
Alaska	—	0	0	—	NN	—	0	0	—	NN
California	—	0	1	4	NN	—	0	0	—	NN
Hawaii	—	0	0	—	NN	—	0	0	—	NN
Oregon	—	0	0	—	NN	—	0	0	—	NN
Washington	—	0	2	5	NN	—	0	0	—	NN
Territories										
American Samoa	—	0	0	—	NN	—	0	0	—	NN
C.N.M.I.	—	—	—	—	NN	—	—	—	—	NN
Guam	—	0	0	—	NN	—	0	0	—	NN
Puerto Rico	—	84	481	5,798	NN	—	0	3	28	NN
U.S. Virgin Islands	—	0	0	—	NN	—	0	0	—	NN

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Dengue Fever includes cases that meet criteria for Dengue Fever with hemorrhage, other clinical, and unknown case classifications.
§ DHF includes cases that meet criteria for dengue shock syndrome (DSS), a more severe form of DHF.
¶ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	Ehrlichiosis/Anaplasmosis†														
	Ehrlichia chaffeensis					*Anaplasma phagocytophilum*					Undetermined				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	9	11	181	451	711	8	13	309	454	679	1	2	35	73	141
New England	—	0	3	3	38	—	1	17	51	202	—	0	2	7	2
Connecticut	—	0	0	—	—	—	0	13	18	2	—	0	2	5	—
Maine§	—	0	1	2	3	—	0	2	13	12	—	0	0	—	—
Massachusetts	—	0	0	—	9	—	0	4	—	82	—	0	0	—	—
New Hampshire	—	0	1	1	3	—	0	3	8	15	—	0	1	2	1
Rhode Island§	—	0	2	—	22	—	0	7	12	91	—	0	0	—	1
Vermont§	—	0	0	—	1	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	4	1	15	37	128	5	3	17	143	209	1	0	2	4	40
New Jersey	—	0	6	—	75	—	0	2	1	60	—	0	0	—	—
New York (Upstate)	4	1	15	22	35	5	3	17	139	144	1	0	1	4	4
New York City	—	0	3	14	7	—	0	1	3	4	—	0	0	—	1
Pennsylvania	—	0	5	1	11	—	0	1	—	1	—	0	1	—	35
E.N. Central	—	0	4	22	74	—	2	27	188	241	—	1	4	41	61
Illinois	—	0	2	10	32	—	0	1	1	6	—	0	2	3	3
Indiana	—	0	0	—	—	—	0	0	—	—	—	0	3	23	33
Michigan	—	0	1	1	4	—	0	0	—	—	—	0	1	2	—
Ohio	—	0	3	5	10	—	0	1	1	1	—	0	0	—	2
Wisconsin	—	0	3	6	28	—	2	27	186	234	—	0	3	13	23
W.N. Central	1	2	13	108	133	—	0	261	8	7	—	0	30	11	16
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	1	6	6	—	0	0	—	1	—	0	0	—	—
Minnesota	—	0	6	—	1	—	0	261	—	3	—	0	30	—	3
Missouri	1	1	13	101	124	—	0	3	8	2	—	0	3	11	13
Nebraska§	—	0	1	1	2	—	0	0	—	1	—	0	0	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
S. Atlantic	3	4	19	194	200	3	0	7	46	14	—	0	1	3	2
Delaware	—	0	3	16	16	—	0	1	4	2	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Florida	—	0	2	8	8	1	0	1	3	3	—	0	0	—	—
Georgia	—	0	4	15	17	—	0	1	1	1	—	0	1	1	—
Maryland§	—	0	3	18	33	—	0	2	11	3	—	0	1	2	—
North Carolina	2	1	13	75	53	1	0	4	17	3	—	0	0	—	—
South Carolina§	—	0	2	3	8	—	0	0	—	—	—	0	0	—	—
Virginia§	1	1	13	59	64	1	0	2	10	2	—	0	0	—	2
West Virginia	—	0	0	—	1	—	0	0	—	—	—	0	1	—	—
E.S. Central	1	1	10	69	106	—	0	2	16	3	—	0	2	6	20
Alabama§	—	0	3	10	6	—	0	2	7	1	—	0	0	—	—
Kentucky	—	0	2	10	9	—	0	0	—	—	—	0	0	—	—
Mississippi	—	0	1	3	6	—	0	1	1	—	—	0	0	—	—
Tennessee§	1	1	10	46	85	—	0	2	8	2	—	0	2	6	20
W.S. Central	—	0	141	17	29	—	0	23	2	1	—	0	1	1	—
Arkansas§	—	0	34	2	4	—	0	6	—	—	—	0	0	—	—
Louisiana	—	0	1	1	—	—	0	0	—	—	—	0	0	—	—
Oklahoma	—	0	105	11	23	—	0	16	2	1	—	0	0	—	—
Texas§	—	0	2	3	2	—	0	1	—	—	—	0	1	1	—
Mountain	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Arizona	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Colorado	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Nevada§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New Mexico§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Utah	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Wyoming§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	1	1	3	—	0	0	—	2	—	0	1	—	—
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
California	—	0	1	1	3	—	0	0	—	2	—	0	1	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	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 reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Cumulative total *E. ewingii* cases reported for year 2010 = 10.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive† All ages, all serotypes				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	223	341	666	11,824	12,613	2,594	5,386	6,656	185,128	211,317	11	59	171	2,022	2,101
New England	16	31	65	993	1,152	69	101	196	3,557	3,329	—	3	21	113	142
Connecticut	—	5	15	187	203	—	45	169	1,556	1,530	—	0	15	25	41
Maine§	12	4	11	145	157	1	3	11	124	95	—	0	2	9	16
Massachusetts	—	13	33	393	494	57	42	72	1,540	1,356	—	2	8	58	68
New Hampshire	—	3	9	102	144	1	3	7	105	77	—	0	2	8	7
Rhode Island§	—	1	7	35	39	10	5	13	187	241	—	0	1	7	6
Vermont§	4	4	14	131	115	—	0	17	45	30	—	0	1	6	4
Mid. Atlantic	39	61	112	2,036	2,295	467	672	941	23,844	21,613	—	11	34	398	414
New Jersey	—	6	15	192	305	—	98	151	3,552	3,311	—	2	7	58	96
New York (Upstate)	21	23	84	764	844	97	104	422	3,793	3,881	—	3	20	106	101
