Centers for Disease Control and Prevention

MMWR Morbidity and Mortality Weekly Report

Weekly / Vol. 59 / No. 31 August 13, 2010

Surveillance for Foodborne Disease Outbreaks — United States, 2007

Foodborne agents cause an estimated 76 million illnesses annually in the United States (*1*). Outbreak surveillance provides insights into the causes of foodborne illness, types of implicated foods, and settings of foodborne infections that can be used in food safety strategies to prevent and control foodborne disease. CDC collects data on foodborne disease outbreaks submitted from all states and territories. This report summarizes epidemiologic data for the 1,097 reported outbreaks occurring during 2007 (the most recent finalized data), which resulted in 21,244 cases of foodborne illness and 18 deaths. Among the 497 foodborne outbreaks with a laboratory-confirmed single etiologic agent reported, norovirus was the most common cause, followed by *Salmonella*. Among the 18 reported deaths, 11 were attributed to bacterial etiologies (five *Salmonella*, three *Listeria monocytogenes,* two *Escherichia coli* O157:H7, and one *Clostridium botulinum*), two to viral etiologies (norovirus), and one to a chemical (mushroom toxin). Four deaths occurred in outbreaks with unknown etiologies. Among the 235 outbreaks attributed to a single food commodity, poultry (17%), beef (16%), and leafy vegetables (14%) were most often the cause of illness. Public health, regulatory, and agricultural professionals can use this information when creating targeted control strategies and to support efforts to promote safe food preparation practices among food employees and the public.

A foodborne disease outbreak is defined as the occurrence of two or more similar illnesses resulting from ingestion of a common food. State, local, and territorial health departments use a standard, Internet-based form to voluntarily submit reports of foodborne outbreaks to the Foodborne Disease Outbreak Surveillance System, and a toolkit for investigation and reporting of outbreaks is used to guide reporting officials.*

This report includes outbreaks occurring in 2007 and reported to CDC by May 3, 2010. Population-based rates of reported outbreaks were calculated for each state using U.S. Census estimates of the 2007 state populations.† Reported outbreak data include the number of illnesses, hospitalizations, and deaths associated with each outbreak; the etiologic agent, either confirmed or suspected§; and the implicated food vehicle. CDC classifies implicated foods into the following 17 food commodities: finfish, crustaceans, mollusks, dairy, eggs, beef, game, pork, poultry, grains-beans, oils-sugars, fruits-nuts, fungi, leafy vegetables, root vegetables, sprouts, and vegetables from a vine or stalk (*2*). Outbreaks in which the reported food vehicle contained ingredients from only one commodity were assigned to that commodity; those in which the reported food vehicle contained ingredients from more than one commodity, could not be grouped in one of the 17 commodities (e.g., coffee, alcohol), or contained insufficient information for commodity assignment were not attributed to any commodity.

Public health officials from 48 states, Puerto Rico, and the District of Columbia reported 1,097 foodborne disease outbreaks; multistate outbreaks involving two additional states (Montana and Nevada) were reported indirectly (Figure). The

* The reporting form is available via the National Outbreak Reporting System at http://www.cdc.gov/outbreaknet/nors; the toolkit is available at http://www.cdc.gov/outbreaknet/references_resources.

† US Census Bureau. Population, population change and estimated components of population change: April 1, 2000 to July 1, 2008. Available at http://www.census.gov/popest/datasets.html.

§ Available at http://www.cdc.gov/outbreaknet/references_resources/guide_confirming_diagnosis.html.

INSIDE

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
www.cdc.gov/mmwr

number of foodborne disease outbreaks (1,097) reported to CDC in 2007 was 8% lower than the annual average (1,193) reported for 2002–2006, and the number of outbreak-related illnesses (21,244 versus 25,079) was 15% lower. The number of outbreaks reported by each state or territory during 2007 varied from 0 to 149 (median: 0.30 outbreaks per 100,000 population; range: 0.03–1.90). A confirmed or suspected single etiologic agent was identified in 698 (64%) outbreaks (497 confirmed, 201 suspected), resulting in 15,477 (73%) illnesses (Table 1). Among the 363 outbreaks with an unknown etiology (5,122 illnesses), 257 outbreaks (71%) with 3,904 illnesses (76%) also had an unknown food vehicle. Outbreaks in which few persons became ill were more likely to have an unknown etiology. Among the 146 outbreaks in which no more than two persons became ill, 51% had no confirmed or suspected etiology. In contrast, no confirmed or suspected etiology was identified for 40% of 346 outbreaks involving three to seven illnesses, 30% of the 89 outbreaks involving eight or nine illnesses, and 24% of the 519 outbreaks involving 10 or more illnesses. The most common reasons reported for not identifying an etiology or food vehicle were 1) delayed reporting of illnesses to the health department, 2) too many food items were consumed by ill persons to identify a single food as the contaminated vehicle, and 3) human or food sample test results were unavailable, either because samples could not be obtained or because tests were negative for the pathogens evaluated.

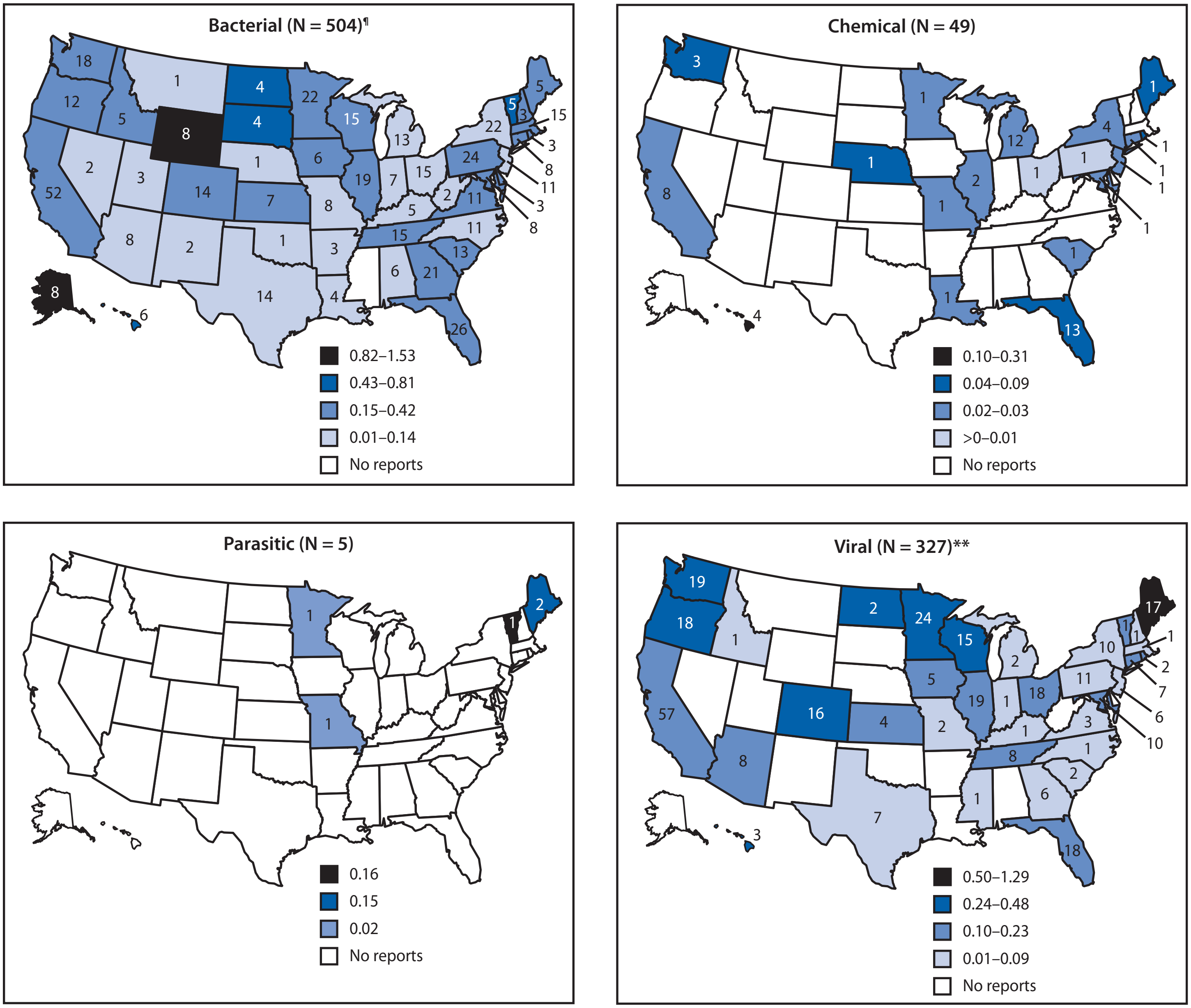
Among the 497 outbreaks (12,767 illnesses) with a confirmed single etiologic agent, bacteria caused 259 (52%) outbreaks with 6,441 (50%) illnesses, viruses caused 199 (40%) outbreaks with 6,120 (48%) illnesses, chemical agents caused 34 (7%) outbreaks with 141 (1%) illnesses, and parasites caused five (1%) outbreaks with 65 (1%) illnesses. Norovirus was the most common cause of illness, accounting for 193 (39%) of the confirmed single-etiology outbreaks and 97% of those caused by viruses. *Salmonella* was the second most common, causing 136 (27%) confirmed single-etiology outbreaks and 53% of those attributed to bacteria. Among *Salmonella* serotypes identified, Enteritidis was the most common, causing 28 confirmed single-etiology outbreaks with 555 illnesses. Shiga toxin-producing *E. coli* (STEC) caused 40 of the confirmed single-etiology outbreaks (15% of those attributed to bacteria), of which 39 were caused by serogroup O157.

Among the 18 multistate foodborne disease outbreaks (i.e., outbreaks in which exposure to the

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

Suggested citation: Centers for Disease Control and Prevention. [Article title]. MMWR 2010;59:[inclusive page numbers].

FIGURE. Rate of reported foodborne disease outbreaks per 100,000 standard population* and number of outbreaks,† by state and major etiology group§ — United States, 2007



* Cutpoints for outbreak rate categories determined using Jenks Natural Breaks Optimization in ArcGIS.
† Number of reported outbreaks in each state.
§ Analysis restricted to outbreaks attributed to a single confirmed or suspected etiology. Note that legend differs for each etiology.
¶ Includes 17 multistate outbreaks, which are assigned as an outbreak to each state involved. An outbreak in Puerto Rico is not shown.
** Includes one multistate outbreak, which is assigned as an outbreak to each state involved.

etiologic agent or agents occurred in more than one state), 10 were attributed to *Salmonella*, six to *E. coli* O157:H7, one to *C. botulinum*, and one to norovirus. Foods associated with multistate *Salmonella* outbreaks included commercially-processed frozen pot pies (401 illnesses, three deaths), commercially-processed vegetable snacks (87 illnesses), eggs (81 illnesses), spinach/lettuce (76 illnesses), beefsteak tomatoes (65 illnesses), raw tuna (44 illnesses), ground beef (43 illnesses), cheese (20 illnesses), alfalfa sprouts (15 illnesses), and raw fresh basil (11 illnesses). Of the six multistate outbreaks of *E. coli* O157:H7 infection, the vehicle for five was ground beef (117 illnesses) and the vehicle for one was commercially-processed frozen pepperoni pizzas (27 illnesses). The vehicle for the *C. botulinum* toxin outbreak (eight illnesses)

TABLE 1. Number and percentage of reported foodborne outbreaks and outbreak-associated illnesses, by etiology* — United States, 2007,[†] and 2002–2006 mean annual totals

	Outbreaks						Illnesses					
	2007				2002–2006		2007				2002–2006	
			Total		Mean annual total				Total		Mean annual total	
Etiology	**Confirmed etiology**	**Suspected etiology**	**No.**	**(%)**	**No.**	**(%)**	**Confirmed etiology**	**Suspected etiology**	**No.**	**(%)**	**No.**	**(%)**
Bacterial												
Salmonella[§]	136	6	142	(20)	144	(11)	3,465	50	3,515	(23)	3,475	(12)
Clostridium perfringens	31	14	45	(6)	34	(4)	1,304	302	1,606	(10)	2,062	(7)
Staphylococcus enterotoxin[¶]	11	10	21	(3)	25	(4)	242	44	286	(2)	554	(2)
Escherichia coli, Shiga toxin-producing (STEC)**	40	2	42	(6)	28	(2)	593	10	603	(4)	375	(1)
Campylobacter[††]	21	6	27	(4)	22	(2)	346	26	372	(2)	624	(2)
Bacillus cereus	4	15	19	(3)	10	(2)	67	97	164	(1)	130	(0)
Shigella[§§]	10	1	11	(2)	12	(1)	338	17	355	(2)	495	(2)
Vibrio parahaemolyticus	—	1	1	(0)	5	(1)	—	5	5	(0)	114	(0)
Listeria[¶¶]	1	—	1	(0)	2	(0)	5	—	5	(0)	22	(0)
Clostridium botulinum	3	1	4	(1)	3	(0)	12	4	16	(0)	11	(0)
Brucella spp	1	—	1	(0)	0	(0)	3	—	3	(0)	1	(0)
Escherichia coli, enterotoxigenic	1	1	2	(0)	2	(0)	66	76	142	(1)	106	(0)
Yersinia enterocolitica	—	—	—	(0)	2	(0)	—	—	—	(0)	5	(0)
Other bacterial	—	4	4	(1)	10	(1)	—	43	43	(0)	122	(0)
Total	**259**	**61**	**320**	**(46)**	**299**	**(41)**	**6,441**	**674**	**7,115**	**(46)**	**8,098**	**(28)**
Chemical												
Scombroid toxin/Histamine	17	3	20	(3)	36	(3)	48	26	74	(0)	131	(0)
Ciguatoxin	14	—	14	(2)	17	(1)	84	—	84	(0)	51	(0)
Mycotoxins	—	3	3	(0)	2	(0)	—	10	10	(0)	17	(0)
Neurotoxic shellfish poison	—	1	1	(0)	1	(0)	—	3	3	(0)	4	(0)
Puffer fish tetrodotoxin	1	—	1	(0)	0	(0)	2	—	2	(0)	0	(0)
Heavy metals	1	—	1	(0)	1	(0)	3	—	3	(0)	4	(0)
Paralytic shellfish poison	1	—	1	(0)	1	(0)	4	—	4	(0)	6	(0)
Other natural toxins	—	3	3	(0)	1	(0)	—	12	12	(0)	2	(0)
Other chemical	—	5	5	(1)	8	(1)	—	18	18	(0)	177	(1)
Total	**34**	**15**	**49**	**(7)**	**67**	**(9)**	**141**	**69**	**210**	**(1)**	**396**	**(1)**
Parasitic												
Cryptosporidium	3	—	3	(0)	2	(0)	14	—	14	(0)	45	(0)
Cyclospora	—	—	—	(0)	3	(0)	—	—	—	(0)	194	(1)
Giardia	2	—	2	(0)	2	(0)	51	—	51	(0)	34	(0)
Trichinella	—	—	—	(0)	1	(0)	—	—	—	(0)	2	(0)
Other parasitic	—	—	—	(0)	0	(0)	—	—	—	(0)	4	(0)
Total	**5**	**—**	**5**	**(1)**	**9**	**(1)**	**65**	**—**	**65**	**(0)**	**279**	**(1)**
Viral												
Norovirus	193	124	317	(45)	338	(33)	6,059	1,965	8,024	(52)	10,854	(37)
Hepatitis A	4	—	4	(1)	7	(1)	28	—	28	(0)	238	(1)
Rotavirus	1	1	2	(0)	0	(0)	16	2	18	(0)	15	(0)
Other Viral	1	—	1	(0)	2	(0)	17	—	17	(0)	133	(0)
Total	**199**	**125**	**324**	**(46)**	**348**	**(48)**	**6,120**	**1,967**	**8,087**	**(52)**	**11,243**	**(39)**
Single etiology (subtotal)	**497**	**201**	**698**	**(64)**	**796**	**(67)**	**12,767**	**2,710**	**15,477**	**(73)**	**20,018**	**(3)**
Unknown etiology***	**—**	**—**	**363**	**(33)**	**355**	**(30)**	**—**	**—**	**5,122**	**(24)**	**4,052**	**(14)**
Multiple etiologies	**12**	**24**	**36**	**(3)**	**42**	**(4)**	**402**	**243**	**645**	**(3)**	**1,009**	**(5)**
Total	**509**	**225**	**1,097**	**(100)**	**1,193**	**(100)**	**13,169**	**2,953**	**21,244**	**(100)**	**25,079**	**(100)**

* If all reported etiologies were laboratory-confirmed, the outbreak was considered to have a "confirmed etiology." If at least one etiology was not laboratory-confirmed, but an etiology was reported based on clinical or epidemiologic features, the outbreak was considered to have a "suspected etiology."