New York City	9	16	31	585	578	249	226	394	8,369	7,582	—	2	6	80	49
Pennsylvania	9	15	37	495	568	121	217	290	8,130	6,839	—	4	9	154	168
E.N. Central	23	52	92	1,841	1,982	179	971	1,536	32,203	44,782	2	9	20	344	328
Illinois	—	11	20	368	437	4	189	441	5,656	14,334	—	2	9	97	125
Indiana	—	6	14	191	191	—	91	216	3,578	5,335	—	1	6	65	57
Michigan	1	13	25	447	454	90	247	502	9,294	10,370	—	0	4	25	17
Ohio	19	16	28	577	553	42	315	372	10,576	11,081	2	2	6	85	76
Wisconsin	3	7	22	258	347	43	92	154	3,099	3,662	—	2	5	72	53
W.N. Central	15	26	165	987	1,148	104	273	367	9,324	10,473	2	3	24	119	119
Iowa	4	5	11	202	219	1	32	53	1,140	1,190	—	0	1	1	—
Kansas	—	4	8	151	112	2	39	83	1,336	1,805	—	0	2	12	13
Minnesota	—	0	135	136	250	—	41	64	1,298	1,622	—	0	17	25	40
Missouri	8	8	15	267	371	67	122	172	4,445	4,577	2	1	6	57	43
Nebraska§	3	4	9	159	121	31	22	50	792	948	—	0	2	15	18
North Dakota	—	0	8	16	8	—	2	11	76	88	—	0	4	9	5
South Dakota	—	1	10	56	67	3	6	16	237	243	—	0	0	—	—
S. Atlantic	44	75	143	2,594	2,468	930	1,296	1,651	45,557	52,739	6	14	27	543	575
Delaware	—	0	5	23	18	10	18	34	665	655	—	0	1	5	3
District of Columbia	—	1	4	23	46	38	38	65	1,304	1,927	—	0	1	2	2
Florida	35	39	87	1,435	1,316	255	376	466	13,778	15,052	2	3	9	130	178
Georgia	—	13	51	485	505	123	148	494	4,263	9,541	—	3	9	131	111
Maryland§	2	6	12	189	188	16	132	237	4,540	4,234	1	1	6	44	68
North Carolina	N	0	0	N	N	225	254	596	9,679	10,083	3	2	9	93	68
South Carolina§	1	3	9	104	71	159	153	230	5,625	5,961	—	2	7	65	55
Virginia§	6	8	36	312	292	93	163	271	5,355	4,920	—	2	4	57	66
West Virginia	—	0	5	23	32	11	8	20	348	366	—	0	5	16	24
E.S. Central	—	6	22	171	282	100	473	700	16,404	19,094	1	3	12	122	133
Alabama§	—	4	8	119	141	59	140	217	5,148	5,394	—	0	3	20	33
Kentucky	N	0	0	N	N	—	76	156	2,745	2,668	—	0	2	24	19
Mississippi	N	0	0	N	N	—	111	216	3,526	5,297	—	0	2	10	7
Tennessee§	—	2	18	52	141	41	148	195	4,985	5,735	1	2	10	68	74
W.S. Central	8	8	18	251	346	432	771	1,227	27,491	33,280	—	2	20	92	88
Arkansas§	5	2	9	81	96	55	73	139	2,297	3,094	—	0	3	12	15
Louisiana	1	3	9	105	138	—	0	343	910	6,625	—	0	3	17	16
Oklahoma	2	2	7	65	112	78	80	359	3,200	3,226	—	1	15	56	54
Texas§	N	0	0	N	N	299	573	962	21,084	20,335	—	0	2	7	3
Mountain	19	30	53	1,101	1,150	34	168	266	5,602	6,381	—	5	15	213	188
Arizona	2	3	7	101	142	13	57	109	1,562	2,136	—	2	10	80	61
Colorado	12	13	27	489	344	5	52	127	1,761	1,870	—	1	5	65	53
Idaho§	—	4	9	132	131	—	2	6	61	76	—	0	2	12	3
Montana§	2	2	11	75	91	—	2	6	78	53	—	0	1	2	1
Nevada§	—	1	10	65	80	—	29	94	1,177	1,256	—	0	2	5	14
New Mexico§	—	1	5	61	96	16	20	41	716	735	—	1	5	28	26
Utah	3	5	12	154	219	—	7	15	222	204	—	0	4	16	27
Wyoming§	—	1	5	24	47	—	1	4	25	51	—	0	2	5	3
Pacific	59	53	133	1,850	1,790	279	579	795	21,146	19,626	—	2	9	78	114
Alaska	—	2	7	67	73	—	23	37	859	664	—	0	2	16	13
California	29	33	61	1,167	1,180	238	482	699	17,963	16,152	—	0	4	12	39
Hawaii	2	0	4	21	14	—	13	24	475	434	—	0	2	5	26
Oregon	13	9	15	316	272	—	0	43	106	763	—	1	5	41	33
Washington	15	8	75	279	251	41	48	66	1,743	1,613	—	0	4	4	3
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	1	2	3	—	0	4	20	16	—	0	0	—	—
Puerto Rico	—	0	7	18	119	3	5	14	182	173	—	0	1	1	4
U.S. Virgin Islands	—	0	0	—	—	—	2	7	78	93	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 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).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	Hepatitis (viral, acute), by type														
	A					B					C				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	20	30	69	1,028	1,394	31	59	204	2,056	2,304	7	15	44	572	515
New England	1	2	5	70	79	—	1	5	39	40	—	1	4	24	48
Connecticut	1	0	3	22	17	—	0	2	13	11	—	0	3	17	37
Maine†	—	0	1	7	1	—	0	2	11	9	—	0	1	—	1
Massachusetts	—	1	4	34	49	—	0	2	8	16	—	0	1	7	9
New Hampshire	—	0	1	1	6	—	0	2	5	4	N	0	0	N	N
Rhode Island†	—	0	4	6	4	U	0	0	U	U	U	0	0	U	U
Vermont†	—	0	0	—	2	—	0	1	2	—	—	0	0	—	1
Mid. Atlantic	3	4	10	133	197	1	5	10	208	245	2	2	6	75	70
New Jersey	—	0	3	11	54	—	1	5	51	74	—	0	2	7	4
New York (Upstate)	1	1	3	39	35	1	1	6	38	39	2	1	4	45	34
New York City	1	1	4	47	61	—	2	4	62	48	—	0	1	—	4
Pennsylvania	1	1	6	36	47	—	1	5	57	84	—	0	3	23	28
E.N. Central	1	4	8	134	221	—	8	14	296	321	1	2	8	101	66
Illinois	—	1	3	28	103	—	2	6	61	84	—	0	1	1	4
Indiana	—	0	2	15	15	—	1	5	40	50	—	0	2	20	13
Michigan	—	1	4	41	51	—	2	6	83	99	1	1	6	66	23
Ohio	1	0	5	28	30	—	2	6	79	70	—	0	1	8	23
Wisconsin	—	0	3	22	22	—	1	3	33	18	—	0	1	6	3
W.N. Central	—	1	12	51	81	—	2	15	76	96	—	0	11	17	9
Iowa	—	0	3	5	26	—	0	2	11	26	—	0	4	1	3
Kansas	—	0	2	10	7	—	0	2	4	5	—	0	0	—	1
Minnesota	—	0	12	13	14	—	0	13	6	17	—	0	9	9	2
Missouri	—	0	2	15	14	—	1	3	44	32	—	0	1	5	—
Nebraska†	—	0	4	8	17	—	0	2	10	14	—	0	1	2	2
North Dakota	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	0	—	3	—	0	1	1	2	—	0	0	—	1
S. Atlantic	9	8	14	251	298	16	16	40	610	637	—	4	7	124	120
Delaware	—	0	1	6	3	—	0	2	19	23	U	0	0	U	U
District of Columbia	—	0	1	1	1	—	0	1	3	9	—	0	1	2	1
Florida	6	3	8	96	128	12	6	11	218	210	—	1	4	41	30
Georgia	—	1	3	28	34	—	3	7	103	106	—	0	2	6	29
Maryland†	2	0	4	20	32	—	1	6	42	55	—	0	2	18	17
North Carolina	—	0	5	41	33	—	1	15	65	82	—	1	3	33	16
South Carolina†	—	1	4	22	42	—	1	4	39	39	—	0	0	—	1
Virginia†	1	1	6	35	24	—	2	14	74	65	—	0	2	10	7
West Virginia	—	0	2	2	1	4	0	14	47	48	—	0	5	14	19
E.S. Central	—	1	3	30	31	3	7	13	238	231	2	3	7	98	67
Alabama†	—	0	1	5	7	—	1	5	43	67	—	0	2	5	5
Kentucky	—	0	2	13	7	—	2	7	82	55	1	2	5	67	40
Mississippi	—	0	1	2	8	—	1	3	24	21	U	0	0	U	U
Tennessee†	—	0	2	10	9	3	3	7	89	88	1	1	4	26	22
W.S. Central	1	2	19	81	136	6	10	109	300	397	—	1	14	51	41
Arkansas†	—	0	3	—	7	—	1	4	32	50	—	0	1	—	1
Louisiana	—	0	2	6	4	—	1	5	32	48	—	0	1	4	6
Oklahoma	—	0	3	—	3	5	1	19	66	71	—	0	12	18	10
Texas†	1	2	18	75	122	1	5	87	170	228	—	1	3	29	24
Mountain	—	3	8	110	112	—	2	8	85	100	—	1	5	35	36
Arizona	—	1	5	50	46	—	0	2	22	36	U	0	0	U	U
Colorado	—	1	3	25	38	—	0	3	19	19	—	0	2	6	23
Idaho†	—	0	2	6	3	—	0	1	6	9	—	0	2	8	2
Montana†	—	0	1	4	5	—	0	1	1	—	—	0	0	—	1
Nevada†	—	0	2	11	8	—	0	3	29	23	—	0	1	3	2
New Mexico†	—	0	1	3	7	—	0	1	3	5	—	0	2	8	5
Utah	—	0	2	8	3	—	0	1	5	4	—	0	2	10	3
Wyoming†	—	0	3	3	2	—	0	0	—	4	—	0	0	—	—
Pacific	5	5	16	168	239	5	6	20	204	237	2	1	6	47	58
Alaska	—	0	1	1	2	—	0	1	2	2	U	0	2	U	U
California	4	4	15	137	188	3	4	17	141	168	—	0	4	21	30
Hawaii	—	0	2	1	8	1	0	1	1	5	U	0	0	U	U
Oregon	—	0	2	14	10	—	1	4	30	29	—	0	3	9	15
Washington	1	0	2	15	31	1	1	4	30	33	2	0	6	17	13
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	6	14	4	—	1	6	30	48	—	0	6	25	33
Puerto Rico	—	0	1	3	20	—	0	5	10	21	—	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 reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
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† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	Legionellosis					Lyme disease					Malaria				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	41	59	111	1,995	2,274	220	425	2,336	17,759	29,225	18	24	89	904	989
New England	5	3	10	127	151	63	123	376	4,931	10,286	—	1	4	44	43
Connecticut	4	0	3	29	42	4	40	191	1,863	3,545	—	0	1	1	5
Maine†	—	0	1	7	6	58	12	76	478	609	—	0	1	5	2
Massachusetts	—	1	7	67	77	—	39	127	1,460	4,486	—	1	3	30	27
New Hampshire	—	0	3	11	10	1	21	59	859	1,125	—	0	1	2	3
Rhode Island†	—	0	3	5	10	—	0	11	36	197	—	0	1	4	3
Vermont†	1	0	2	8	6	—	4	26	235	324	—	0	1	2	3
Mid. Atlantic	16	16	44	492	835	115	180	643	8,647	12,633	3	7	14	235	286
New Jersey	—	2	11	47	157	—	43	167	2,028	4,232	—	0	4	1	74
New York (Upstate)	9	5	19	172	247	72	55	577	2,114	2,873	2	1	4	51	36
New York City	—	2	12	80	168	—	1	31	11	817	—	4	9	144	133
Pennsylvania	7	6	16	193	263	43	75	359	4,494	4,711	1	1	3	39	43
E.N. Central	2	12	33	449	483	1	21	130	1,282	2,535	—	2	9	95	140
Illinois	—	2	10	75	82	—	1	11	70	123	—	1	7	33	59
Indiana	1	2	6	69	41	—	1	7	59	71	—	0	2	7	20
Michigan	—	3	18	104	101	1	1	14	79	78	—	0	4	19	21
Ohio	1	4	12	158	200	—	0	5	21	34	—	0	5	31	31
Wisconsin	—	1	11	43	59	—	18	113	1,053	2,229	—	0	1	5	9
W.N. Central	—	2	19	80	83	—	3	1,395	91	193	2	1	11	48	44
Iowa	—	0	2	11	20	—	0	10	66	101	—	0	1	8	10
Kansas	—	0	2	6	5	—	0	1	6	17	—	0	2	7	6
Minnesota	—	0	16	23	8	—	0	1,380	—	68	—	0	11	3	13
Missouri	—	0	4	24	39	—	0	1	1	3	2	0	3	15	9
Nebraska†	—	0	2	8	9	—	0	2	9	3	—	0	2	13	5
North Dakota	—	0	1	4	1	—	0	15	8	—	—	0	1	—	—
South Dakota	—	0	1	4	1	—	0	1	1	1	—	0	2	2	1
S. Atlantic	14	11	25	366	345	36	58	157	2,537	3,254	3	6	36	245	259
Delaware	—	0	3	12	12	—	12	31	486	784	—	0	1	2	4
District of Columbia	—	0	4	12	15	—	0	4	18	46	—	0	3	7	11
Florida	2	4	10	126	112	6	2	11	63	51	2	2	7	90	69
Georgia	—	1	4	32	33	—	0	2	8	36	—	0	2	3	57
Maryland†	6	3	12	79	89	8	28	73	1,054	1,617	—	1	19	58	56
North Carolina	4	1	7	40	40	—	1	9	67	74	—	0	13	33	20
South Carolina†	—	0	2	10	6	—	1	3	26	25	—	0	1	3	3
Virginia†	2	1	6	46	32	22	14	79	733	522	1	1	5	48	37
West Virginia	—	0	3	9	6	—	0	33	82	99	—	0	2	1	2
E.S. Central	—	2	10	92	92	—	1	4	33	26	—	0	3	21	28
Alabama†	—	0	2	10	12	—	0	1	1	2	—	0	1	4	8
Kentucky	—	0	4	19	37	—	0	1	2	1	—	0	3	5	8
Mississippi	—	0	3	9	4	—	0	0	—	—	—	0	2	2	3
Tennessee†	—	1	6	54	39	—	1	4	30	23	—	0	2	10	9
W.S. Central	—	3	14	95	75	2	3	44	63	139	1	1	31	56	44
Arkansas†	—	0	2	11	5	—	0	0	—	—	—	0	1	1	3
Louisiana	—	0	3	5	7	—	0	1	1	—	—	0	1	1	5
Oklahoma	—	0	4	11	3	—	0	2	—	—	1	0	1	5	1
Texas†	—	2	10	68	60	2	3	42	62	139	—	1	30	49	35
Mountain	—	3	10	110	89	—	0	3	16	47	2	1	3	43	43