† As of May 3, 2010.

§ *Salmonella* serotypes accounting for more than five reported outbreaks include Enteriditis (30 outbreaks), Typhimurium (20), Newport (17), and Heidelberg (nine), and Montevideo (nine).

¶ *Staphylococcus aureus* (11 confirmed outbreaks, nine suspected outbreaks) and *Staphylococcus* unknown (one suspected outbreak).

** STEC O157:H7 (36 confirmed outbreaks, two suspected outbreaks), STEC O157:NM(H-) (three confirmed outbreaks), and STEC O111 (one confirmed outbreak).

†† *Campylobacter jejuni* (14 confirmed outbreaks, three suspected outbreaks) and *Campylobacter* unknown (seven confirmed outbreaks, three suspected outbreaks).

§§ *Shigella sonnei* (nine confirmed outbreaks, one suspected outbreak) and *Shigella* unknown (one confirmed outbreak).

¶¶ *Listeria monocytogenes* (one confirmed outbreak).

*** An etiologic agent was not confirmed or suspected based on clinical, laboratory, or epidemiologic information.

was commercially canned hotdog chili sauce. The one multistate outbreak caused by norovirus was associated with raw oysters (40 illnesses).

A food vehicle was identified in 470 (43%) outbreaks associated with 9,818 illnesses, of which 235 (50%) with 4,119 (42%) illnesses were linked to a food vehicle with ingredients limited to only one of the 17 commodities (Table 2). The commodities most commonly implicated in outbreaks were finfish (41 outbreaks), poultry (40 outbreaks), and beef (33 outbreaks); the commodities associated with the most illnesses were poultry (691 illnesses), beef (667 illnesses), and leafy vegetables (590 illnesses). The pathogen-commodity pairs responsible for the most outbreak-related illnesses were norovirus in leafy vegetables (315 illnesses), *E. coli* O157:H7 in beef (298 illnesses), and *Clostridium perfringens* in poultry (281 illnesses).¶

Two of the three largest reported outbreaks in 2007 were caused by *Salmonella.* The vehicles were hummus (802 illnesses) and commercially-processed frozen pot pies (401 illnesses and three deaths). The second largest outbreak was caused by norovirus at a conference hotel (526 illnesses); several shared food items were the suspected vehicles. The largest outbreaks assigned to a single food commodity were caused be a chicken dish contaminated with *C. perfringens* (132 illnesses), leafy vegetable salad contaminated with norovirus (128 illnesses), chili beans contaminated with *C. perfringens* (125 illnesses), and beef contaminated with *E. coli* O157:H7 (124 illnesses).

Reported by

A Boore, PhD, KM Herman, MSPH, AS Perez, MPH, CC Chen, MPH, DJ Cole, DVM, PhD, BE Mahon, MD, PM Griffin, MD, IT Williams, PhD, Enteric Diseases Epidemiology Br, Div of Foodborne, Waterborne, and Environmental Diseases, National Center for Emerging and Zoonotic Infectious Diseases; AJ Hall, DVM, Epidemiology Br, Div of Viral Diseases, National Center for Immunization and Respiratory Diseases, CDC.

Editorial Note

Many factors in detection and reporting likely contribute to variation in the annual rate of outbreaks reported by states. However, the emergence of two new norovirus strains in 2006 likely resulted in a relative increase in norovirus outbreaks in 2006 and early 2007 (*3,4*). Subsequently, increased population immunity to these new strains might have contributed to the relative decrease in norovirus outbreaks in 2007. This pattern of emergence of new norovirus strains corresponding with a spike in norovirus outbreaks appears to occur worldwide approximately every 2–3 years (*5*). The overall decrease in reported outbreaks in 2007 largely resulted from a reduction in the proportion caused by norovirus. The number of outbreaks caused by bacterial agents in 2007 was similar to the 2002–2006 average.

Despite the decrease in 2007, norovirus was still the leading cause of reported outbreaks and outbreak-related illnesses. Norovirus contamination can occur before the point of food preparation and service, as indicated by recent multistate and international norovirus outbreaks associated with oysters, raspberries, and delicatessen meat (*6–8*). The large number of norovirus foodborne outbreaks indicates a need for continued attention to preventing food contamination by food employees who come into contact with ready-to-eat foods. Norovirus outbreaks are thought to largely result from contamination of food via the unwashed or improperly washed hands of food workers shedding norovirus in their stools. Enhanced food safety training for food employees that work with ready-to eat foods, and the presence of a certified food protection manager in food service and retail establishments, as recommended by the Food and Drug Administration's (FDA) Food Code,** might help to reduce the number of outbreaks and outbreak-related illnesses resulting from contamination in food service establishments, if adopted by all states and territories. To date, 49 of 50 states and three of six U.S. territories have adopted codes patterned after versions of the FDA Food Code (*9*), but the specific components of individual state regulations vary.

The findings in this report are subject to at least four limitations. First, only a small proportion of all foodborne illnesses reported each year are identified as associated with outbreaks. For example, in FoodNet sites during 2007, only 5.4% of *Salmonella* illnesses reported to CDC were part of a recognized outbreak (*10*). Some illnesses reported as sporadic likely are not

¶ Additional data on foodborne disease outbreaks and illnesses for the 17 commodity categories can be found at http://www.cdc.gov/outbreaknet/surveillance_data.html.

** The 2009 Food Code and earlier versions are available at http://www.fda.gov/food/foodsafety/retailfoodprotection/foodcode/default.htm.

TABLE 2. Number of reported foodborne disease outbreaks and outbreak-associated illnesses, by etiology* and food vehicle attribution — United States, 2007.†

	Outbreaks (illnesses)							
Etiology	Attributed to a single commodity§		Attributed to food containing at least two commodities		Attributed to unknown commodity		Total outbreaks (illnesses)	
Bacterial								
Salmonella¶	32	(816)	39	(1,939)	71	(760)	142	(3,515)
Clostridium perfringens	21	(652)	18	(535)	6	(419)	45	(1,606)
Staphylococcus enterotoxin**	7	(186)	7	(59)	7	(41)	21	(286)
Escherichia coli, Shiga toxin-producing (STEC)††	18	(341)	3	(30)	21	(232)	42	(603)
Campylobacter§§	15	(252)	1	(48)	11	(72)	27	(372)
Bacillus cereus	4	(51)	9	(75)	6	(38)	19	(164)
Shigella¶¶	3	(132)	0	(0)	8	(223)	11	(355)
Vibrio parahaemolyticus	1	(5)	0	(0)	0	(0)	1	(5)
*Listeria****	1	(5)	0	(0)	0	(0)	1	(5)
Clostridium botulinum	1	(4)	2	(10)	1	(2)	4	(16)
Brucella spp	1	(3)	0	(0)	0	(0)	1	(3)
Escherichia coli, enterotoxigenic	0	(0)	1	(76)	1	(66)	2	(142)
Yersinia enterocolitica	0	(0)	0	(0)	0	(0)	0	(0)
Other bacterial	1	(32)	1	(3)	2	(8)	4	(43)
Total	**105**	**(2,479)**	**81**	**(2,775)**	**134**	**(1,861)**	**320**	**(7,115)**
Chemical								
Scombroid toxin/Histamine	19	(72)	1	(2)	0	(0)	20	(74)
Ciguatoxin	13	(81)	1	(3)	0	(0)	14	(84)
Mycotoxins	3	(10)	0	(0)	0	(0)	3	(10)
Neurotoxic shellfish poison	1	(3)	0	(0)	0	(0)	1	(3)
Puffer fish tetrodotoxin	0	(0)	1	(2)	0	(0)	1	(2)
Heavy metals	0	(0)	0	(0)	1	(3)	1	(3)
Paralytic shellfish poison	1	(4)	0	(0)	0	(0)	1	(4)
Other natural toxins	2	(6)	0	(0)	1	(6)	3	(12)
Other chemical	2	(4)	0	(0)	3	(14)	5	(18)
Total	**41**	**(180)**	**3**	**(7)**	**5**	**(23)**	**49**	**(210)**
Parasitic								
Cryptosporidium	0	(0)	1	(5)	2	(9)	3	(14)
Cyclospora	0	(0)	0	(0)	0	(0)	0	(0)
Giardia	0	(0)	1	(15)	1	(36)	2	(51)
Trichinella	0	(0)	0	(0)	0	(0)	0	(0)
Other parasite	0	(0)	0	(0)	0	(0)	0	(0)
Total	**0**	**(0)**	**2**	**(20)**	**3**	**(45)**	**5**	**(65)**
Viral								
Norovirus	39	(800)	69	(1,819)	209	(5,405)	317	(8,024)
Hepatitis A	1	(3)	1	(15)	2	(10)	4	(28)
Rotavirus	0	(0)	0	(0)	2	(18)	2	(18)
Other viral	0	(0)	0	(0)	1	(17)	1	(17)
Total	**40**	**(803)**	**70**	**(1,834)**	**214**	**(5,450)**	**324**	**(8,087)**
Single etiology (subtotal)	**186**	**(3,462)**	**156**	**(4,636)**	**356**	**(7,379)**	**698**	**(15,477)**
Unknown etiology†††	**40**	**(531)**	**66**	**(687)**	**257**	**(3,904)**	**363**	**(5,122)**
Multiple etiologies	**9**	**(126)**	**13**	**(376)**	**14**	**(143)**	**36**	**(645)**
Total	**235**	**(4,119)**	**235**	**(5,699)**	**627**	**(11,426)**	**1,097**	**(21,244)**

* If all reported etiologies were laboratory-confirmed, the outbreak was considered to have a "confirmed etiology." If at least one etiology was not laboratory-confirmed, but an etiology was reported based on clinical or epidemiologic features, the outbreak was considered to have a "suspected etiology."

† As of May 3, 2010.

§ Data on foodborne disease outbreaks and illnesses for each of the 17 commodity categories is available at http://www.cdc.gov/outbreaknet/surveillance_data.html.

¶ *Salmonella* serotypes accounting for more than five outbreaks reported include Enteriditis (30 outbreaks), Typhimurium (20), Newport (17), and Heidelberg (nine), and Montevideo (nine).

** *Staphylococcus aureus* (11 confirmed outbreaks, nine suspected outbreaks) and *Staphylococcus* unknown (one suspected outbreak).

†† STEC O157:H7 (36 confirmed outbreaks, two suspected outbreaks), STEC O157:NM(H-) (three confirmed outbreaks), and STEC O111 (one confirmed outbreak).

§§ *Campylobacter jejuni* (14 confirmed outbreaks, three suspected outbreaks) and *Campylobacter* unknown (seven confirmed outbreaks, three suspected outbreaks).

¶¶ *Shigella sonnei* (nine confirmed outbreaks, one suspected outbreak) and *Shigella* unknown (one confirmed outbreak).

*** *Listeria monocytogenes* (one confirmed outbreak).

††† An etiologic agent was not confirmed or suspected based on clinical, laboratory, or epidemiologic information.

What is already known on this topic?

Surveillance for foodborne disease outbreaks can identify opportunities to prevent and control foodborne diseases, which cause millions of illnesses in the United States each year.

What is added by this report?

Among the 1,097 foodborne disease outbreaks reported in 2007, most of the single, laboratory-confirmed, agents of outbreak-associated illnesses (12,767) were norovirus (47%) and *Salmonella* (27%). Among outbreaks in which a pathogen and a single-commodity food vehicle were identified, most were attributed to norovirus in leafy vegetables, *Escherichia coli* O157 in beef, or *Clostridium perfringens* in poultry.

What are the implications for public health practice?

Timely investigation and reporting of foodborne outbreaks can provide public health, regulatory, and agricultural professionals with information to target control and prevention strategies as well as to promote good food-handling practices among food employees and the public.

recognized as being part of a reported outbreak or are part of undetected outbreaks. All outbreak-associated illnesses might not be identified during an investigation, and smaller outbreaks might not come to the attention of public health authorities. Second, because of competing priorities in health departments, not all recognized clusters of illness are investigated or reported to CDC. Third, many reported outbreaks had an unknown etiology, an unknown food vehicle, or both, and conclusions drawn from outbreaks with a confirmed or suspected etiology or food vehicle might not apply to outbreaks of unknown etiology or food source. Finally, CDC's outbreak surveillance database is dynamic; reporting agencies can submit new reports and can change or delete previous reports at any time as new information becomes available. Therefore, the results of this analysis represent data available at a single point in time and might differ from those published earlier or subsequently.

Although most foodborne illnesses are sporadic, investigations of those that occur as part of recognized outbreaks provide insights into the agents, food vehicles, and food handling practices that lead to foodborne illness. Unlike laboratory-based surveillance systems, in which the sources of illnesses are rarely reported, the investigation and reporting of outbreaks provides important epidemiologic information that can be used to inform food safety policy. For example, recognition of *E. coli* O157:H7 infections caused by contaminated ground beef in the early 1990s led to regulatory and industry interventions that contributed to a decline in *E. coli* O157:H7 contamination of ground beef. Determining the etiologic agent and the food vehicle for small outbreaks is inherently more difficult because fewer affected persons are available to provide clinical specimens and food histories. However, even when no etiology or food vehicle is confirmed as the cause of foodborne illnesses, the investigative process provides health departments the opportunity to detect and remedy problems with food storage, preparation, and service that might prevent future outbreaks. Further information on foodborne disease outbreaks, including the Foodborne Outbreak Online Database (FOOD), is available at http://www.cdc.gov/foodborneoutbreaks.

Acknowledgments

The findings in this report are based, in part, on contributions by state, territorial, tribal, and local health departments.

References

1. Mead PS, Slutsker L, Dietz V, et al. Food-related illness and death in the United States. Emerg Inf Dis 1999;5:607–25.
2. Painter JA, Ayers T, Woodruff R, et al. Recipes for foodborne outbreaks: a scheme for categorizing and grouping implicated foods. Foodborne Pathog Dis 2009;6:1259–64.
3. CDC. Norovirus activity—United States, 2006–2007. MMWR 2007;56:842–6.
4. CDC. Surveillance for foodborne disease outbreaks—United States, 2006. MMWR 2009;58:609–15.
5. Siebenga JJ, Vennema H, Zheng DP, et al. Norovirus illness is a global problem: emergence and spread of norovirus GII.4 variants, 2001–2007. J Infect Dis 2009;200:802–12.
6. Korsager B, Hede S, Boggild H, Bottiger BE, Molbak K. Two outbreaks of norovirus infections associated with the consumption of imported frozen raspberries, Denmark, May–June 2005. Euro Surveill 2005;10:E050623.1.
7. Dowell SF, Groves C, Kirkland KB, et al. A multistate outbreak of oyster-associated gastroenteritis: implications for interstate tracing of contaminated shellfish. J Infect Dis 1995;171:1497–503.
8. Malek M, Barzilay E, Kramer A, et al. Outbreak of norovirus infection among river rafters associated with packaged delicatessen meat, Grand Canyon, 2005. Clin Infect Dis 2009;48:31–7.
9. Food and Drug Administration. Real progress in food code adoptions. Silver Spring, MD: Food and Drug Administration; 2010. Available at http://www.fda.gov/food/foodsafety/retailfoodprotection/federalstatecooperativeprograms/ucm108156.htm#adopt. Accessed August 5, 2010.
10. CDC. FoodNet 2007 surveillance report. Atlanta, GA: US Department of Health and Human Services, CDC; 2009. Available at http://www.cdc.gov/foodnet/annual/2007/2007_annual_report_508.pdf. Accessed May 5, 2010.