Arizona	—	1	5	35	34	—	0	1	3	4	—	0	2	19	8
Colorado	—	1	5	25	13	—	0	1	2	1	2	0	1	14	24
Idaho†	—	0	1	3	3	—	0	1	5	13	—	0	1	1	2
Montana†	—	0	1	4	5	—	0	1	1	3	—	0	1	2	5
Nevada†	—	0	2	18	11	—	0	1	—	12	—	0	1	3	—
New Mexico†	—	0	2	6	3	—	0	1	3	4	—	0	1	1	—
Utah	—	0	3	15	19	—	0	1	2	8	—	0	1	3	4
Wyoming†	—	0	2	4	1	—	0	1	—	2	—	0	0	—	—
Pacific	4	5	19	184	121	3	4	10	159	112	7	3	19	117	102
Alaska	—	0	2	2	1	—	0	1	4	5	—	0	1	2	2
California	4	3	19	157	94	2	3	8	108	70	2	2	13	81	76
Hawaii	—	0	1	1	1	N	0	0	N	N	—	0	1	1	1
Oregon	—	0	3	9	10	1	1	3	40	30	—	0	1	7	10
Washington	—	0	4	15	15	—	0	3	7	7	5	0	5	26	13
Territories															
American Samoa	—	0	0	—	—	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	1	—	1	N	0	0	N	N	—	0	1	1	4
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	Meningococcal disease, invasive† All groups					Pertussis					Rabies, animal				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	4	16	43	529	679	199	291	1,756	11,466	10,947	31	72	145	2,457	3,744
New England	—	0	2	13	24	1	7	19	269	486	3	4	24	168	243
Connecticut	—	0	2	2	3	—	1	8	70	35	—	0	22	59	101
Maine§	—	0	1	3	3	—	0	5	26	71	1	1	4	44	39
Massachusetts	—	0	1	3	12	—	4	10	135	283	—	0	0	—	—
New Hampshire	—	0	1	—	1	—	0	3	9	62	—	0	5	11	25
Rhode Island§	—	0	0	—	4	1	0	8	21	26	—	0	2	14	35
Vermont§	—	0	1	5	1	—	0	3	8	9	2	1	5	40	43
Mid. Atlantic	—	1	4	44	76	21	21	63	862	841	12	17	41	747	433
New Jersey	—	0	2	9	13	—	3	8	68	172	—	0	0	—	—
New York (Upstate)	—	0	3	9	17	11	7	27	318	139	12	9	22	379	320
New York City	—	0	2	11	13	—	0	11	44	59	—	1	12	105	13
Pennsylvania	—	0	2	15	33	10	8	39	432	471	—	5	24	263	100
E.N. Central	—	3	8	93	119	38	69	143	2,903	2,255	9	2	38	251	192
Illinois	—	0	4	17	31	—	11	28	457	505	6	1	22	153	72
Indiana	—	0	3	21	26	—	9	26	371	256	—	0	0	—	25
Michigan	—	0	2	13	18	6	23	45	814	570	1	1	5	56	55
Ohio	—	1	2	23	26	32	20	69	1,019	792	2	0	12	42	40
Wisconsin	—	0	2	19	18	—	5	12	242	132	—	0	0	—	—
W.N. Central	—	1	6	38	52	47	27	627	1,267	1,636	1	5	16	189	295
Iowa	—	0	3	8	7	—	6	24	273	164	—	0	2	7	25
Kansas	—	0	2	6	9	—	3	9	98	183	—	1	4	47	61
Minnesota	—	0	2	2	10	38	0	601	463	336	—	1	9	26	43
Missouri	—	0	3	16	18	1	8	25	245	796	—	1	6	56	52
Nebraska§	—	0	2	5	5	8	2	10	131	111	1	1	4	43	68
North Dakota	—	0	1	1	1	—	0	30	32	17	—	0	7	10	4
South Dakota	—	0	2	—	2	—	1	5	25	29	—	0	2	—	42
S. Atlantic	3	3	7	105	125	25	26	75	1,015	1,221	—	23	85	756	1,576
Delaware	—	0	1	1	2	—	0	4	9	10	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	1	4	4	—	0	0	—	—
Florida	3	1	5	48	40	11	5	28	230	399	—	0	72	72	161
Georgia	—	0	2	9	24	—	3	16	145	187	—	0	13	—	297
Maryland§	—	0	1	5	8	—	2	8	78	104	—	6	15	247	287
North Carolina	—	0	2	14	24	—	1	32	124	149	—	0	15	—	353
South Carolina§	—	0	1	9	11	10	5	19	253	199	—	0	0	—	—
Virginia§	—	0	2	17	11	3	5	15	136	145	—	10	26	384	393
West Virginia	—	0	2	2	5	1	0	7	36	24	—	1	6	53	85
E.S. Central	—	1	4	27	23	—	14	25	501	630	4	3	7	120	110
Alabama§	—	0	2	5	6	—	4	8	146	242	2	0	4	38	—
Kentucky	—	0	2	12	4	—	4	13	162	188	1	0	4	16	37
Mississippi	—	0	1	3	3	—	1	6	45	53	—	0	1	1	4
Tennessee§	—	0	2	7	10	—	4	10	148	147	1	2	4	65	69
W.S. Central	1	1	9	59	62	29	58	753	1,948	2,265	2	1	40	60	621
Arkansas§	—	0	2	5	5	1	4	29	118	265	—	0	10	20	28
Louisiana	—	0	4	12	13	—	1	4	22	129	—	0	0	—	—
Oklahoma	—	0	7	14	6	8	0	41	39	37	2	0	30	40	21
Texas§	1	0	7	28	38	20	50	681	1,769	1,834	—	0	30	—	572
Mountain	—	1	6	42	50	11	21	41	760	701	—	1	8	46	80
Arizona	—	0	2	11	12	1	6	14	240	174	—	0	5	—	—
Colorado	—	0	4	13	15	9	3	13	142	178	—	0	0	—	—
Idaho§	—	0	1	5	6	1	2	19	121	64	—	0	2	5	4
Montana§	—	0	1	1	5	—	1	8	35	25	—	0	3	12	24
Nevada§	—	0	1	8	4	—	0	7	19	19	—	0	1	4	5
New Mexico§	—	0	1	3	3	—	1	8	59	52	—	0	3	9	20
Utah	—	0	1	1	1	—	4	10	138	167	—	0	2	2	8
Wyoming§	—	0	1	—	4	—	0	1	6	22	—	0	3	14	19
Pacific	—	3	16	108	148	27	33	186	1,941	912	—	3	12	120	194
Alaska	—	0	1	1	6	—	0	6	26	34	—	0	2	11	11
California	—	1	13	70	95	2	22	162	1,414	439	—	2	12	99	172
Hawaii	—	0	1	1	5	—	0	6	29	30	—	0	0	—	—
Oregon	—	1	3	24	29	2	5	15	243	207	—	0	2	10	11
Washington	—	0	7	12	13	23	4	24	229	202	—	0	0	—	—
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	—	—	—	0	0	—	—
Puerto Rico	—	0	1	—	—	—	0	0	—	1	—	1	3	32	28
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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† Data for meningococcal disease, invasive caused by serogroups A, C, Y, and 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).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	819	889	1,602	31,078	32,576	50	80	198	3,014	3,186	148	251	527	9,058	11,374
New England	2	29	346	1,489	1,752	2	3	38	140	194	—	5	44	214	273
Connecticut	—	0	329	329	430	—	0	38	38	67	—	0	37	37	43
Maine§	2	2	7	84	95	2	0	2	14	14	—	0	2	5	3
Massachusetts	—	20	42	807	858	—	2	8	59	68	—	4	15	156	189
New Hampshire	—	3	10	124	219	—	0	2	17	25	—	0	2	6	16
Rhode Island§	—	2	17	97	97	—	0	26	2	1	—	0	3	9	17
Vermont§	—	1	5	48	53	—	0	2	10	19	—	0	1	1	5
Mid. Atlantic	59	96	174	3,636	3,899	6	8	26	348	312	17	34	61	1,156	2,176
New Jersey	—	15	39	445	843	—	1	4	36	78	—	6	17	200	473
New York (Upstate)	29	24	78	979	893	5	3	15	138	96	11	4	19	162	159
New York City	9	25	55	924	891	—	1	6	51	46	—	7	13	214	332
Pennsylvania	21	29	77	1,288	1,272	1	2	13	123	92	6	17	35	580	1,212
E.N. Central	33	80	231	3,514	3,843	4	12	35	493	563	8	25	235	1,189	2,063
Illinois	—	26	112	1,171	1,082	—	2	8	76	133	—	9	228	646	482
Indiana	—	10	53	369	458	—	1	8	67	72	—	1	5	31	56
Michigan	2	15	41	627	728	3	2	16	123	104	1	4	9	165	175
Ohio	31	24	47	974	1,054	1	2	11	112	101	7	6	23	236	933
Wisconsin	—	10	40	373	521	—	3	9	115	153	—	4	14	111	417
W.N. Central	20	45	94	1,696	1,972	4	10	39	444	560	17	48	88	1,676	682
Iowa	2	7	35	370	314	—	2	15	121	131	—	1	5	40	46
Kansas	—	7	18	300	299	—	1	6	48	47	—	4	14	184	162
Minnesota	—	4	32	178	429	—	1	14	31	147	—	0	6	14	59
Missouri	11	12	44	558	458	3	3	27	175	100	16	42	75	1,406	385
Nebraska§	7	4	13	174	280	1	1	6	51	70	1	0	4	27	23
North Dakota	—	0	39	27	35	—	0	7	—	4	—	0	5	—	3
South Dakota	—	2	6	89	157	—	0	4	18	61	—	0	2	5	4
S. Atlantic	339	267	545	8,975	8,686	8	13	30	470	462	23	40	85	1,576	1,744
Delaware	1	3	10	115	83	—	0	2	4	11	—	1	10	37	80
District of Columbia	—	2	4	52	68	—	0	1	5	2	—	0	4	20	18
Florida	168	126	277	3,785	3,676	7	4	13	161	113	10	13	49	697	312
Georgia	80	40	126	1,563	1,605	—	1	15	69	53	6	13	25	476	459
Maryland§	22	15	47	708	545	1	2	6	63	64	3	2	8	85	307
North Carolina	18	30	144	1,043	1,229	—	1	7	44	77	2	2	17	117	324
South Carolina§	33	20	76	878	624	—	0	3	16	23	2	1	5	50	94
Virginia§	17	18	68	698	698	—	2	15	94	100	—	2	15	93	144
West Virginia	—	3	16	133	158	—	0	5	14	19	—	0	2	1	6
E.S. Central	23	51	135	2,180	2,105	—	4	11	168	157	4	12	40	474	605
Alabama§	—	15	42	529	580	—	1	4	36	39	—	3	10	104	113
Kentucky	7	8	29	363	342	—	1	6	38	55	1	4	28	181	143
Mississippi	6	14	60	687	629	—	0	2	11	6	1	1	4	29	36
Tennessee§	10	14	45	601	554	—	2	8	83	57	2	4	11	160	313
W.S. Central	126	114	547	3,491	3,708	6	5	68	185	212	32	47	251	1,587	2,146
Arkansas§	38	10	36	455	413	1	1	5	40	27	—	1	9	38	238
Louisiana	1	19	45	696	768	—	0	2	11	20	—	3	10	153	146
Oklahoma	26	10	46	404	434	—	0	27	15	23	7	6	96	200	197
Texas§	61	72	477	1,936	2,093	5	3	41	119	142	25	35	144	1,196	1,565
Mountain	24	48	103	1,842	2,206	4	9	29	388	411	7	15	39	495	839
Arizona	5	18	41	602	737	—	1	5	40	47	3	8	25	259	609
Colorado	13	11	23	421	465	2	2	18	144	126	3	2	6	82	67
Idaho§	3	3	9	111	133	2	1	7	52	60	—	0	3	18	6
Montana§	—	2	7	67	84	—	0	5	28	26	—	0	1	6	11
Nevada§	—	4	20	202	190	—	0	5	23	21	—	0	7	21	49
New Mexico§	—	5	15	195	283	—	1	4	30	29	—	2	9	80	80
Utah	3	5	18	212	244	—	1	7	60	92	1	0	4	29	15
Wyoming§	—	1	9	32	70	—	0	2	11	10	—	0	2	—	2
Pacific	193	115	299	4,255	4,405	16	10	46	378	315	40	20	64	691	846
Alaska	—	1	5	61	54	—	0	1	1	1	—	0	2	1	2
California	138	84	227	3,198	3,274	7	5	35	162	167	32	16	51	567	673
Hawaii	6	4	14	120	241	—	0	4	18	4	—	0	3	11	31
Oregon	6	8	48	391	324	2	2	11	69	47	—	1	4	37	40
Washington	43	14	61	485	512	7	3	19	128	96	8	2	22	75	100
Territories															
American Samoa	—	1	1	2	—	—	0	0	—	—	—	0	1	1	3
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	4	9	—	0	0	—	—	—	0	3	1	7
Puerto Rico	—	5	39	131	369	—	0	0	—	—	—	0	1	—	10
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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† 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).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	Spotted Fever Rickettsiosis (including RMSF)†									
	Confirmed					Probable				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max		
United States	1	2	14	111	119	14	16	421	987	1,095
New England	—	0	0	—	2	—	0	1	1	9
Connecticut	—	0	0	—	—	—	0	0	—	—
Maine§	—	0	0	—	—	—	0	1	1	4
Massachusetts	—	0	0	—	1	—	0	1	—	5
New Hampshire	—	0	0	—	—	—	0	1	—	—
Rhode Island§	—	0	0	—	—	—	0	0	—	—
Vermont§	—	0	0	—	1	—	0	0	—	—
Mid. Atlantic	1	0	2	15	10	1	1	4	41	80
New Jersey	—	0	0	—	2	—	0	3	—	51
New York (Upstate)	1	0	1	2	—	1	0	3	11	11
New York City	—	0	1	1	1	—	0	4	20	6
Pennsylvania	—	0	2	12	7	—	0	1	10	12
E.N. Central	—	0	1	4	8	1	1	8	64	75
Illinois	—	0	1	2	1	—	0	5	19	45
Indiana	—	0	1	2	3	1	0	5	34	9
Michigan	—	0	1	—	3	—	0	2	3	1
Ohio	—	0	0	—	—	—	0	2	7	16
Wisconsin	—	0	0	—	1	—	0	1	1	4
W.N. Central	—	0	3	14	16	6	2	20	211	232
Iowa	—	0	0	—	1	—	0	1	3	4
Kansas	—	0	1	2	1	—	0	0	—	—
Minnesota	—	0	1	—	1	—	0	1	—	1