CDC Grand Rounds: Additional Opportunities to Prevent Neural Tube Defects with Folic Acid Fortification

Neural tube defects (NTDs) are serious birth defects that result from the failure of the neural tube to close in the cranial region (anencephaly) or more caudally along the spine (spina bifida) by the 28th day of gestation. Infants born with anencephaly usually die within a few days of birth, and those with spina bifida have life-long disabilities with varying degrees of paralysis. Currently, identified risk factors for NTDs include a mother who previously had an NTD-affected pregnancy, maternal diabetes, obesity, hyperthermia, certain antiseizure medications, genetic variants, race/ethnicity, and nutrition (particularly folic acid insufficiency). In the United States, during 1995–1996, approximately 4,000 pregnancies were affected by an NTD. This number declined to 3,000 pregnancies in 1999–2000 after fortification of enriched cereal grain products with folic acid was mandated (*1*). Worldwide, in 1998, approximately 300,000 births were affected by an NTD (Figure 1).

Both observational and intervention studies, including randomized, controlled trials, have demonstrated that adequate consumption of folic acid periconceptionally can prevent 50%—70% of NTDs (*2*). Three approaches can increase intake of folate/folic acid*: dietary improvement, supplementation, and food fortification. Efforts to improve women's dietary habits so that they consume more foods rich in folate or daily vitamin supplements have had little success because they require behavior change, improved accessibility, affordability, or sustainability (*3*). Supplementation alone also has not been an effective approach because approximately 50% of pregnancies are unplanned. Fortifying foods with folic acid has been a highly effective and more uniform intervention, because fortification makes folic acid accessible to all women of childbearing age without requiring behavior change.

In 1992, the U.S. Public Health Service (USPHS) recommended that all women of childbearing age capable of becoming pregnant consume 400 μg of folic acid daily for prevention of NTDs. In 1996, the Food and Drug Administration (FDA) established regulations that required that by 1998 all standardized enriched cereal grain products sold in the United States include 140 μg folic acid/100 g and provided for the addition of folic acid to breakfast cereals, corn grits, infant formulas, medical foods, and foods for special dietary use. Also in 1998, the Institute of Medicine (IOM) conducted an independent review, with conclusions supporting the USPHS recommendations for folic acid consumption; in 2009, the U.S. Preventive Services Task Force published updated guidelines reinforcing these recommendations (*4*).

Impact of Fortification with Folic Acid

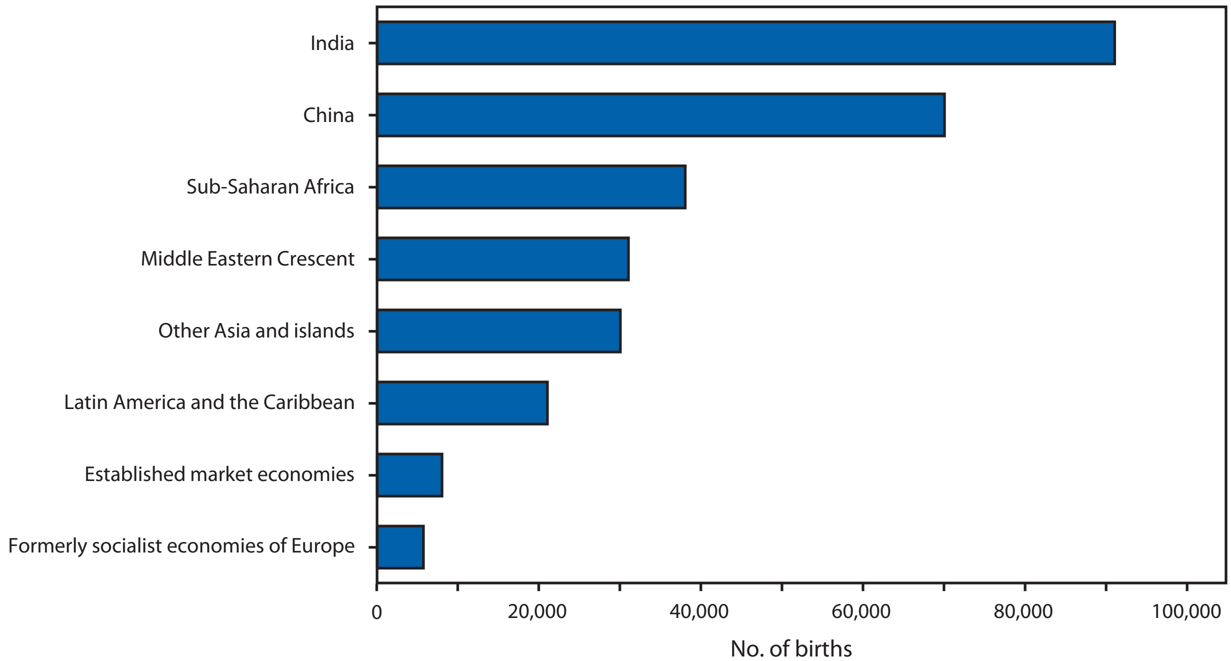
U.S. NTD and blood folate trends. The mandatory fortification of standardized enriched cereal grain products in the United States resulted in a substantial increase in blood folate concentrations and a concomitant decrease in NTD prevalence. The percentage of the population with low serum folate (<3 ng/mL) declined from 21% in the period before fortification (1988–1994) to <1% of the total population in the period immediately following fortification (1999–2000) (*5*). NTD prevalence decreased by 36% after fortification, from 10.8 per 10,000 population during 1995–1996 to 6.9 at the end of 2006 (*6*).

Health disparities. After mandatory fortification in 1998, NTD prevalence declined 30%–40% among the three largest racial and ethnic groups. Nevertheless, 2005–2007 National Birth Defects Prevention Network (NBDPN) data show that Hispanic women continue to be at significantly greater risk (prevalence ratio = 1.21; 95% confidence interval = 1.11–1.31) for having a baby affected by an NTD than non-Hispanic white women (CDC, unpublished data, 2010) (Figure 2). Non-Hispanic

* Folate often is used as a generic term for two different forms of vitamin B9. One form, folate, is found naturally in foods such as beef liver, green leafy vegetables, some fruits, beans, and whole grains. The other form, folic acid, is the synthetic form found in supplements, ready-to-eat breakfast cereals, and fortified foods.

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

FIGURE 1. Number of births affected by a neural tube defect — worldwide, 1998



Source: Shibuya K, Murray CJ. Congenital anomalies. In: Health dimensions of sex and reproduction: the global burden of sexually transmitted diseases, HIV, maternal conditions, perinatal disorders, and congenital anomalies. Murray CJ, Lopez AD, eds. Boston, Massachusetts: the Harvard School of Public Health on behalf of the World Health Organization and the World Bank; 1998:455–512.

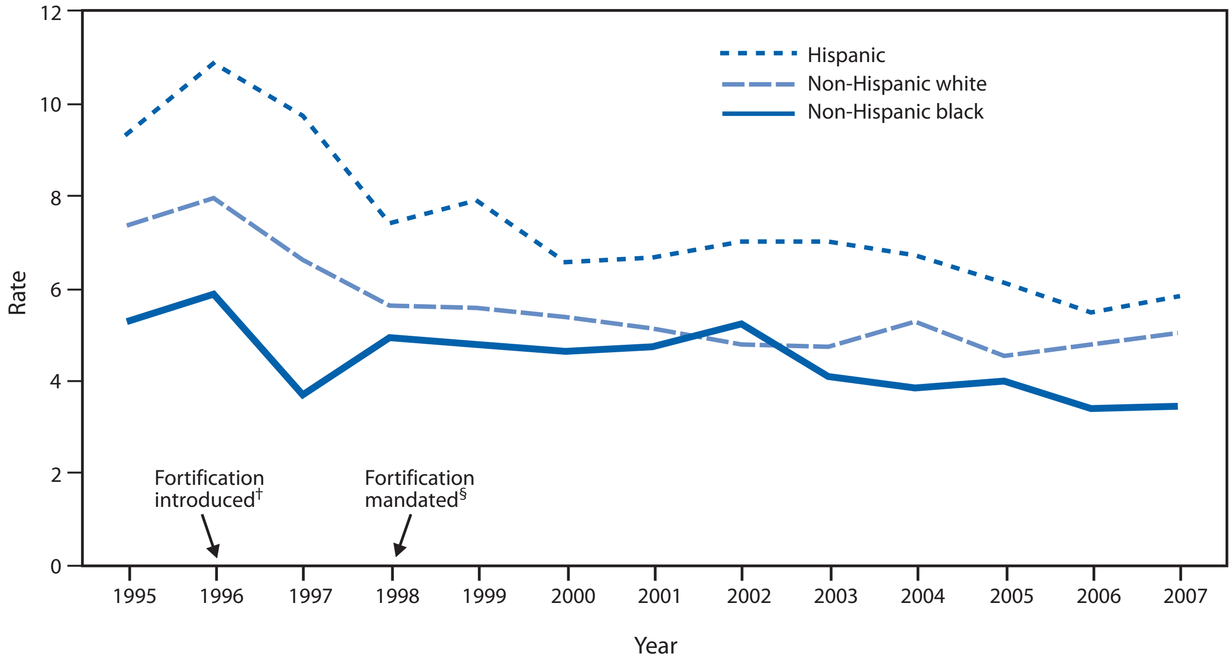
black women have consistently had lower NTD prevalence than Hispanic women and non-Hispanic white women (Figure 2), despite having the lowest folate levels before and after mandatory fortification. Nonfolate risk factors for NTDs might explain this inconsistency between NTD prevalence and folate status and merit further study. Factors that might be contributing to the inconsistency include genetic differences in folate metabolism, maternal diabetes, and obesity, which are known to vary by race and ethnicity; another possibility is intake of nutrients other than folic acid, such as Vitamin B12 (*7*).

Global NTD and blood folate trends. Successful mandatory fortification programs also have been documented in several other countries, including Canada, Costa Rica, Chile, and South Africa, resulting in significant increases in blood folate concentrations and 25%–50% declines in the prevalence of NTD-affected pregnancies (*3*). For example, in Chile, fortification of wheat flour for bread at 220 μg folic acid/100 g was associated with a 43% reduction in NTDs from 17.1 per 10,000 population in 1999–2000 to 9.7 in 2001–2002 (*8*).

Cost. Published economic evaluations have shown that folic acid food fortification is cost saving in the United States and other countries. A 2008 study estimated that current folic acid fortification produces an annual savings of about $300 million, or $100 for each $1 invested in fortification (*9*). Fortification also has resulted in substantial cost savings globally. Chile has demonstrated a savings of $11 (in international dollars) for each $1 invested in fortification (*10*).

Potential adverse effects. Concerns have been raised that intake of folic acid might cause harmful effects, including progression of nerve damage in B12-deficient persons; excess intake in children; accumulation of unmetabolized folic acid; blunting of antifolate therapy (methotrexate and phenytoin); accelerated cognitive decline in the elderly; epigenetic hypermethylation; and cancer promotion (*11*). Most of these concerns are associated with consumption of high levels of folic acid from supplement use rather than fortification. A 2010 study using NHANES 2003–2006 data showed that 6% of the U.S. adult population aged >19 years consumed more than the recommended 400 μg folic acid/day from supplements, and almost half of these persons (2.7% of the U.S. adult population) exceeded the tolerable upper level (UL) of average daily usual folic acid intake of 1,000 μg (*12*). Conversely, none of the remaining 94% of the U.S. adult population, who consumed ≤400 μg folic acid per day from supplements,

FIGURE 2. Neural tube defect rates per 10,000 population, by race/ethnicity and fortification period status — National Birth Defects Prevention Network,* 1995–2007



* Data from 25 population-based birth defects programs.
† Food and Drug Administration establishes regulations requiring fortification with 140 µg folic acid/100 g of all standardized enriched cereal grain products sold in the United States by 1998.
§ Mandatory fortification takes effect.

exceeded the UL, regardless of folic acid intake levels from enriched cereal grain products and ready-to-eat cereals. No conclusive evidence exists to indicate that folic acid intake at recommended levels contributes to the causation of any of these conditions of concern; however, continued monitoring and research are needed to ensure that folic acid public health recommendations do not have unintended negative consequences.

Current Opportunities and Strategies

Focus on Hispanics. While nonfolate risk factors for NTDs and their contribution to disparities in NTD prevalence must be further considered, prevalence data suggest that Hispanics also might have a need for additional folic acid. Consideration of ways to enhance the intake of folic acid among Hispanics while not contributing to higher folic acid intake in the general population is a high priority. Targeted folic acid awareness and promotion efforts have been successful in increasing the use of folic acid supplements among Spanish-speaking Hispanic women (*13*), although whether this behavior change is sustained after intensive intervention is concluded has not yet been evaluated. In addition, the possibility of selectively fortifying foods not included in the current fortification regulation that are staples in Hispanic communities, such as corn tortillas or other products made from corn masa flour, is being considered. A recent study suggested that fortifying corn masa flour at the levels currently used for fortified grains (i.e., 140 µg folic acid / 100 g), would increase folic acid consumption by Mexican-American women by 20%, while increasing folic acid consumption among non-Hispanic white and non-Hispanic black women by approximately 5% (*14*). Currently, FDA regulations do not permit folic acid to be added to corn masa flour. Substantial assessments are needed to address such issues as nutrient composition of corn masa flours; stability, shelf life and consumer acceptance of adding folic acid to such flours; amount of fortification needed to achieve a reduction in risk of NTDs in the target population; and methods for monitoring effectiveness and safety of such proposed fortification.

Expand global fortification. NTDs have been reported on every continent and among diverse populations at all levels of economic development. Currently, 53 countries have regulations for mandatory fortification of wheat flour with folic acid, although many of these programs have not been fully implemented and the existence of regulations does not imply compliance† (Figure 3). Micronutrient fortification programs that include folic acid are only preventing an estimated 9% of total annual cases of folic acid-preventable NTDs (*15*). Expanding the number of developed and developing countries with mandatory folic acid fortification of high consumption staples has the potential to safely eliminate NTDs that are preventable through folic acid consumption.§

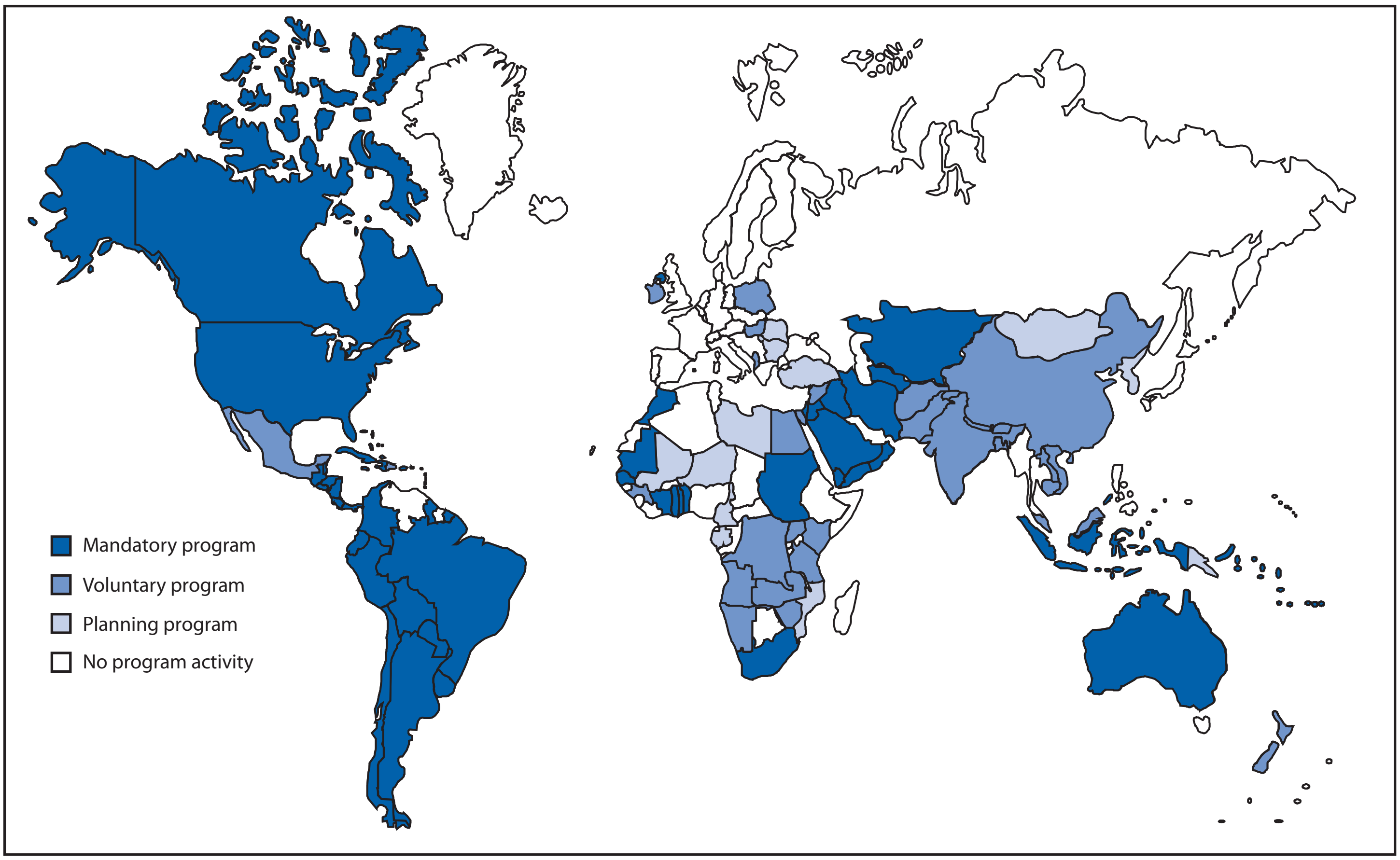
In 2004, CDC, in collaboration with Emory University in Atlanta, Georgia, contributed to formation of the Flour Fortification Initiative (FFI), a network of government and international agencies, wheat and flour industries, and consumer and civic organizations, to promote global flour fortification because none of these sectors can effectively address all the issues alone. Since then, the percentage of the world's wheat flour produced in large roller mills that is fortified has increased from 18% to 30%. By 2015, the target date of the WHO Millennium Development Goals, the FFI goal is for 80% of the world's roller mill wheat flour to be fortified. Future efforts should focus not only on expanding fortification of wheat flour with folic acid but also on fortifying other common staples such as corn and rice.

NTDs are life-threatening and cause life-long disabilities. Fortification of flour and other high-consumption, high-penetration staples with folic acid is a feasible, economical, safe, and effective public health policy to prevent NTDs worldwide. Efforts are needed to evaluate the safety and effectiveness of fortification of corn masa flour in the United States and to expand fortification of staple foods across the globe. Current research and increasing fortification

† Flour Fortification Initiative. Map of global progress, 2010. Available at http://www.sph.emory.edu/wheatflour/ globalmap.php.

§ World Health Organization. Recommendations on wheat and maize flour fortification meeting report: interim consensus statement. Available at http://www.who.int/nutrition/publications/micronutrients/wheat_maize_fortification/en/index.html.

FIGURE 3. Countries (N = 53) with regulations for fortification of wheat flour with folic acid*, by program status — worldwide, June 2010



Source: Flour Fortification Initiative. Map of global progess. Available at http://www.sph.emory.edu/wheatflour/globalmap.php.

* The World Health Organization recommends adding 1–5 ppm of folic acid to fortified wheat flour, depending on the average per capita wheat flour availability (g/day). Additional information available at http://www.who.int/nutrition/publications/micronutrients/wheat_maize_fortification/en/index.html.

efforts have demonstrated the ability to eliminate those NTDs that are sensitive to folic acid. If 50%–70% of NTDs fall into this category, and assuming an annual prevalence of 300,000 NTDs, worldwide folic acid fortification could lead to the prevention of 150,000–210,000 NTDs per year.

Reported by

A Cordero, MPA, J Mulinare, MD, RJ Berry, MD, C Boyle, PhD, Div of Birth Defects and Developmental Disabilities, National Center on Birth Defects and Developmental Disabilities; W Dietz, MD, PhD, Div of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion, CDC. R Johnston Jr, MD, Univ of Colorado School of Medicine. J Leighton, PhD, Office of the Commissioner, Food and Drug Admin. T Popovic, MD, PhD, Office of the Director, CDC.

References

1. CDC. Spina bifida and anencephaly before and after folic acid mandate—United States, 1995–1996 and 1999–2000. MMWR 2004;53:362–5.
2. Blencowe H, Cousens S, Modell B, Lawn J. Folic acid to reduce neonatal mortality from neural tube disorders. Int J Epidemiol 2010;39(Suppl 1):i110–21.
3. Berry RJ, Bailey L, Mulinare J, Bower C, Folic Acid Working Group. Fortification of flour with folic acid. Food Nutr Bull 2010;31(Suppl 1):S22–35.
4. US Preventive Services Task Force. Folic acid for the prevention of neural tube defects: US Preventive Services Task Force recommendation statement. Ann Intern Med 2009;150:626–31.
5. Pfeiffer CM, Johnson CL, Jain RB, et al. Trends in blood folate and vitamin B-12 concentrations in the United States, 1988–2004. Am J Clin Nutr 2007;86:718–27.
6. National Birth Defects Prevention Network. Neural tube defect ascertainment project 2010. Available at http://www.nbdpn.org/current/resources/ntd_fa_info.html. Accessed August 10, 2010.
7. Williams LJ, Rasmussen SA, Flores A, Kirby RS, Edmonds LD. Decline in the prevalence of spina bifida and anencephaly by race/ethnicity: 1995–2002. Pediatrics 2005;116:580–6.
8. Hertrampf E, Cortes F. National food-fortification program with folic acid in Chile. Food Nutr Bull 2008;29(Suppl 2):S231–7.
9. Grosse SD, Ouyang L, Collins JS, Green D, Dean JH, Stevenson RE. Economic evaluation of a neural tube defect recurrence-prevention program. Am J Prev Med 2008;35:572–7.
10. Llanos A, Hertrampf E, Cortes F, Pardo A, Grosse SD, Uauy R. Cost-effectiveness of a folic acid fortification program in Chile. Health Policy 2007;83:295–303.
11. Smith AD, Kim YI, Refsum H. Is folic acid good for everyone? Am J Clin Nutr 2008;87:517–33.
12. Yang Q, Cogswell ME, Hamner HC, et al. Folic acid source, usual intake, and folate and vitamin B-12 status in US adults: National Health and Nutrition Examination Survey (NHANES) 2003–2006. Am J Clin Nutr 2010;91:64–72.
13. Prue CE, Hamner HC, Flores AL. Effects of folic acid awareness on knowledge and consumption for the prevention of birth defects among Hispanic women in several US communities. J Women's Health 2010;19:689–98.
14. Hamner HC, Mulinare J, Cogswell ME, et al. Predicted contribution of folic acid fortification of corn masa flour to the usual folic acid intake for the US population: National Health and Nutrition Examination Survey 2001–2004. Am J Clin Nutr 2009;89:305–15.
15. Bell KN, Oakley GP Jr. Update on prevention of folic acid-preventable spina bifida and anencephaly. Birth Defects Res A Clin Mol Teratol 2009;85:102–7.

Completion of National Laboratory Inventories for Wild Poliovirus Containment — Region of the Americas, March 2010

In May 1988, the World Health Assembly resolved to eradicate wild poliovirus (WPV) transmission globally. By 2006, transmission of indigenous WPV was eliminated in all but four countries (Afghanistan, India, Nigeria, and Pakistan). In May 1999, the World Health Assembly urged member states to begin the process leading to laboratory containment of WPV (*1*). Containment of infectious and potentially infectious WPV materials after eradication is essential to minimize the risk for reintroducing WPV into poliomyelitis-free communities. The staged containment approach begins with a national survey of all biomedical facilities, which alerts facilities to the need for containment, encourages reduction of WPV materials, and develops a national inventory of facilities holding such materials (Phase I). In May 2008, the World Health Assembly reiterated the need for progress in containment and urged polio-free states to complete Phase I (*2, 3*). This report describes completion of Phase I by the countries and territories in the World Health Organization (WHO) Region of the Americas during 2001–2010. Of 67,362 biomedical facilities, all 15,541 (23.1%) that were classified as high-risk or medium-risk facilities were surveyed. Of the remaining 51,821 (76.9%) facilities, all classified as low-risk, 44,077 (85.1%) were surveyed; sampling ranged from 12.8% to 100% among countries. After voluntary destruction of some materials during Phase I, a total of 215 facilities in nine countries of the Region of the Americas reported retaining WPV materials as of March 2010. The survey provides a facility registry for use in subsequent steps that will lead to global poliovirus containment.

An elimination initiative began in the Americas in 1985, and the last case of WPV infection was confirmed in 1991; the western hemisphere was certified polio-free in 1994. In 2004, the director of the Pan American Health Organization (PAHO) established the American Regional Commission for the Certification of Poliovirus Laboratory Containment and Verification of Polio-free Status (RCC) to oversee Phase I activities. Forty-three countries and territories in the Region of the Americas conducted Phase I activities during 2001–2010. PAHO advised member states regarding creation of national plans of action, provided technical assistance on implementing national surveys, and monitored progress. National task forces comprised of working groups from various ministries and/or sectors were formed to implement the national plans of action. National certification committees comprised of experts in areas related to polio eradication, epidemiology, virology, pediatrics, and public health were formed to review progress and ensure completeness and accuracy. Seven regional and subregional meetings were held to facilitate exchange between countries on strategies and progress and to assure Phase I quality and consistency. The United States (*4*) and Canada, the Region of the Americas countries with the largest research laboratory infrastructures, began Phase I containment activities in 2002 because of the expected complexity of the task.

National databases of biomedical institutions and laboratories were commonly compiled through multisector efforts coordinated by the Ministry of Health (MOH), the national certification committee, or joint working groups. Methods used to establish the national database varied by country, but primarily consisted of consolidating and verifying lists from national laboratory registries, accrediting bodies, professional organizations and associations, and institutional and national biosafety networks. Institutions and laboratories included in the national databases were MOH facilities, hospitals, research laboratories, military facilities, environmental and other government agencies, and private industrial companies and clinical diagnostic laboratories. Databases were verified and supplemented by telephone book and Internet searches and by literature reviews. Countries differed in methods for enumerating institutions and laboratories. For example, countries with complex laboratory infrastructures, such as Canada and the United States, counted large universities, government agencies, and vaccine producers as single units to be held accountable for the multiple laboratories under their jurisdictions. Conversely, other countries, with fewer large multilaboratory institutions, counted individual laboratories.

Countries and territories classified each institution and laboratory according to the risk for possessing infectious or potentially infectious WPV materials.

High-risk facilities included virology, university, research, and public health laboratories. Medium-risk facilities included environmental, major hospital, industrial, and clinical laboratories with advanced microbiological capabilities. Low-risk facilities included basic public or private clinical or other biomedical laboratories with limited or no capacity for long-term storage of biological specimens. National surveys were guided by WHO standards (*3*). All high-risk and medium-risk institutions and laboratories were surveyed for the presence of WPV materials. A proportion of low-risk facilities (85.1% overall, ranging from 12.8% to 100% by country) was surveyed to confirm accuracy of classification. All countries exceeded the RCC-recommended 10% sampling minimum for low-risk facilities.

The most common survey methods were electronic forms and letters sent to institutions and laboratories from the MOH or the president of the national certification committee. Follow-up telephone calls and visits were made to recipients who failed to respond. In Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Caribbean countries, national task force members visited high-risk laboratories as well as institutions that had reported possessing infectious or potentially infectious WPV materials. The El Salvador national task force sent letters and survey instruments to laboratories using private couriers who were also responsible for securing and delivering responses. Task forces in Bolivia, Costa Rica, Ecuador, Guatemala, Nicaragua, and Panama conducted personal visits to all laboratories included in the national database and verified response accuracy. Argentina, Brazil, Cuba, and Mexico created subnational teams whose responsibility entailed verifying the completeness of the laboratory list, the accuracy and consistency of the responses, the completion of the survey, and visits to high-risk laboratories. Completeness of the surveys in all countries was assessed by a systematic quality-assurance procedure provided by WHO.

Of 67,362 biomedical facilities, a total of 59,618 (88.5%) were surveyed. All 4,313 (7.2%) laboratories classified as high-risk and all 11,228 (18.8%) classified as medium-risk were surveyed, as well as 44,077 (85.1%) of 51,821 laboratories classified as low-risk (73.9%) (Table). Of all facilities surveyed, 2,629 (4.4%) were virology, university, research, or public health facilities; 10,372 (17.4%) were hospital-based facilities (both medium-risk and low-risk); 41,438 (69.5%) were clinical diagnostic facilities (both medium-risk and low-risk); and 5,179 (8.7%) were environmental, industrial, or other types of facilities.

The number of high-risk or medium-risk facilities holding WPV materials before the survey was not determined. No low-risk facilities were found to be holding WPV materials. After the survey, the number of facilities retaining infectious or potentially infectious WPV materials totaled 215 in nine Region of Americas countries: the United States (180), Canada (eight), Brazil (six), Costa Rica (six), Argentina (five), Mexico (four), Guatemala (three), Chile (two), and Trinidad and Tobago (one). On March 5, RCC reviewed the quality and completeness of the final regional report and declared Phase I of laboratory containment in the Region of Americas complete.

Reported by

Pan American Health Organization, Washington, D.C. World Health Organization (WHO) Regional Office for the Americas, Polio Eradication Dept, WHO, Geneva, Switzerland. Task Force for Global Health, Decatur, Georgia. Global Immunization Div, Div of Viral Diseases, National Center for Immunization and Respiratory Diseases, CDC.

Editorial Note

The Region of the Americas becomes the third of the six WHO regions (after the European [*5*] and Western Pacific regions [*6*]) to create national databases of biomedical facilities and inventories of facilities that retain WPV materials. The Region of the Americas was declared free of WPV transmission by the International Commission for the Certification of Poliomyelitis Eradication in September 1994, 4 years before the Global Certification Commission for the Certification of the Eradication of Polio announced that adequate progress on laboratory containment was a precondition for regional certification. When Phase I began in 2001, the region had shifted much of its resources and attention to measles elimination. Consequently, nearly all of the national certification committees for polio were inactive or had been disbanded. Member states overcame the organizational and resource challenges and built on the successful survey experiences of European and Western Pacific regions to complete Phase 1 with high quality.

Before implementing Phase I, no country in the region had a complete or integrated database of biomedical institutions and laboratories. Six countries

TABLE. Number of biomedical facilities and laboratories surveyed for the presence of wild poliovirus (WPV) materials,* during 2000–2010 and number retaining WPV materials, by country/area — World Health Organization Region of the Americas, March 2010

Country/Area	No. of facilities in national list	No. of high-risk facilities§	No. of medium- risk facilities¶	Low-risk facilities†			Total no. of facilities surveyed	No. of facilities retaining WPV materials
				Total no.	No. selected for survey	(%)		
Argentina	1,578	198	360	1,020	260	(25.5)	818	5
Bolivia	301	23	108	170	170	(100)	301	0
Brazil	7,652	1,044	1,789	4,819	4,819	(100)	7,652	6
Canada	1,195	626	210	359	73	(20.3)	909	8
Caribbean**	180	10	72	98	98	(100)	180	1
Chile	1,056	54	248	754	354	(46.9)	656	2
Colombia	5,631	130	517	4,984	1,377	(27.6)	2,024	0
Costa Rica	558	53	79	426	426	(100)	558	6
Cuba	1,162	248	173	741	295	(39.8)	716	0
Dominican Republic	229	7	24	198	198	(100)	229	0
Ecuador	1,300	87	535	678	678	(100)	1,300	0
El Salvador	536	13	134	389	389	(100)	536	0
Guatemala	336	39	101	196	196	(100)	336	3
Haiti	235	1	18	216	128	(59.3)	147	0
Honduras	211	21	125	65	65	(100)	211	0
Mexico	9,824	319	1,661	7,844	7,844	(100)	9,824	4
Nicaragua	594	17	54	523	523	(100)	594	0
Panama	445	34	61	350	350	(100)	445	0
Paraguay	639	18	35	586	127	(21.7)	180	0
Peru	2,148	61	80	2,007	710	(35.4)	851	0
Uruguay	556	9	87	460	59	(12.8)	155	0
United States	29,791	1,216	4,369	24,206	24,206	(100)	29,791	180
Venezuela	1,205	85	388	732	732	(100)	1,205	0
Total	**67,362**	**4,313**	**11,228**	**51,821**	**44,077**	**(85.1)**	**59,618**	**215**

* WPV infectious and potentially infectious materials. Additional information available at http://www.polioeradication.org/content/publications/who-vb-03-729.pdf.

† Low-risk facilities include basic clinical or other labs with limited or no long-term storage capacity. Countries were only required to survey >10% of these facilities to confirm classification.