Missouri	—	0	3	11	6	6	2	19	203	223
Nebraska§	—	0	1	1	7	—	0	1	4	4
North Dakota	—	0	0	—	—	—	0	1	1	—
South Dakota	—	0	0	—	—	—	0	0	—	—
S. Atlantic	—	1	10	54	57	4	5	59	337	332
Delaware	—	0	1	1	—	—	0	3	15	16
District of Columbia	—	0	0	—	—	—	0	1	—	—
Florida	—	0	1	2	—	—	0	1	7	4
Georgia	—	0	6	33	46	—	0	0	—	—
Maryland§	—	0	1	2	2	—	0	4	29	32
North Carolina	—	0	3	11	6	3	1	48	186	217
South Carolina§	—	0	1	1	3	—	0	2	10	15
Virginia§	—	0	2	4	—	1	1	10	90	46
West Virginia	—	0	0	—	—	—	0	0	—	2
E.S. Central	—	0	3	14	7	2	3	28	271	225
Alabama§	—	0	1	4	3	—	1	8	51	53
Kentucky	—	0	2	6	1	—	0	0	—	—
Mississippi	—	0	0	—	—	—	0	2	7	9
Tennessee§	—	0	2	4	3	2	3	20	213	163
W.S. Central	—	0	3	1	6	—	1	408	54	119
Arkansas§	—	0	1	—	—	—	0	110	20	62
Louisiana	—	0	0	—	—	—	0	1	2	2
Oklahoma	—	0	2	—	5	—	0	287	17	39
Texas§	—	0	1	1	1	—	0	11	15	16
Mountain	—	0	2	2	12	—	0	2	7	23
Arizona	—	0	2	—	6	—	0	1	2	11
Colorado	—	0	0	—	1	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	1	2	1
Montana§	—	0	1	2	4	—	0	1	1	6
Nevada§	—	0	0	—	—	—	0	0	—	1
New Mexico§	—	0	0	—	—	—	0	1	1	1
Utah	—	0	0	—	—	—	0	1	1	1
Wyoming§	—	0	0	—	1	—	0	0	—	2
Pacific	—	0	2	7	1	—	0	1	1	—
Alaska	N	0	0	N	N	N	0	0	N	N
California	—	0	2	6	1	—	0	0	—	—
Hawaii	N	0	0	N	N	N	0	0	N	N
Oregon	—	0	1	1	—	—	0	1	1	—
Washington	—	0	0	—	—	—	0	0	—	—
Territories										
American Samoa	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	N	0	0	N	N	N	0	0	N	N
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Illnesses with similar clinical presentation that result from Spotted fever group rickettsia infections are reported as Spotted fever rickettsioses. Rocky Mountain spotted fever (RMSF) caused by *Rickettsia rickettsii*, is the most common and well-known spotted fever.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	*Streptococcus pneumoniae*,† invasive disease										Syphilis, primary and secondary				
	All ages					Age <5									
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	58	188	492	10,090	2,121	6	50	156	1,571	1,633	70	235	413	7,866	9,800
New England	—	7	99	564	38	—	1	24	74	50	2	7	22	299	227
Connecticut	—	0	92	254	—	—	0	22	24	—	—	1	10	58	43
Maine§	—	1	6	87	10	—	0	2	7	4	—	0	3	16	2
Massachusetts	—	0	5	53	3	—	1	4	35	35	2	5	14	181	159
New Hampshire	—	0	7	59	—	—	0	2	3	8	—	0	1	14	13
Rhode Island§	—	0	34	53	14	—	0	2	2	1	—	0	4	28	10
Vermont§	—	1	6	58	11	—	0	1	3	2	—	0	2	2	—
Mid. Atlantic	3	14	54	867	128	—	7	48	245	211	13	33	45	1,167	1,247
New Jersey	—	1	8	76	—	—	1	5	39	36	—	4	12	152	162
New York (Upstate)	—	3	12	114	51	—	3	19	83	93	3	2	11	97	85
New York City	1	4	25	328	8	—	1	24	83	69	9	18	31	676	768
Pennsylvania	2	6	22	349	69	—	0	5	40	13	1	7	16	242	232
E.N. Central	4	31	98	2,032	479	—	8	18	254	271	2	27	46	883	1,082
Illinois	—	1	7	70	—	—	2	5	63	42	2	12	23	313	522
Indiana	—	7	23	417	187	—	1	6	35	57	—	3	13	120	115
Michigan	1	7	27	480	20	—	2	6	57	50	—	3	12	146	171
Ohio	2	14	49	837	272	—	2	6	68	93	—	8	13	276	239
Wisconsin	1	5	22	228	—	—	1	4	31	29	—	1	3	28	35
W.N. Central	—	8	182	584	139	—	2	12	104	134	2	5	12	206	222
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	9	17
Kansas	—	1	7	72	47	—	0	2	11	15	—	0	3	11	22
Minnesota	—	0	179	287	34	—	0	10	44	60	—	1	9	78	50
Missouri	—	2	9	81	49	—	0	3	28	37	1	3	8	102	125
Nebraska§	—	1	7	91	—	—	0	2	12	10	1	0	1	6	5
North Dakota	—	0	11	39	7	—	0	1	2	4	—	0	1	—	3
South Dakota	—	0	3	14	2	—	0	2	7	8	—	0	0	—	—
S. Atlantic	20	40	144	2,356	958	—	12	28	392	389	19	56	218	1,895	2,349
Delaware	—	0	3	27	15	—	0	2	—	—	—	0	2	4	23
District of Columbia	—	0	4	21	17	—	0	2	7	3	2	2	8	94	128
Florida	11	18	89	1,084	561	—	3	18	146	140	1	19	32	673	729
Georgia	6	10	28	388	275	—	4	12	105	99	3	11	167	371	558
Maryland§	2	5	25	341	4	—	1	6	39	60	3	6	11	191	203
North Carolina	—	0	0	—	—	—	0	0	—	—	7	7	31	259	390
South Carolina§	1	5	25	365	—	—	1	4	40	35	2	2	7	102	89
Virginia§	—	0	4	41	—	—	1	4	39	34	1	4	22	198	225
West Virginia	—	1	21	89	86	—	0	4	16	18	—	0	2	3	4
E.S. Central	6	17	50	882	204	1	2	8	84	104	—	18	39	617	812
Alabama§	—	0	0	—	—	—	0	0	—	—	—	5	12	164	319
Kentucky	—	2	16	132	55	—	0	2	10	7	—	2	13	90	47
Mississippi	—	1	6	41	36	—	0	2	8	18	—	5	17	148	152
Tennessee§	6	12	44	709	113	1	2	7	66	79	—	6	17	215	294
W.S. Central	16	17	90	1,299	88	3	6	41	209	243	21	34	71	1,076	1,983
Arkansas§	3	2	9	122	41	—	0	3	11	32	4	3	14	111	163
Louisiana	—	1	8	58	47	—	0	3	18	19	—	0	23	64	577
Oklahoma	—	0	5	36	—	—	1	5	36	43	—	1	6	52	61
Texas§	13	13	82	1,083	—	3	3	34	144	149	17	25	42	849	1,182
Mountain	6	20	82	1,289	84	2	5	12	181	207	2	9	20	304	375
Arizona	2	7	51	598	—	1	2	7	78	93	—	3	7	92	178
Colorado	4	6	20	380	—	1	1	4	51	30	—	2	5	76	69
Idaho§	—	0	2	11	—	—	0	2	5	7	—	0	1	2	3