§ High- risk facilities include virology, university, research, and public health labs; 100% of these facilities were surveyed in all countries.

¶ Medium- risk facilities include environmental, major hospital, industrial, and advanced clinical diagnostic laboratories; 100% of these facilities were surveyed in all countries.

** Includes Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, Netherlands Antilles, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos. The only facility retaining WPV materials was in Trinidad and Tobago.

(Argentina, Brazil, Chile, Colombia, Mexico, and Peru) subsequently established a national registry of laboratories with application beyond the goal of poliovirus containment. Canada confirmed its 2002–2004 Phase I national laboratory database and survey results through implementation of the 2009 Human Pathogens and Toxins Act. Successful application of the act for control and tracking of polioviruses and other infectious agents in institutions supports a regulatory/legislative strategy as an approach in subsequent containment phases.

As in the European and Western Pacific regions, implementation of Phase I resulted in a voluntary reduction by several countries in the number of institutions and laboratories retaining WPV materials. Facilities in three countries (Colombia, Cuba, and Panama) reported destroying all infectious and potentially infectious WPV materials.

The findings in this report are subject to at least two limitations. First, although the Phase I activities were standardized and reviewed at multiple levels, some low-risk facilities might not have been identified for the survey. Second, among facilities surveyed, particularly those with jurisdiction over multiple laboratories, some laboratories might not have thoroughly reviewed materials in storage. However, countries conducting site-visits did not find any instances in which this occurred.

Subsequent phases of WPV containment are outlined in a working draft revision of the WHO global action plan to minimize WPV risk from facilities, scheduled for public review and comment before the end of 2010 (*7*). Phase II of the action plan will begin following evidence of interruption of WPV transmission in one of the four remaining

What is already known on this topic?

After progress toward eradication of wild poliovirus (WPV) transmission, the World Health Assembly in 1999 urged member states to begin the process leading to laboratory containment of WPV; previously, countries in the European and Western Pacific regions of the World Health Organization completed Phase I of this process, a comprehensive survey and inventory of facilities holding WPV materials.

What is added by this report?

Following surveys and inventories conducted by countries and territories in the Region of the Americas and voluntary destruction of some materials, 215 facilities in nine countries of the Americas (including 180 in the United States) reported retaining WPV materials as of March 2010.

What are the implications for public health practice?

Completion of the surveys and inventories in three polio-free WHO regions provides a solid base for subsequent steps toward final containment once interruption of WPV transmission is achieved.

polio-endemic countries (Afghanistan, India, Nigeria, and Pakistan). During this phase, member states are requested to establish long-term national policies and regulations for destruction or containment of WPV materials. Completion of Phase I in three polio-free WHO regions and the majority of countries in the remaining three regions (*5,6*) provides a solid base for subsequent steps toward final containment of all polioviruses when the goal of global interruption of WPV transmission is achieved.

References

1. World Health Organization. Eradication of poliomyelitis: report by the director-general. Resolution WHA52.8. Geneva, Switzerland: Fifty-second World Health Assembly; 1999. Available at http://apps.who.int/gb/archive/pdf_files/wha52/ew8.pdf.
2. World Health Organization. Eradication of poliomyelitis: report by the director-general. Resolution WHA61.1. Geneva, Switzerland: Sixty-first World Health Assembly; 2008. Available at http://apps.who.int/gb/ebwha/pdf_files/wha61-rec1/a61_rec1-part2-en.pdf.
3. World Health Organization. WHO global action plan for laboratory containment of wild polioviruses. 2nd ed. Geneva, Switzerland: World Health Organization; 2004. Available at http://www.polioeradication.org/content/publications/who-vb-03-729.pdf.
4. CDC. National laboratory inventory for global poliovirus containment—United States, November 2003. MMWR 2004;53:457–9.
5. CDC. National laboratory inventory for global poliovirus containment—European Region, June 2006. MMWR 2006;55:916–8.
6. CDC. National laboratory inventories for wild poliovirus containment—Western Pacific Region, 2008. MMWR 2009;58:975–8.
7. World Health Organization. WHO global action plan to minimize poliovirus facility-associated risk after eradication of wild polioviruses and cessation of routine OPV use [Draft]. Geneva, Switzerland: World Health Organization; 2009. Available at http://www.polioeradication.org/content/publications/gapIIIworkingdraft_07.pdf.

Update: Recommendations of the Advisory Committee on Immunization Practices (ACIP) Regarding Use of CSL Seasonal Influenza Vaccine (Afluria) in the United States During 2010–11

During the 2010 influenza season in Australia, administration of a 2010 Southern Hemisphere seasonal influenza trivalent inactivated vaccine (TIV) (Fluvax Junior and Fluvax) manufactured by CSL Biotherapies was associated with increased frequency of fever and febrile seizures in children aged 6 months through 4 years (*1*). Postmarketing surveillance indicated increased reports of fever in children aged 5–8 years after vaccination with Fluvax compared to previous seasons. An antigenically equivalent 2010–11 Northern Hemisphere seasonal influenza TIV (Afluria) manufactured by CSL Biotherapies is approved by the Food and Drug Administration (FDA) for persons aged ≥6 months in the United States. Prescribing information for the 2010–11 Afluria formulation includes a warning that "Administration of CSL's Southern Hemisphere influenza vaccine has been associated with increased postmarketing reports of fever and febrile seizures in children predominantly below the age of 5 years as compared to previous years" (*2*). In the United States, annual influenza vaccination is recommended for all persons aged ≥6 months. On August 5, 2010, the Advisory Committee on Immunization Practices (ACIP) recommended that the 2010–11 Afluria vaccine not be administered to children aged 6 months through 8 years. Other age-appropriate, licensed seasonal influenza vaccine formulations should be used for prevention of influenza in these children. If no other age-appropriate, licensed inactivated seasonal influenza vaccine is available for a child aged 5–8 years who has a medical condition that increases their risk for influenza complications (*3*), Afluria can be used; however, providers should discuss with the parents or caregivers the benefits and risks of Afluria use before administering this vaccine to children aged 5–8 years.

Background

In Australia and New Zealand, use of 2010 Fluvax Junior (0.25 mL preparation) and Fluvax (0.5 mL preparation) was suspended in children aged <5 years because of reports of fever and febrile seizures occurring after receipt of these vaccines in children aged 6 months through 4 years (*1,4–7*). Australia and New Zealand are the only Southern Hemisphere countries in which Fluvax Junior and Fluvax have been used during 2010. Investigations in Australia indicated that administration of 2010 Fluvax or Fluvax Junior was associated with higher rates of fever in young children 4–24 hours after vaccination when compared with rates observed with TIV during previous years (*1*). A retrospective cohort study among children aged <5 years who received TIV in 2010 reported that the risk for fever following receipt of Fluvax was 6.5 times greater than for Influvac (Solvay/Abbott), a different TIV (*1*). Other data indicated that the rate of fever in 2010 was eight times greater after receipt of Fluvax Junior versus Influvac among children aged <3 years, and 10 times greater for Fluvax versus Influvac among children aged 3–4 years (*1*). A follow-up New Zealand study among more than 300 children aged <5 years found substantially increased febrile reactions in the 24 hours after receipt of Fluvax, but not with Vaxigrip (sanofi pasteur), another TIV (*6*). Postmarketing surveillance found increased reports of fever in children aged 5–8 years after receipt of 2010 Fluvax compared with reports for the same product in three previous seasons (unpublished data, CSL; 2010). An increased frequency of fever after receipt of 2009 CSL seasonal TIV compared with TIV from another manufacturer among children aged 6 months through 8 years age also was reported in a U.S. clinical trial (*2*).

Additional investigations determined that the higher frequencies of fever with Fluvax and Fluvax Junior in Australia during 2010 were associated with substantially higher rates of febrile seizures in children aged 6 months through 4 years; febrile seizures occurred a mean of 7.2 hours (range: 5.9–8.4 hours) after vaccination (*1*). Overall, the rate of febrile seizures following Fluvax and Fluvax Junior was estimated at ≤9 per 1,000 doses administered, and approximately nine times more than expected (*1*). Among children aged 6 months through 2 years, the rate of febrile seizures after vaccination with Fluvax Junior was approximately 10 per 1,000 doses administered, and 1.5 (Fluvax) to 14 (Fluvax Junior) per 1,000 doses administered among children aged 3–4 years versus zero for Influvac in both age groups (*1*).

Before Fluvax use in New Zealand was suspended in young children on April 26, 2010, nine cases of febrile seizures were reported in children aged <5 years after receiving Fluvax, and one case was reported after vaccination with an unknown influenza vaccine that was strongly suspected to be Fluvax (*6*). No febrile seizures were reported in an estimated 5,000 to 7,000 children aged <5 years who received approximately 10,000 to 12,000 doses of Vaxigrip, and no febrile seizures were reported after Influvac in New Zealand (*6*). To date, despite extensive investigations, no biological cause (e.g., contamination, incomplete virus inactivation or disruption, etc.) has been identified to explain the increase in febrile reactions and febrile seizures associated with Fluvax Junior and Fluvax among children in 2010.

In the United States, annual influenza vaccination is recommended for all persons aged ≥6 months (*3*). Alternative, age-appropriate, approved TIV formulations are available for children aged ≥6 months, and live attenuated influenza virus vaccine (LAIV) is approved for healthy children aged ≥2 years (Table). Studies that assessed adverse events after receipt of TIV or LAIV in the United States during past influenza seasons (*8–10*) and unpublished surveillance data have not demonstrated an association between TIV administration and febrile seizures.

Afluria* was approved by FDA in 2007 for persons aged ≥18 years. Since November 2009, Afluria has been approved by FDA for persons aged ≥6 months. The manufacturing process for 2010 Fluvax and Fluvax Junior is the same as for 2010–11 Afluria, and the vaccines strains are antigenically equivalent, although the influenza A (H3N2) virus strains are different. For the 2010–11 influenza season, the warning and precautions section of the Afluria package insert was revised to include the increased incidence of fever and febrile seizures in young children, predominantly among those aged <5 years, based on postmarketing reports from Australia and New Zealand (*2*). Limited information is available about seasonal influenza vaccine coverage or the risk of febrile seizures or fever in children aged ≥5 years from Australia and New Zealand. However, available data to date suggest that children aged 5–8 years might experience higher incidence of fever after vaccination with Fluvax. No information is available on the risk of febrile seizures in children aged 5–8 years, although febrile seizures from any cause are uncommon in this age group.

Recommendations

Based on the available information, ACIP recommendations for the 2010–11 influenza season in the United States include the following:

- Afluria should not be used in children aged 6 months through 8 years.
- Other age-appropriate, licensed seasonal influenza vaccine formulations, including other TIVs and LAIV, have not been associated with an increased risk of fever or febrile seizures, are safe, and should be used for prevention of influenza in children aged 6 months through 8 years.
- If no other age-appropriate, licensed inactivated seasonal influenza vaccine is available for a child aged 5–8 years who has a medical condition that increases the child's risk for influenza complications (*3*), Afluria can be used; however, providers should discuss with the parents or caregivers the benefits and risks of influenza vaccination with Afluria before administering this vaccine.
- Afluria may be used in persons aged ≥9 years.

Safety Monitoring

Although CSL Southern Hemisphere 2010 seasonal influenza vaccine is the only influenza vaccine to be associated with increased reports of fever and febrile seizures in young children, as in previous seasons, CDC, FDA, and other federal agencies will closely monitor the safety of seasonal influenza vaccines during 2010–11. CDC will rely primarily on the Vaccine Adverse Event Reporting System (VAERS)† and the Vaccine Safety Datalink (VSD)§ to conduct safety monitoring. VAERS is a passive reporting system, co-managed by CDC and FDA, which identifies potential vaccine safety problems in the United States. VAERS reports following 2010–11 influenza vaccinations will be reviewed regularly with special attention to reports of febrile seizures in children aged <9 years. VSD is a collaboration of eight managed-care organizations with more than 9 million members that links

* Additional information on Afluria is available at http://www.fda.gov/downloads/biologicsbloodvaccines/vaccines/approvedproducts/ucm220730.pdf; additional information on influenza vaccines also is available from CDC at http://www.cdc.gov/flu/protect/vaccine/qa_cslfluvac.htm and from FDA at http://www.fda.gov/biologicsbloodvaccines/guidancecomplianceregulatoryinformation/post-marketactivities/lotreleases/ucm220649.htm.

† Additional information is available at http://www.cdc.gov/vaccinesafety/activities/vaers.html and http://vaers.hhs.gov/index.

§ Additional information is available at http://www.cdc.gov/vaccinesafety/activities/vsd.html.

TABLE. Influenza vaccines recommended by the Advisory Committee on Immunization Practices (ACIP) for different age groups — United States, 2010–11 season

Vaccine	Trade name	Manufacturer	Presentation	Mercury content (mcg Hg/0.5 mL dose)	Age group	No. of doses	Route
TIV*	Fluzone	sanofi pasteur	0.25mL prefilled syringe	0	6–35 mos	1 or 2†	Intramuscular§
			0.5 mL prefilled syringe	0	≥36 mos	1 or 2†	Intramuscular§
			0.5 mL vial	0	≥36 mos	1 or 2†	Intramuscular§
			5.0 mL multidose vial	25.0	≥6 mos	1 or 2†	Intramuscular§
TIV	Fluvirin	Novartis Vaccine	5.0 mL multidose vial	25.0	≥4 yrs	1 or 2†	Intramuscular§
			0.5 mL prefilled syringe	<1.0			
TIV	Agriflu	Novartis Vaccine	0.5 mL prefilled syringe	0	≥18 yrs	1	Intramuscular§
TIV	Fluarix	GlaxoSmithKline	0.5 mL prefilled syringe	0	≥3 yrs	1 or 2†	Intramuscular§
TIV	FluLaval	GlaxoSmithKline	5.0 mL multidose vial	25.0	≥18 yrs	1	Intramuscular§
TIV	Afluria¶	CSL Biotherapies	0.5 mL prefilled syringe	0	≥9 yrs	1	Intramuscular§
TIV High-Dose**	Fluzone High-Dose	sanofi pasteur	0.5 mL prefilled syringe	0	≥65 yrs	1	Intramuscular§
LAIV††	FluMist§§	MedImmune	0.2 mL sprayer, divided dose	0	2–49 yrs	1 or 2†	Intranasal

* Trivalent inactivated vaccine.
† Children aged 6 months–8 years who did not receive at least 1 dose of an influenza A (H1N1) 2009 monovalent vaccine, who have never received a seasonal influenza vaccine before, or who were vaccinated for the first time with the seasonal 2009–10 seasonal vaccine but who received only 1 dose should receive 2 doses of the 2010–11 influenza vaccine formula, spaced ≥4 weeks apart.
§ For adults and older children, the recommended site of vaccination is the deltoid muscle. The preferred site for infants and young children is the anterolateral aspect of the thigh.
¶ Afluria (CSL Biotherapies) is approved in the United States by the Food and Drug Administration for use in persons aged ≥6 months. However, the Advisory Committee on Immunization Practices recommends that the 2010–11 formulation of Afluria not be administered to children aged 6 months–8 years because of an increased frequency of fever or febrile seizures reported among young children (mostly children aged <5 years) who received a similar vaccine in Australia in 2010. Therefore, another age-appropriate, licensed seasonal influenza vaccine formulation should be used for prevention of influenza in children aged 6 months–8 years. If no other age-appropriate, licensed seasonal influenza vaccine is available for a child aged 5–8 years who has a medical condition that increases the child's risk for influenza complications, Afluria can be used; however, providers should discuss with the parents or caregivers the benefits and risks of influenza vaccination with Afluria before administering this vaccine. See second footnote above for dose information when administering Afluria to children aged 5–8 years.
** Trivalent inactivated vaccine high dose. A 0.5-mL dose contains 60 mcg each of A/California/7/2009 (H1N1)-like, A/Perth/16/2009 (H3N2)-like, and B/Brisbane/60/2008-like antigens.
†† Live attenuated influenza vaccine.
§§ FluMist is shipped refrigerated and stored in the refrigerator at 36°F–46°F (2°C–8°C) after arrival in the vaccination clinic. The dose is 0.2 mL divided equally between each nostril. Health-care providers should consult the medical record, when available, to identify children aged 2–4 years with asthma or recurrent wheezing that might indicate asthma. In addition, to identify children who might be at greater risk for asthma and possibly at increased risk for wheezing after receiving LAIV, parents or caregivers of children aged 2–4 years should be asked: "In the past 12 months, has a health-care provider ever told you that your child had wheezing or asthma?" Children whose parents or caregivers answer "yes" to this question and children who have asthma or who had a wheezing episode noted in the medical record within the past 12 months should not receive FluMist.

computerized vaccination and health-care encounter data. VSD will be used for rapid, ongoing analyses to monitor for serious adverse events associated with vaccination against seasonal influenza, including seizures in young children. VSD also is available to evaluate possible associations detected by VAERS or other sources, as needed.

Reported by

Advisory Committee on Immunization Practices (ACIP); ACIP Influenza Work Group; Immunization Safety Office, National Center for Emerging and Zoonotic Infectious Diseases; Influenza Div, Immunization Services Div, National Center for Immunization and Respiratory Diseases; CDC.

References

1. Therapeutic Goods Administration. Investigation into febrile reactions in young children following 2010 seasonal trivalent influenza vaccination. Woden, Australia: Therapeutic Goods Administration, Department of Health and Ageing; 2010. Available at http://www.tga.gov.au/alerts/medicines/fluvaccine-report100702.htm. Accessed August 11, 2010.
2. Food and Drug Administration. Afluria, influenza virus vaccine 2010 [package insert]. CSL Limited; Food and Drug Administration; 2010. Available at http://www.fda.gov/downloads/biologicsbloodvaccines/vaccines/approvedproducts/ucm220730.pdf. Accessed August 11, 2010.
3. CDC. Prevention and Control of Influenza with Vaccines. Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2010. Available at http://www.cdc.gov/mmwr/pdf/rr/rr59e0729.pdf. Accessed August 11, 2010.
4. Investigation into febrile convulsions in young children after seasonal influenza vaccination. Interim findings and recommendations. Woden, Australia: Department of Health and Ageing; 2010. Available at http://www.health.gov.au/internet/main/publishing.nsf/content/c8d6beb67768e80aca257735002424bf/$file/dept%20010610.pdf. Accessed August 11, 2010.
5. Department of Health and Ageing. Investigation into febrile convulsions in young children after seasonal influenza vaccination. Woden, Australia: Department of Health and Ageing; 2010. Available at http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/content/431453bbfef1fb2fca25776d007d9ff4/$file/factsheet-30jul10.pdf. Accessed August 11, 2010.

6. Department of Health and Ageing. Australian Technical Advisory Group on Immunisation (ATAGI) statement: clinical advice for immunisation providers on resumption of the use of 2010 trivalent seasonal vaccines in children less than 5 years of age. Woden, Australia: Department of Health and Ageing; 2010. Available at http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/B4A8DC125C08290ACA25776D001DA89B/$File/atagi-statement-tiv.pdf. Accessed August 11, 2010.
7. New Zealand Ministry of Health. Fever and convulsions in children receiving flu vaccine. Wellington, New Zealand: New Zealand Ministry of Health; 2010. Available at http://www.moh.govt.nz/moh.nsf/indexmh/fever-and-convulsions-in-children-receiving-flu-vaccine?open. Accessed August 11, 2010.
8. Hambidge SJ, Glanz JM, France EK, et al.; Vaccine Safety Datalink Team. Safety of trivalent inactivated influenza vaccine in children 6 to 23 months old. JAMA. 2006 Oct 25;296(16):1990-7.
9. France EK, Glanz JM, Xu S, et al. Safety of the trivalent inactivated influenza vaccine among children: a population-based study. Arch Pediatr Adolesc Med 2004;158:1031–6.
10. Greene SK, Kulldorff M, Lewis EM, et al. Near real-time surveillance for influenza vaccine safety: proof-of-concept in the Vaccine Safety Datalink Project. Am J Epidemiol 2010;171:177–88.

Announcement

Interactive CDC DengueMap Available Online

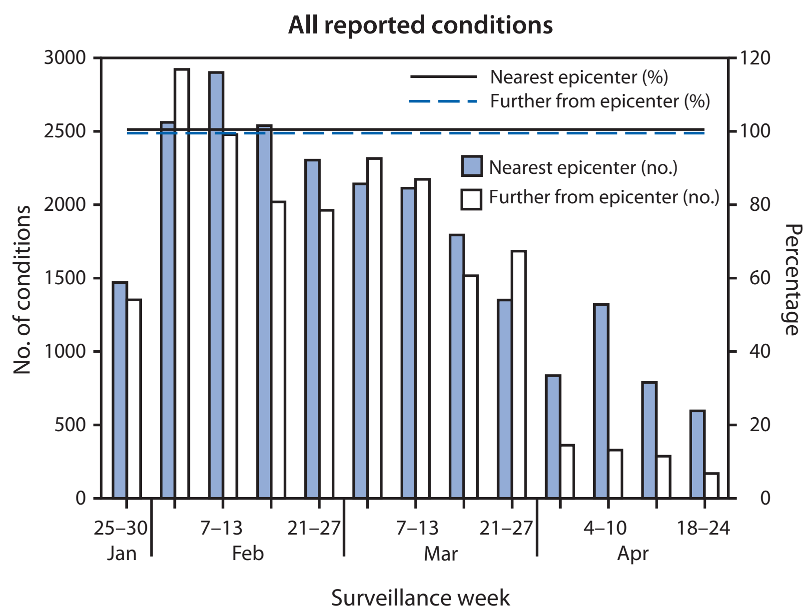
CDC, in collaboration with HealthMap, has created a new online tool for displaying global dengue activity. The interactive DengueMap shows areas where CDC considers dengue to be endemic and sites of recent, location-specific reports of disease. Unlike the CDC map that is compiled every 2 years for the CDC Travelers' Health Yellow Book to characterize general dengue risk based on traditional public health data sources, HealthMap reports are updated hourly and include both professional sources, such as the World Health Organization and ProMED-mail, and informal sources such as local media reports. Combined, these data provide a more dynamic and immediate picture of where transmission of dengue viruses might occur and where disease is actually occurring. DengueMap is available at http://healthmap.org/dengue and http://www.cdc.gov/dengue. Additional information regarding HealthMap is available at http://healthmap.org.

Erratum: Vol. 59, No. RR-8

In the *MMWR Recommendations and Reports* "Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2010," on page 18, the first two sentences under the heading "Pregnant Women and Neonates" should read, "FDA has classified FluLaval, Fluarix (GlaxoSmithKline Biologicals), and Agriflu (Novartis Vaccines and Diagnostics Limited) influenza vaccines as "Pregnancy Category B" medications, indicating that animal reproduction studies have not demonstrated a fetal risk, but there are no controlled studies in pregnant women; all other influenza vaccines are classified as "Pregnancy Category C" medications, indicating that adequate animal reproduction studies have not been conducted. Available data do not indicate that any influenza vaccine causes fetal harm when administered to a pregnant woman, and any of the approved TIV formulations may be used for vaccinating pregnant women."

Errata: Vol. 59, No. 30

In the report, "Launching a National Surveillance System After an Earthquake — Haiti, 2010," errors occurred in one of the charts in Figure 2 on page 937. The corrected chart is below.



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 August 7, 2010 (31st week)*

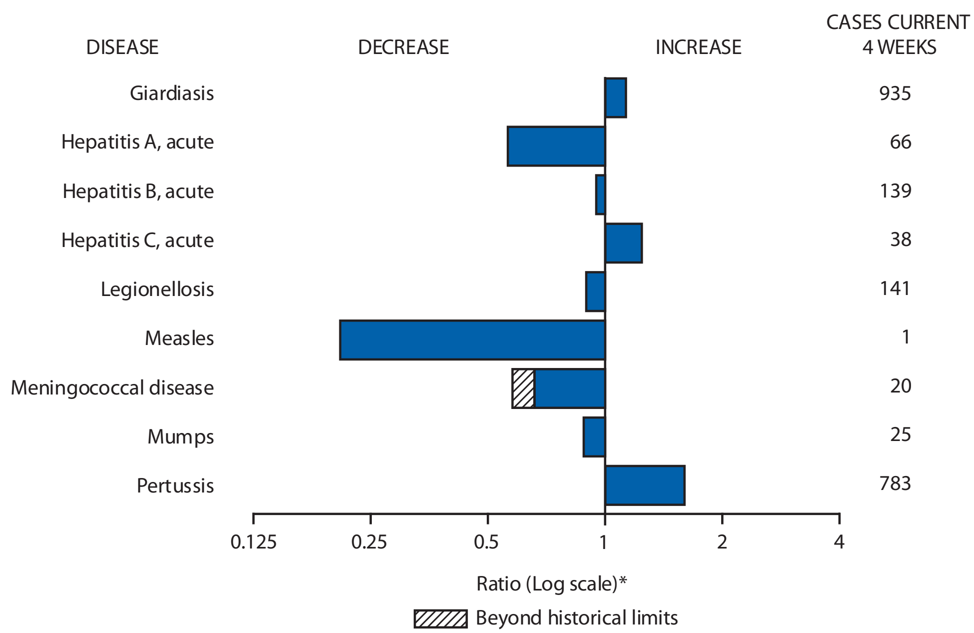
Disease	Current week	Cum 2010	5-year weekly average[†]	Total cases reported for previous years					States reporting cases during current week (No.)
				2009	2008	2007	2006	2005	
Anthrax	—	—	—	1	—	1	1	—	
Botulism, total	1	47	3	118	145	144	165	135	
foodborne	—	5	0	10	17	32	20	19	
infant	1	34	2	83	109	85	97	85	PA (1)
other (wound and unspecified)	—	8	1	25	19	27	48	31	
Brucellosis	3	73	3	115	80	131	121	120	MI (1), FL (1), TN (1)
Chancroid	1	31	0	28	25	23	33	17	NC (1)
Cholera	—	2	0	10	5	7	9	8	
Cyclosporiasis[§]	4	110	5	141	139	93	137	543	OH (1), GA (1), FL (2)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases[§,¶]:									
California serogroup virus disease	—	7	4	55	62	55	67	80	
Eastern equine encephalitis virus disease	—	4	1	4	4	4	8	21	
Powassan virus disease	—	2	0	6	2	7	1	1	
St. Louis encephalitis virus disease	—	2	0	12	13	9	10	13	
Western equine encephalitis virus disease	—	—	—	—	—	—	—	—	
Haemophilus influenzae,[**] invasive disease (age <5 yrs):									
serotype b	—	7	0	35	30	22	29	9	
nonserotype b	—	128	3	236	244	199	175	135	
unknown serotype	2	140	3	178	163	180	179	217	NY (1), GA (1)
Hansen disease[§]	—	25	1	103	80	101	66	87	
Hantavirus pulmonary syndrome[§]	—	10	0	20	18	32	40	26	
Hemolytic uremic syndrome, postdiarrheal[§]	2	96	7	242	330	292	288	221	NY (1), CA (1)
HIV infection, pediatric (age <13 yrs)[††]	—	—	1	—	—	—	—	380	
Influenza-associated pediatric mortality[§,§§]	—	54	1	358	90	77	43	45	
Listeriosis	11	411	21	851	759	808	884	896	VT (1), NY (3), OH (1), TN (1), AZ (1), CA (4)
Measles[¶¶]	—	32	1	71	140	43	55	66	
Meningococcal disease, invasive***:									
A, C, Y, and W-135	—	161	4	301	330	325	318	297	
serogroup B	—	67	3	174	188	167	193	156	
other serogroup	—	8	0	23	38	35	32	27	
unknown serogroup	2	236	8	482	616	550	651	765	PA (1), FL (1)
Mumps	3	2,256	15	1,991	454	800	6,584	314	TX (3)
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[§,§§§]	—	63	3	114	120	171	169	136	
acute	—	49	1	94	106	—	—	—	
chronic	—	14	0	20	14	—	—	—	
Rabies, human	—	—	—	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[§]	—	113	2	161	157	132	125	129	
Syphilis, congenital (age <1 yr)[††††]	—	105	8	423	431	430	349	329	
Tetanus	—	2	0	18	19	28	41	27	
Toxic-shock syndrome (staphylococcal)[§]	—	44	1	74	71	92	101	90	
Trichinellosis	—	1	0	13	39	5	15	16	
Tularemia	—	47	5	93	123	137	95	154	
Typhoid fever	2	211	8	397	449	434	353	324	OH (1), CA (1)
Vancomycin-intermediate *Staphylococcus aureus*[§]	—	59	1	78	63	37	6	2	
Vancomycin-resistant *Staphylococcus aureus*[§]	—	1	—	1	—	2	1	3	
Vibriosis (noncholera *Vibrio* species infections)[§]	27	307	16	789	588	549	NN	NN	OH (1), MO (2), MD (2), VA (4), NC (1), FL (6), TN (1), TX (1), WA (2), CA (7)
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 August 7, 2010 (31st 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 279 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 August 7, 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.

Notifiable Disease Data Team and 122 Cities Mortality Data Team

Patsy A. Hall-Baker

Deborah A. Adams	Rosaline Dhara
Willie J. Anderson	Pearl C. Sharp
Michael S. Wodajo	Lenee Blanton

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2010, and August 8, 2009 (31st 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	12,015	23,302	26,098	677,037	748,981	142	121	284	3,659	3,754
New England	592	744	1,396	23,018	23,823	5	7	50	228	230
Connecticut	—	216	736	5,469	6,871	—	0	44	44	38
Maine†	45	49	75	1,475	1,437	2	1	4	40	24
Massachusetts	476	396	638	12,018	11,421	—	3	15	59	83
New Hampshire	34	40	116	1,304	1,239	1	1	6	37	39
Rhode Island†	32	68	116	2,027	2,148	—	0	8	9	4
Vermont†	5	24	63	725	707	2	1	9	39	42
Mid. Atlantic	2,556	3,189	4,619	99,297	93,240	20	15	38	428	434
New Jersey	201	462	699	15,021	14,804	—	0	4	—	30
New York (Upstate)	638	670	2,530	19,693	17,155	14	3	16	98	97
New York City	1,209	1,183	2,144	37,149	35,117	—	1	5	41	50
Pennsylvania	508	869	1,091	27,434	26,164	6	9	24	289	257
E.N. Central	1,082	3,553	4,413	100,357	120,932	39	29	73	884	904
Illinois	—	877	1,322	20,808	36,998	—	3	7	86	88
Indiana	—	336	776	10,334	14,156	1	4	10	107	165
Michigan	686	887	1,417	28,664	27,847	3	6	12	172	154
Ohio	137	958	1,077	28,133	29,221	23	7	19	243	237
Wisconsin	259	404	495	12,418	12,710	12	10	39	276	260
W.N. Central	183	1,356	1,651	39,128	42,419	24	22	59	613	573
Iowa	10	185	293	5,800	5,849	3	4	13	151	137
Kansas	—	191	381	5,320	6,190	—	2	6	67	54
Minnesota	—	270	337	7,754	8,686	—	3	31	98	143
Missouri	163	490	606	14,634	15,669	10	3	18	137	113
Nebraska†	—	95	237	2,792	3,238	10	2	9	87	53
North Dakota	—	35	93	1,083	989	—	0	18	13	7
South Dakota	10	60	82	1,745	1,798	1	2	10	60	66
S. Atlantic	2,607	4,507	5,681	134,356	154,225	32	20	51	601	571
Delaware	98	87	156	2,548	2,821	—	0	2	3	2
District of Columbia	81	99	178	2,947	4,259	—	0	1	2	5
Florida	657	1,402	1,669	43,494	44,682	12	8	24	216	185
Georgia	1	334	1,388	9,426	25,097	7	5	31	189	218
Maryland†	—	452	1,031	12,652	13,579	1	0	3	18	25
North Carolina	535	802	1,562	26,593	26,011	—	2	12	53	63
South Carolina†	414	515	712	16,029	16,721	5	1	7	45	30
Virginia†	743	595	902	18,488	18,832	5	2	8	65	34
West Virginia	78	67	137	2,179	2,223	2	0	2	10	9
E.S. Central	1,341	1,703	2,410	51,823	56,465	2	4	10	121	115
Alabama†	405	478	660	14,847	16,598	—	1	4	41	42
Kentucky	302	312	642	9,448	7,476	—	1	6	44	30
Mississippi	448	390	781	10,967	14,532	—	0	3	7	8
Tennessee†	186	590	734	16,561	17,859	2	1	5	29	35
W.S. Central	1,646	2,883	4,578	87,163	98,819	2	8	40	184	240
Arkansas†	300	239	402	5,910	8,615	—	1	4	20	26
Louisiana	—	228	1,055	2,922	17,845	—	1	4	20	24
Oklahoma	1,346	264	1,338	9,803	8,989	1	2	9	44	52
Texas†	—	2,163	3,205	68,528	63,370	1	5	30	100	138
Mountain	525	1,509	2,118	41,875	44,981	3	9	25	267	312
Arizona	193	480	713	12,709	15,376	—	0	3	15	23
Colorado	—	400	709	11,061	9,747	—	2	10	76	80
Idaho†	—	66	192	1,710	2,083	2	2	6	51	49
Montana†	7	57	75	1,711	1,804	—	1	4	29	29
Nevada†	161	175	478	5,813	5,933	—	0	2	9	11
New Mexico†	140	164	453	4,243	5,160	—	2	8	43	83
Utah	—	117	175	3,507	3,734	—	1	4	32	22
Wyoming†	24	35	70	1,121	1,144	1	0	2	12	15
Pacific	1,483	3,483	5,350	100,020	114,077	15	12	27	333	375
Alaska	—	105	146	3,388	3,188	—	0	1	2	3
California	1,483	2,742	4,406	81,565	87,580	9	8	20	203	205
Hawaii	—	112	159	3,107	3,713	—	0	0	—	1
Oregon	—	129	468	1,367	6,404	3	2	10	80	120
Washington	—	385	638	10,593	13,192	3	1	8	48	46
American Samoa	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	4	31	157	237	—	0	0	—	—
Puerto Rico	204	94	266	3,163	4,888	N	0	0	N	N
U.S. Virgin Islands	—	8	15	132	344	—	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 August 7, 2010, and August 8, 2009 (31st week)***