Montana§	—	0	2	13	—	—	0	1	1	—	—	0	1	1	—
Nevada§	—	1	4	54	34	—	0	1	5	7	—	1	10	70	64
New Mexico§	—	2	9	114	—	—	0	4	14	24	2	1	4	32	37
Utah	—	2	9	110	41	—	1	4	24	45	—	1	4	31	21
Wyoming§	—	0	1	9	9	—	0	1	3	1	—	0	0	—	3
Pacific	3	4	14	217	3	—	0	7	28	24	9	39	60	1,419	1,503
Alaska	—	1	9	83	—	—	0	5	18	15	—	0	1	1	—
California	3	2	12	134	—	—	0	2	10	—	4	36	55	1,250	1,334
Hawaii	—	0	0	—	3	—	0	1	—	9	—	0	3	25	25
Oregon	—	0	0	—	—	—	0	0	—	—	—	0	5	6	41
Washington	—	0	0	—	—	—	0	0	—	—	5	3	10	137	103
Territories															
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	3	4	16	161	160
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 reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Includes drug resistant and susceptible cases of invasive *Streptococcus pneumoniae* disease among children <5 years and among all ages. Case definition: Isolation of *S. pneumoniae* from a normally sterile body site (e.g., blood or cerebrospinal fluid).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 11, 2010, and September 12, 2009 (36th week)*

Reporting area	Varicella (chickenpox)§					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive¶				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	102	326	547	9,903	15,212	—	0	41	217	325	—	1	26	164	288
New England	4	15	36	469	754	—	0	3	8	—	—	0	2	2	—
Connecticut	3	6	20	220	364	—	0	2	5	—	—	0	2	2	—
Maine§	—	3	15	130	139	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	1	—	3	—	0	2	3	—	—	0	0	—	—
New Hampshire	—	2	8	88	147	—	0	0	—	—	—	0	0	—	—
Rhode Island§	1	1	12	19	25	—	0	0	—	—	—	0	0	—	—
Vermont§	—	0	10	12	76	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	11	33	66	1,107	1,477	—	0	12	52	5	—	0	4	18	1
New Jersey	—	9	30	394	307	—	0	2	6	3	—	0	1	1	—
New York (Upstate)	N	0	0	N	N	—	0	7	26	1	—	0	4	12	1
New York City	—	0	0	—	—	—	0	4	19	1	—	0	4	5	—
Pennsylvania	11	22	52	713	1,170	—	0	1	1	—	—	0	0	—	—
E.N. Central	21	108	176	3,288	4,726	—	0	5	11	8	—	0	3	6	4
Illinois	3	26	49	851	1,137	—	0	1	1	5	—	0	0	—	—
Indiana§	—	5	35	303	352	—	0	0	—	2	—	0	2	3	2
Michigan	6	35	62	999	1,344	—	0	4	9	—	—	0	1	1	—
Ohio	11	28	56	910	1,448	—	0	1	1	—	—	0	1	1	2
Wisconsin	1	7	21	225	445	—	0	0	—	1	—	0	1	1	—
W.N. Central	1	15	40	536	1,004	—	0	7	19	23	—	0	7	37	61
Iowa	N	0	0	N	N	—	0	1	1	—	—	0	1	1	5
Kansas§	1	6	22	207	423	—	0	0	—	4	—	0	2	5	7
Minnesota	—	0	0	—	—	—	0	1	3	1	—	0	1	—	1
Missouri	—	7	23	277	483	—	0	1	3	3	—	0	1	—	—
Nebraska§	N	0	0	N	N	—	0	3	7	9	—	0	3	12	34
North Dakota	—	0	26	31	57	—	0	2	2	—	—	0	1	5	1
South Dakota	—	0	7	21	41	—	0	1	3	6	—	0	3	14	13
S. Atlantic	37	37	99	1,524	1,907	—	0	3	11	13	—	0	1	4	2
Delaware§	—	0	4	17	11	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	4	15	26	—	0	0	—	2	—	0	0	—	—
Florida§	19	15	57	756	936	—	0	2	3	1	—	0	0	—	1
Georgia	N	0	0	N	N	—	0	1	3	3	—	0	1	3	—
Maryland§	N	0	0	N	N	—	0	2	5	—	—	0	1	1	1
North Carolina	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
South Carolina§	—	0	35	75	93	—	0	0	—	3	—	0	0	—	—
Virginia§	1	11	34	338	525	—	0	1	—	4	—	0	0	—	—
West Virginia	17	8	26	323	316	—	0	0	—	—	—	0	0	—	—
E.S. Central	4	6	28	209	401	—	0	5	3	29	—	0	3	5	21
Alabama§	4	6	27	202	398	—	0	1	1	—	—	0	1	2	—
Kentucky	N	0	0	N	N	—	0	1	—	2	—	0	0	—	—
Mississippi	—	0	2	7	3	—	0	3	2	25	—	0	2	3	17
Tennessee§	N	0	0	N	N	—	0	2	—	2	—	0	1	—	4
W.S. Central	18	56	285	1,989	3,844	—	0	9	28	104	—	0	3	11	30
Arkansas§	—	3	32	122	390	—	0	3	3	6	—	0	0	—	—
Louisiana	—	1	5	40	109	—	0	2	6	9	—	0	1	6	9
Oklahoma	N	0	0	N	N	—	0	2	—	5	—	0	0	—	2
Texas§	18	48	272	1,827	3,345	—	0	8	19	84	—	0	2	5	19
Mountain	6	22	37	744	1,013	—	0	10	64	73	—	0	10	64	112
Arizona	—	0	0	—	—	—	0	10	50	12	—	0	9	32	5
Colorado§	3	8	20	296	386	—	0	4	10	32	—	0	6	27	61
Idaho§	N	0	0	N	N	—	0	0	—	9	—	0	4	—	27
Montana§	2	3	17	157	123	—	0	0	—	2	—	0	1	—	3
Nevada§	N	0	0	N	N	—	0	0	—	7	—	0	0	—	5
New Mexico§	—	2	8	81	96	—	0	1	3	6	—	0	2	3	2
Utah	1	6	22	197	408	—	0	1	—	1	—	0	0	—	1
Wyoming§	—	0	3	13	—	—	0	1	1	4	—	0	1	2	8
Pacific	—	1	5	37	86	—	0	10	21	70	—	0	4	17	57
Alaska	—	0	5	30	52	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	8	21	45	—	0	4	17	36
Hawaii	—	0	2	7	34	—	0	0	—	—	—	0	0	—	—
Oregon	N	0	0	N	N	—	0	0	—	1	—	0	1	—	9
Washington	N	0	0	N	N	—	0	2	—	24	—	0	0	—	12
Territories															
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	3	12	17	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	5	30	188	406	—	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 reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).
¶ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table, except starting 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/ncphi/disss/nndss/phs/infdis.htm.