	Dengue Virus Infection									
	Dengue Fever†					Dengue Hemorrhagic Fever§				
	Current	Previous 52 weeks		Cum	Cum	Current	Previous 52 weeks		Cum	Cum
Reporting area	week	Med	Max	2010	2009	week	Med	Max	2010	2009
United States	—	1	12	142	NN	—	0	1	1	NN
New England	—	0	1	1	NN	—	0	0	—	NN
Connecticut	—	0	0	—	NN	—	0	0	—	NN
Maine¶	—	0	1	1	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	0	—	NN	—	0	0	—	NN
Mid. Atlantic	—	0	4	27	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	4	23	NN	—	0	0	—	NN
Pennsylvania	—	0	2	4	NN	—	0	0	—	NN
E.N. Central	—	0	2	6	NN	—	0	0	—	NN
Illinois	—	0	0	—	NN	—	0	0	—	NN
Indiana	—	0	0	—	NN	—	0	0	—	NN
Michigan	—	0	0	—	NN	—	0	0	—	NN
Ohio	—	0	2	5	NN	—	0	0	—	NN
Wisconsin	—	0	1	1	NN	—	0	0	—	NN
W.N. Central	—	0	2	8	NN	—	0	0	—	NN
Iowa	—	0	1	1	NN	—	0	0	—	NN
Kansas	—	0	0	—	NN	—	0	0	—	NN
Minnesota	—	0	2	7	NN	—	0	0	—	NN
Missouri	—	0	0	—	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	—	0	11	88	NN	—	0	1	1	NN
Delaware	—	0	0	—	NN	—	0	0	—	NN
District of Columbia	—	0	0	—	NN	—	0	0	—	NN
Florida	—	0	10	78	NN	—	0	1	1	NN
Georgia	—	0	2	5	NN	—	0	0	—	NN
Maryland¶	—	0	0	—	NN	—	0	0	—	NN
North Carolina	—	0	0	—	NN	—	0	0	—	NN
South Carolina¶	—	0	1	4	NN	—	0	0	—	NN
Virginia¶	—	0	0	—	NN	—	0	0	—	NN
West Virginia	—	0	1	1	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	0	—	NN	—	0	0	—	NN
Arkansas¶	—	0	0	—	NN	—	0	0	—	NN
Louisiana	—	0	0	—	NN	—	0	0	—	NN
Oklahoma	—	0	0	—	NN	—	0	0	—	NN
Texas¶	—	0	0	—	NN	—	0	0	—	NN
Mountain	—	0	1	3	NN	—	0	0	—	NN
Arizona	—	0	0	—	NN	—	0	0	—	NN
Colorado	—	0	0	—	NN	—	0	0	—	NN
Idaho¶	—	0	0	—	NN	—	0	0	—	NN
Montana¶	—	0	1	1	NN	—	0	0	—	NN
Nevada¶	—	0	1	1	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	8	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	4	NN	—	0	0	—	NN
American Samoa	—	0	0	—	NN	—	0	0	—	NN
C.N.M.I.	—	—	—	—	NN	—	—	—	—	NN
Guam	—	0	0	—	NN	—	0	0	—	NN
Puerto Rico	—	7	83	1,055	NN	—	0	3	25	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.
§ 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 August 7, 2010, and August 8, 2009 (31st week)***

	Ehrlichiosis/Anaplasmosis†														
	Ehrlichia chaffeensis					*Anaplasma phagocytophilum*					Undetermined				
	Current week	Previous 52 weeks		Cum	Cum	Current week	Previous 52 weeks		Cum	Cum	Current week	Previous 52 weeks		Cum	Cum
Reporting area		Med	Max	2010	2009		Med	Max	2010	2009		Med	Max	2010	2009
United States	11	12	181	313	564	13	14	309	305	553	2	2	35	55	123
New England	—	0	6	3	32	—	1	22	30	158	—	0	1	2	2
Connecticut	—	0	0	—	—	—	0	13	—	2	—	0	0	—	—
Maine§	—	0	1	2	3	—	0	2	12	11	—	0	0	—	—
Massachusetts	—	0	2	—	7	—	0	4	—	80	—	0	0	—	—
New Hampshire	—	0	1	1	3	—	0	3	7	14	—	0	1	2	1
Rhode Island§	—	0	4	—	19	—	0	20	11	51	—	0	0	—	1
Vermont§	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	3	1	15	26	102	10	3	17	99	171	—	0	3	1	34
New Jersey	—	0	6	—	64	—	0	2	1	57	—	0	0	—	—
New York (Upstate)	3	1	15	17	21	10	2	17	97	109	—	0	1	1	4
New York City	—	0	1	8	7	—	0	1	1	4	—	0	0	—	1
Pennsylvania	—	0	5	1	10	—	0	1	—	1	—	0	3	—	29
E.N. Central	—	0	7	13	69	—	3	22	124	208	—	1	5	29	54
Illinois	—	0	3	6	31	—	0	1	—	5	—	0	2	3	3
Indiana	—	0	0	—	—	—	0	0	—	—	—	0	2	12	28
Michigan	—	0	1	1	3	—	0	0	—	—	—	0	1	2	—
Ohio	—	0	2	1	9	—	0	0	—	1	—	0	0	—	2
Wisconsin	—	0	3	5	26	—	3	22	124	202	—	0	3	12	21
W.N. Central	3	2	10	74	109	1	0	261	8	1	1	0	30	14	14
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	1	4	6	—	0	1	—	—	—	0	0	—	—
Minnesota	—	0	6	—	—	—	0	261	—	—	—	0	30	—	2
Missouri	2	1	9	69	102	1	0	3	8	1	1	0	4	14	12
Nebraska§	1	0	1	1	1	—	0	1	—	—	—	0	0	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
S. Atlantic	5	4	19	139	147	2	0	7	34	11	—	0	1	2	2
Delaware	—	0	3	13	12	—	0	1	4	2	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Florida	—	0	2	7	7	1	0	1	2	2	—	0	0	—	—
Georgia	—	0	2	9	15	—	0	1	1	1	—	0	1	1	—
Maryland§	—	0	2	12	29	—	0	2	8	2	—	0	1	1	—
North Carolina	—	1	9	53	34	—	0	4	12	2	—	0	0	—	—
South Carolina§	—	0	2	2	8	—	0	0	—	—	—	0	0	—	—
Virginia§	5	1	13	43	41	1	0	2	7	2	—	0	0	—	2
West Virginia	—	0	0	—	1	—	0	0	—	—	—	0	1	—	—
E.S. Central	—	1	11	44	82	—	0	2	10	2	1	0	2	6	17
Alabama§	—	0	3	6	2	—	0	2	4	—	—	0	0	—	—
Kentucky	—	0	2	6	8	—	0	0	—	—	—	0	0	—	—
Mississippi	—	0	1	1	5	—	0	1	1	—	—	0	0	—	—
Tennessee§	—	1	10	31	67	—	0	1	5	2	1	0	2	6	17
W.S. Central	—	0	141	13	21	—	0	23	—	1	—	0	1	1	—
Arkansas§	—	0	34	1	4	—	0	6	—	—	—	0	0	—	—
Louisiana	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oklahoma	—	0	105	11	16	—	0	16	—	1	—	0	0	—	—
Texas§	—	0	2	1	1	—	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	2	—	0	1	—	1	—	0	1	—	—
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
California	—	0	1	1	2	—	0	1	—	1	—	0	1	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
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 = 6.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2010, and August 8, 2009 (31st 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	230	333	666	9,649	10,259	2,879	5,408	6,656	156,973	181,437	19	58	171	1,835	1,871
New England	8	31	65	811	866	66	100	196	3,064	2,869	—	3	21	101	126
Connecticut	—	5	15	158	161	—	44	169	1,380	1,315	—	0	15	22	39
Maine§	1	4	13	113	111	—	3	11	108	79	—	0	2	8	15
Massachusetts	—	12	36	311	364	61	40	72	1,315	1,179	—	1	8	52	59
New Hampshire	1	3	11	87	108	—	2	7	80	65	—	0	2	7	6
Rhode Island§	—	1	7	35	37	—	5	13	140	204	—	0	2	7	3
Vermont§	6	4	14	107	85	5	1	17	41	27	—	0	1	5	4
Mid. Atlantic	44	60	112	1,641	1,899	511	676	941	20,148	18,109	1	11	34	357	359
New Jersey	—	7	15	163	256	43	102	151	3,215	2,804	—	2	7	51	87
New York (Upstate)	26	24	84	613	690	80	108	422	3,119	2,996	1	3	20	96	87
New York City	8	16	27	458	496	271	221	394	7,058	6,524	—	2	6	67	39
Pennsylvania	10	15	37	407	457	117	212	282	6,756	5,785	—	4	9	143	146
E.N. Central	24	50	92	1,459	1,582	233	965	1,536	27,146	38,575	3	9	20	306	297
Illinois	—	11	22	271	351	—	201	441	4,702	12,373	—	2	9	85	114
Indiana	—	6	14	147	149	—	92	186	2,877	4,625	—	1	6	59	52
Michigan	4	12	25	356	368	127	251	502	8,043	9,010	1	0	4	23	16
Ohio	17	17	28	490	453	44	314	372	8,821	9,399	2	2	6	74	67
Wisconsin	3	7	23	195	261	62	91	193	2,703	3,168	—	2	5	65	48
W.N. Central	19	25	165	823	939	73	274	367	7,799	9,002	5	3	24	106	104
Iowa	4	5	10	161	175	2	31	53	923	1,023	—	0	1	1	—
Kansas	—	4	14	123	77	—	39	83	1,079	1,536	—	0	2	9	11
Minnesota	—	0	135	136	250	—	40	64	1,111	1,416	—	0	17	25	32
Missouri	9	9	27	221	281	71	123	172	3,783	3,937	3	1	6	49	40
Nebraska§	6	3	9	126	101	—	23	54	646	798	2	0	2	14	16
North Dakota	—	0	8	13	7	—	2	11	76	75	—	0	4	8	5
South Dakota	—	1	10	43	48	—	5	16	181	217	—	0	0	—	—
S. Atlantic	67	73	143	2,214	2,127	758	1,327	1,690	39,044	45,583	9	14	27	483	506
Delaware	—	0	3	14	18	25	19	34	590	542	—	0	1	5	3
District of Columbia	—	1	4	17	39	39	39	86	1,164	1,650	—	0	1	1	2
Florida	51	38	87	1,167	1,133	244	376	482	11,649	12,886	2	3	9	119	163
Georgia	—	13	52	486	444	—	137	494	3,346	8,449	4	3	9	116	99
Maryland§	4	5	12	161	159	—	128	237	3,632	3,661	1	1	6	37	58
North Carolina	N	0	0	N	N	174	262	596	8,860	8,869	2	2	9	86	60
South Carolina§	2	2	7	77	54	122	157	234	4,805	5,098	—	2	7	56	41
Virginia§	9	8	36	272	252	136	162	271	4,711	4,113	—	2	4	50	59
West Virginia	1	0	5	20	28	18	8	19	287	315	—	0	5	13	21
E.S. Central	—	6	22	139	230	394	477	700	14,131	16,227	1	3	12	110	121
Alabama§	—	4	9	87	115	125	137	214	4,369	4,624	—	0	3	17	31
Kentucky	N	0	0	N	N	94	80	156	2,418	2,179	1	0	2	22	16
Mississippi	N	0	0	N	N	130	114	217	3,067	4,565	—	0	2	9	7
Tennessee§	—	3	18	52	115	45	154	206	4,277	4,859	—	2	10	62	67
W.S. Central	1	9	18	204	271	431	776	1,228	22,981	28,799	—	2	20	85	82
Arkansas§	1	3	9	65	76	110	72	139	1,776	2,638	—	0	3	12	15
Louisiana	—	3	10	76	115	—	64	343	910	5,811	—	0	3	17	14
Oklahoma	—	3	10	63	80	321	81	359	2,764	2,799	—	1	15	49	50
Texas§	N	0	0	N	N	—	568	963	17,531	17,551	—	0	2	7	3
Mountain	7	28	64	834	876	86	172	266	4,884	5,363	—	5	15	202	168
Arizona	2	3	7	83	111	31	61	109	1,490	1,765	—	2	10	74	53
Colorado	—	13	27	410	255	—	50	127	1,470	1,641	—	1	5	62	50
Idaho§	1	4	9	115	98	—	2	8	43	57	—	0	2	13	3
Montana§	3	2	11	60	72	1	2	6	65	48	—	0	1	2	1
Nevada§	1	1	11	32	63	23	28	94	1,027	1,021	—	0	2	5	12
New Mexico§	—	1	8	47	75	30	21	41	578	613	—	1	5	26	22
Utah	—	3	13	67	165	—	6	15	188	173	—	0	4	15	24
Wyoming§	—	1	5	20	37	1	1	3	23	45	—	0	2	5	3
Pacific	60	53	133	1,524	1,469	327	565	749	17,776	16,910	—	2	9	85	108
Alaska	—	2	7	52	53	—	23	36	739	539	—	0	2	14	12
California	27	34	61	966	990	327	475	680	15,223	13,921	—	0	8	24	37
Hawaii	—	0	4	15	13	—	10	24	363	384	—	0	2	3	25
Oregon	6	9	15	258	215	—	8	43	106	655	—	1	5	40	31
Washington	27	8	75	233	198	—	43	84	1,345	1,411	—	0	4	4	3
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	1	2	3	—	0	4	20	12	—	0	0	—	—
Puerto Rico	—	1	10	14	90	5	4	14	151	169	—	0	1	1	3
U.S. Virgin Islands	—	0	0	—	—	—	1	4	25	88	—	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 August 7, 2010, and August 8, 2009 (31st week)*