TABLE III. Deaths in 122 U.S. cities,* week ending September 11, 2010 (36th week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	468	336	85	27	11	6	45
Boston, MA	140	93	28	11	6	2	18
Bridgeport, CT	36	29	6	1	—	—	2
Cambridge, MA	16	12	4	—	—	—	—
Fall River, MA	23	18	3	2	—	—	1
Hartford, CT	37	29	6	1	1	—	3
Lowell, MA	29	22	4	1	2	—	3
Lynn, MA	8	6	2	—	—	—	1
New Bedford, MA	13	7	4	2	—	—	1
New Haven, CT	27	20	4	3	—	—	3
Providence, RI	53	40	7	2	—	1	3
Somerville, MA	4	1	1	2	—	—	—
Springfield, MA	28	20	3	2	1	2	2
Waterbury, CT	17	11	5	—	1	—	3
Worcester, MA	37	28	8	—	—	1	5
Mid. Atlantic	1,601	1,068	391	77	31	34	75
Albany, NY	37	22	9	2	1	3	—
Allentown, PA	15	9	5	—	—	1	—
Buffalo, NY	79	58	15	3	1	2	4
Camden, NJ	23	13	9	—	1	—	1
Elizabeth, NJ	17	13	4	—	—	—	2
Erie, PA	46	33	6	5	2	—	4
Jersey City, NJ	18	10	7	—	1	—	2
New York City, NY	869	598	212	34	16	9	36
Newark, NJ	26	10	12	2	1	1	1
Paterson, NJ	15	6	2	1	—	6	1
Philadelphia, PA	191	99	57	19	5	11	4
Pittsburgh, PA§	37	22	10	4	1	—	5
Reading, PA	30	22	4	4	—	—	6
Rochester, NY	40	22	15	1	1	1	3
Schenectady, NY	13	12	1	—	—	—	—
Scranton, PA	24	21	3	—	—	—	1
Syracuse, NY	63	52	10	—	1	—	4
Trenton, NJ	28	21	6	1	—	—	—
Utica, NY	15	13	1	1	—	—	1
Yonkers, NY	15	12	3	—	—	—	—
E.N. Central	1,697	1,111	414	115	29	27	88
Akron, OH	45	24	16	4	1	—	4
Canton, OH	35	17	14	2	1	1	4
Chicago, IL	220	136	47	30	6	1	13
Cincinnati, OH	66	44	17	3	—	2	7
Cleveland, OH	194	122	51	12	4	5	4
Columbus, OH	126	83	31	6	3	3	6
Dayton, OH	94	66	23	3	—	2	9
Detroit, MI	147	71	53	16	4	2	3
Evansville, IN	41	28	13	—	—	—	4
Fort Wayne, IN	59	43	13	2	1	—	2
Gary, IN	15	10	4	1	—	—	2
Grand Rapids, MI	38	29	6	2	—	1	3
Indianapolis, IN	190	127	50	6	3	4	7
Lansing, MI	52	34	13	3	1	1	4
Milwaukee, WI	81	58	15	5	2	1	5
Peoria, IL	46	36	6	3	—	1	—
Rockford, IL	61	44	12	5	—	—	1
South Bend, IN	44	28	7	6	2	1	3
Toledo, OH	77	56	13	6	1	1	3
Youngstown, OH	66	55	10	—	—	1	4
W.N. Central	634	403	171	29	18	13	26
Des Moines, IA	54	41	11	2	—	—	2
Duluth, MN	23	13	9	1	—	—	—
Kansas City, KS	69	39	22	5	3	—	1
Kansas City, MO	59	39	12	4	2	2	3
Lincoln, NE	51	38	8	2	3	—	—
Minneapolis, MN	58	32	18	1	4	3	3
Omaha, NE	55	38	12	2	2	1	7
St. Louis, MO	37	17	14	3	—	3	1
St. Paul, MN	42	30	11	—	—	1	6
Wichita, KS	186	116	54	9	4	3	3
S. Atlantic	1,083	687	281	65	28	22	61
Atlanta, GA	122	81	27	9	4	1	5
Baltimore, MD	119	61	43	8	4	3	12
Charlotte, NC	118	76	30	5	1	6	7
Jacksonville, FL	140	87	42	9	2	—	6
Miami, FL	159	106	34	11	5	3	7
Norfolk, VA	40	30	10	—	—	—	2
Richmond, VA	44	27	10	2	—	5	2
Savannah, GA	38	27	7	2	1	1	4
St. Petersburg, FL	42	25	10	4	2	1	1
Tampa, FL	164	110	42	4	6	2	8
Washington, D.C.	89	51	25	10	3	—	6
Wilmington, DE	8	6	1	1	—	—	1
E.S. Central	687	450	182	32	13	10	45
Birmingham, AL	141	82	50	4	2	3	7
Chattanooga, TN	78	62	14	2	—	—	5
Knoxville, TN	76	46	24	3	2	1	3
Lexington, KY	33	22	9	—	—	2	1
Memphis, TN	122	74	34	10	3	1	12
Mobile, AL	73	60	9	2	2	—	4
Montgomery, AL	34	23	9	1	1	—	4
Nashville, TN	130	81	33	10	3	3	9
W.S. Central	1,223	771	286	94	46	23	53
Austin, TX	90	50	24	10	1	5	3
Baton Rouge, LA	75	47	14	4	8	2	—
Corpus Christi, TX	46	36	7	2	—	1	3
Dallas, TX	162	97	41	14	7	3	3
El Paso, TX	92	62	21	5	4	—	2
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	316	189	83	30	8	3	14
Little Rock, AR	38	25	8	3	1	1	—
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	218	153	41	16	5	3	20
Shreveport, LA	74	41	18	6	7	2	—
Tulsa, OK	112	71	29	4	5	3	8
Mountain	915	586	217	67	21	23	51
Albuquerque, NM	94	60	29	2	1	2	9
Boise, ID	42	32	5	5	—	—	2
Colorado Springs, CO	77	44	25	6	1	1	1
Denver, CO	62	37	17	4	1	3	2
Las Vegas, NV	242	144	64	23	6	4	18
Ogden, UT	36	29	5	2	—	—	1
Phoenix, AZ	152	85	35	16	6	10	8
Pueblo, CO	32	24	7	—	1	—	1
Salt Lake City, UT	115	80	21	8	4	2	4
Tucson, AZ	63	51	9	1	1	1	5
Pacific	1,349	916	281	79	34	38	128
Berkeley, CA	18	11	4	—	—	3	1
Fresno, CA	104	68	24	5	4	3	12
Glendale, CA	39	33	6	—	—	—	6
Honolulu, HI	41	31	3	5	—	2	4
Long Beach, CA	62	35	17	3	3	4	6
Los Angeles, CA	178	110	44	14	8	2	18
Pasadena, CA	20	15	4	1	—	—	2
Portland, OR	85	61	14	8	1	1	7
Sacramento, CA	160	105	34	13	5	3	13
San Diego, CA	133	83	26	9	2	13	15
San Francisco, CA	109	75	23	5	3	2	14
San Jose, CA	149	110	36	2	—	1	12
Santa Cruz, CA	18	16	1	1	—	—	2
Seattle, WA	89	62	20	5	1	1	7
Spokane, WA	50	38	5	2	3	2	6
Tacoma, WA	94	63	20	6	4	1	3
Total¶	**9,657**	**6,328**	**2,308**	**585**	**231**	**196**	**572**

U: Unavailable. —: No reported cases.

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

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

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