Reporting area	Hepatitis (viral, acute), by type: A					B					C				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009
United States	26	30	69	857	1,183	38	57	204	1,716	1,995	6	15	44	475	449
New England	—	2	5	60	63	—	1	5	31	35	—	1	5	18	36
Connecticut	—	0	2	16	14	—	0	2	7	9	—	0	4	13	27
Maine†	—	0	1	4	1	—	0	2	10	8	—	0	1	—	—
Massachusetts	—	1	4	33	38	—	0	2	7	15	—	0	1	5	8
New Hampshire	—	0	1	1	5	—	0	2	5	3	N	0	0	N	N
Rhode Island†	—	0	4	6	3	U	0	0	U	U	U	0	0	U	U
Vermont†	—	0	0	—	2	—	0	1	2	—	—	0	0	—	1
Mid. Atlantic	5	4	10	110	169	2	5	10	178	224	2	2	5	63	60
New Jersey	—	0	4	10	49	—	1	5	44	67	—	0	2	5	4
New York (Upstate)	3	1	3	33	28	1	1	6	32	38	1	1	3	36	31
New York City	—	1	5	34	50	1	1	4	52	41	—	0	1	—	2
Pennsylvania	2	1	6	33	42	—	1	5	50	78	1	0	3	22	23
E.N. Central	3	4	10	102	187	2	8	15	255	286	1	2	7	88	64
Illinois	—	1	6	18	87	—	2	6	54	69	—	0	1	1	4
Indiana	—	0	2	14	13	—	1	5	32	47	—	0	2	15	13
Michigan	2	1	4	32	42	—	2	6	67	92	1	1	6	64	22
Ohio	1	0	4	18	26	2	2	6	69	63	—	0	1	6	22
Wisconsin	—	0	3	20	19	—	1	3	33	15	—	0	1	2	3
W.N. Central	1	1	10	29	75	—	3	15	79	82	—	0	11	18	7
Iowa	—	0	3	5	24	—	0	2	10	23	—	0	4	1	3
Kansas	—	0	2	8	7	—	0	2	4	5	—	0	0	—	1
Minnesota	—	0	8	1	13	—	0	13	6	14	—	0	9	6	1
Missouri	—	0	3	12	12	—	1	5	49	27	—	0	1	9	—
Nebraska†	1	0	1	3	16	—	0	2	9	11	—	0	1	2	2
North Dakota	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	1	—	3	—	0	1	1	2	—	0	1	—	—
S. Atlantic	9	8	13	219	251	11	16	40	491	544	1	4	7	103	105
Delaware	—	0	1	5	3	—	1	2	18	19	U	0	0	U	U
District of Columbia	—	0	1	1	1	—	0	2	2	9	—	0	1	2	—
Florida	7	3	8	79	112	3	5	11	178	182	1	1	4	32	24
Georgia	1	1	3	25	33	1	3	7	88	86	—	0	2	6	27
Maryland†	1	0	4	16	29	—	1	6	32	49	—	0	2	14	15
North Carolina	—	1	5	39	26	—	1	5	35	72	—	1	3	29	13
South Carolina†	—	1	4	23	30	1	1	4	34	29	—	0	0	—	1
Virginia†	—	1	6	30	17	6	2	14	67	52	—	0	2	9	7
West Virginia	—	0	2	1	—	—	0	14	37	46	—	0	5	11	18
E.S. Central	3	1	3	24	28	1	7	13	181	202	—	2	7	75	59
Alabama†	—	0	1	5	7	—	1	5	35	63	—	0	2	3	5
Kentucky	2	0	2	11	5	—	2	6	60	47	—	1	5	51	36
Mississippi	—	0	1	—	8	—	0	3	16	19	U	0	0	U	U
Tennessee†	1	0	2	8	8	1	3	6	70	73	—	0	4	21	18
W.S. Central	—	3	19	77	110	5	9	109	242	339	—	1	14	38	31
Arkansas†	—	0	3	—	5	—	1	4	28	44	—	0	1	—	1
Louisiana	—	0	2	6	3	—	1	5	23	37	—	0	1	3	5
Oklahoma	—	0	3	—	1	3	1	19	49	56	—	0	12	14	4
Texas†	—	2	18	71	101	2	5	87	142	202	—	0	3	21	21
Mountain	—	3	8	96	93	1	2	8	79	89	—	1	5	29	35
Arizona	—	1	5	45	37	—	0	2	20	35	U	0	0	U	U
Colorado	—	1	4	22	32	—	0	3	18	17	—	0	2	6	22
Idaho†	—	0	2	6	2	—	0	1	5	6	—	0	2	7	2
Montana†	—	0	1	4	5	—	0	1	1	—	—	0	0	—	1
Nevada†	—	0	2	9	7	1	1	3	27	18	—	0	1	3	2
New Mexico†	—	0	1	3	6	—	0	1	3	5	—	0	2	7	5
Utah	—	0	2	4	3	—	0	1	5	4	—	0	1	6	3
Wyoming†	—	0	3	3	1	—	0	0	—	4	—	0	0	—	—
Pacific	5	5	16	140	207	16	6	20	180	194	2	1	6	43	52
Alaska	—	0	1	1	2	—	0	1	2	2	U	0	2	U	U
California	5	4	15	113	158	15	4	16	127	137	1	0	4	21	26
Hawaii	—	0	2	1	8	—	0	1	—	4	U	0	0	U	U
Oregon	—	0	2	12	10	—	1	4	26	26	—	0	3	9	14
Washington	—	0	2	13	29	1	1	4	25	25	1	0	6	13	12
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	6	12	4	—	0	6	24	40	—	0	6	24	30
Puerto Rico	—	0	1	3	20	—	0	5	8	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.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2010, and August 8, 2009 (31st week)*

Reporting area	Legionellosis					Lyme disease					Malaria				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009
United States	33	57	174	1,489	1,671	308	435	2,336	12,771	24,006	22	25	89	698	779
New England	2	3	18	60	107	37	121	492	2,927	8,667	—	1	4	34	32
Connecticut	2	0	4	18	31	—	40	150	1,071	3,047	—	0	1	1	4
Maine†	—	0	3	5	2	21	13	76	299	383	—	0	1	5	1
Massachusetts	—	1	7	22	58	—	33	198	683	3,879	—	1	3	21	20
New Hampshire	—	0	1	5	8	—	22	48	652	976	—	0	1	1	2
Rhode Island†	—	0	4	5	5	6	1	19	31	147	—	0	1	4	2
Vermont†	—	0	2	5	3	10	4	45	191	235	—	0	1	2	3
Mid. Atlantic	12	15	73	364	599	205	199	757	6,753	10,190	—	7	17	187	217
New Jersey	—	2	14	37	115	—	44	140	1,606	3,717	—	0	5	1	61
New York (Upstate)	8	5	29	126	163	137	56	577	1,681	2,103	—	1	4	38	28
New York City	—	2	14	59	130	—	0	45	5	637	—	4	12	115	92
Pennsylvania	4	6	20	142	191	68	74	363	3,461	3,733	—	1	3	33	36
E.N. Central	7	11	41	307	313	—	23	129	822	2,114	2	2	12	81	107
Illinois	—	1	11	38	43	—	1	11	41	102	—	1	7	24	49
Indiana	—	2	6	54	29	—	1	6	34	56	—	0	4	7	12
Michigan	3	3	13	56	60	—	1	9	52	45	—	0	4	15	17
Ohio	4	5	17	130	142	—	1	5	16	22	2	0	5	31	24
Wisconsin	—	1	6	29	39	—	19	109	679	1,889	—	0	2	4	5
W.N. Central	1	2	19	66	66	—	3	1,395	68	141	2	1	11	36	35
Iowa	—	0	3	4	14	—	0	7	48	84	—	0	1	7	7
Kansas	—	0	2	6	5	—	0	1	5	14	—	0	1	4	4
Minnesota	—	0	16	21	6	—	0	1,380	—	40	—	0	11	3	13
Missouri	—	1	5	22	30	—	0	1	3	1	1	0	3	10	7
Nebraska†	1	0	2	6	9	—	0	2	8	1	1	0	2	10	3
North Dakota	—	0	1	3	1	—	0	15	3	—	—	0	1	—	—
South Dakota	—	0	1	4	1	—	0	1	1	1	—	0	2	2	1
S. Atlantic	5	10	24	301	283	61	62	155	1,989	2,665	9	6	15	178	217
Delaware	—	0	3	10	8	5	12	36	432	656	—	0	1	2	2
District of Columbia	—	0	4	12	14	—	0	4	10	41	—	0	3	7	8
Florida	—	4	10	101	91	6	2	11	47	25	5	2	6	71	59
Georgia	—	1	4	27	29	—	0	2	5	33	—	0	4	3	47
Maryland†	1	3	12	59	70	19	26	77	809	1,337	—	1	13	31	51
North Carolina	4	1	7	36	33	—	1	8	53	59	—	0	4	19	18
South Carolina†	—	0	2	6	5	—	1	3	18	21	—	0	1	3	2
Virginia†	—	1	6	41	30	31	14	79	567	430	4	1	5	41	28
West Virginia	—	0	3	9	3	—	0	33	48	63	—	0	2	1	2
E.S. Central	2	2	12	75	68	—	1	4	30	17	1	0	3	18	25
Alabama†	—	0	2	7	9	—	0	1	—	2	—	0	2	3	6
Kentucky	1	0	3	14	29	—	0	1	2	1	1	0	3	4	8
Mississippi	—	0	3	8	4	—	0	0	—	—	—	0	2	2	3
Tennessee†	1	1	9	46	26	—	1	4	28	14	—	0	2	9	8
W.S. Central	—	2	14	59	61	—	3	44	36	90	—	1	31	50	33
Arkansas†	—	0	2	10	4	—	0	0	—	—	—	0	1	1	3
Louisiana	—	0	3	3	6	—	0	0	—	—	—	0	1	—	4
Oklahoma	—	0	4	8	3	—	0	2	—	—	—	0	1	3	1
Texas†	—	1	10	38	48	—	3	42	36	90	—	1	30	46	25
Mountain	1	3	9	96	72	1	0	4	13	36	—	1	6	32	33
Arizona	—	1	5	34	25	—	0	1	3	3	—	0	2	14	5
Colorado	—	1	5	19	10	—	0	1	1	—	—	0	2	10	19
Idaho†	1	0	1	3	3	1	0	3	4	9	—	0	1	1	1
Montana†	—	0	1	4	4	—	0	0	—	3	—	0	3	1	4
Nevada†	—	0	2	17	9	—	0	1	—	11	—	0	1	3	—
New Mexico†	—	0	2	4	3	—	0	1	3	3	—	0	0	—	—
Utah	—	0	3	12	17	—	0	1	2	6	—	0	1	3	4
Wyoming†	—	0	2	3	1	—	0	1	—	1	—	0	0	—	—
Pacific	3	5	19	161	102	4	5	10	133	86	8	3	19	82	80
Alaska	—	0	2	2	1	—	0	1	2	4	—	0	1	2	2
California	2	3	19	137	79	4	3	9	91	54	7	2	13	56	58
Hawaii	—	0	1	1	1	N	0	0	N	N	—	0	0	—	1
Oregon	1	0	3	9	7	—	1	4	35	25	—	0	1	6	9
Washington	—	0	4	12	14	—	0	3	5	3	1	0	5	18	10
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	—	—	N	0	0	N	N	—	0	1	1	3
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.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) **Provisional cases of selected notifiable diseases, United States, weeks ending August 7, 2010, and August 8, 2009 (31st 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	2	16	43	472	614	210	297	1,756	9,412	9,141	53	64	147	1,720	3,115
New England	—	0	2	10	23	1	7	16	168	425	9	4	24	148	206
Connecticut	—	0	2	1	3	—	1	5	30	30	—	1	22	59	85
Maine§	—	0	1	3	3	1	0	5	21	67	1	1	4	35	34
Massachusetts	—	0	1	2	11	—	4	10	96	248	—	0	0	—	—
New Hampshire	—	0	1	—	1	—	0	3	6	54	5	0	2	8	24
Rhode Island§	—	0	0	—	4	—	0	8	12	18	—	1	5	14	26
Vermont§	—	0	1	4	1	—	0	1	3	8	3	1	5	32	37
Mid. Atlantic	1	1	4	42	68	25	21	45	614	708	19	11	26	420	350
New Jersey	—	0	2	9	11	—	3	10	58	146	—	0	0	—	—
New York (Upstate)	—	0	3	9	16	17	7	27	249	111	19	9	22	315	241
New York City	—	0	2	9	12	—	0	11	41	53	—	1	12	105	9
Pennsylvania	1	0	2	15	29	8	8	22	266	398	—	0	0	—	100
E.N. Central	—	3	8	81	108	74	65	121	2,133	1,875	3	2	19	125	131
Illinois	—	0	4	16	26	—	11	26	334	440	—	1	9	61	46
Indiana	—	0	3	18	23	—	8	21	271	212	—	0	5	—	24
Michigan	—	0	2	12	18	10	22	41	574	409	2	1	6	41	39
Ohio	—	1	2	21	26	64	19	46	773	701	1	0	5	23	22
Wisconsin	—	0	2	14	15	—	4	11	181	113	—	0	0	—	—
W.N. Central	—	1	6	35	48	12	26	627	689	1,428	5	5	18	157	238
Iowa	—	0	3	8	7	—	5	23	211	147	—	0	2	7	23
Kansas	—	0	2	4	8	—	3	9	88	159	—	1	4	41	56
Minnesota	—	0	2	2	9	—	0	601	80	309	—	1	9	18	32
Missouri	—	0	3	15	16	5	8	30	198	682	4	1	6	50	32
Nebraska§	—	0	2	5	5	7	2	8	87	100	1	1	6	34	57
North Dakota	—	0	1	1	1	—	0	9	6	16	—	0	7	7	4
South Dakota	—	0	2	—	2	—	1	6	19	15	—	0	4	—	34
S. Atlantic	1	3	7	93	112	32	26	63	793	988	9	24	79	632	1,371
Delaware	—	0	1	1	2	—	0	3	5	8	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	1	3	3	—	0	0	—	—
Florida	1	1	5	44	37	18	5	28	183	312	—	0	66	66	161
Georgia	—	0	1	7	22	1	3	8	110	166	—	0	13	—	261
Maryland§	—	0	1	4	6	1	2	8	64	84	8	7	15	212	234
North Carolina	—	0	2	11	20	—	2	32	123	129	—	0	17	—	302
South Carolina§	—	0	1	8	10	3	5	19	185	159	—	0	0	—	—
Virginia§	—	0	2	16	10	5	4	15	98	111	—	10	26	309	342
West Virginia	—	0	2	2	5	4	0	6	22	16	1	2	6	45	71
E.S. Central	—	0	4	22	21	—	14	31	421	529	5	2	7	76	99
Alabama§	—	0	2	4	6	—	4	13	121	207	2	0	4	31	—
Kentucky	—	0	2	10	4	—	4	15	144	155	2	0	4	13	33
Mississippi	—	0	1	2	2	—	1	6	36	45	1	0	1	3	2
Tennessee§	—	0	2	6	9	—	3	10	120	122	—	1	6	29	64
W.S. Central	—	1	9	54	54	27	61	753	1,640	1,874	—	2	40	28	504
Arkansas§	—	0	2	5	5	2	4	29	80	214	—	0	10	20	28
Louisiana	—	0	4	11	10	—	1	5	18	117	—	0	0	—	—
Oklahoma	—	0	7	14	4	6	0	41	23	18	—	0	15	8	7
Texas§	—	0	7	24	35	19	51	681	1,519	1,525	—	0	30	—	469
Mountain	—	1	6	39	46	6	20	41	616	585	1	1	8	36	64
Arizona	—	0	2	9	10	—	7	14	210	127	—	0	5	—	—
Colorado	—	0	4	13	13	—	3	13	105	160	—	0	0	—	—
Idaho§	—	0	1	5	6	6	2	19	102	53	1	0	2	3	3
Montana§	—	0	1	1	5	—	1	8	32	16	—	0	4	7	16
Nevada§	—	0	1	7	4	—	0	7	18	8	—	0	1	2	4
New Mexico§	—	0	1	3	3	—	1	6	37	43	—	0	3	9	18
Utah	—	0	1	1	1	—	3	10	107	157	—	0	2	2	4
Wyoming§	—	0	1	—	4	—	0	1	5	21	—	0	3	13	19
Pacific	—	3	16	96	134	33	41	288	2,338	729	2	3	12	98	152
Alaska	—	0	2	1	4	—	0	6	17	29	—	0	2	11	10
California	—	2	13	60	84	17	26	275	1,964	343	2	3	11	78	133
Hawaii	—	0	2	—	5	—	0	4	7	24	—	0	0	—	—
Oregon	—	1	3	23	28	1	6	16	200	163	—	0	2	9	9
Washington	—	0	7	12	13	15	4	25	150	170	—	0	0	—	—
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	27	25
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 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 August 7, 2010, and August 8, 2009 (31st week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009
United States	837	885	1,555	22,762	25,602	104	80	198	2,242	2,503	188	249	527	7,635	9,821
New England	—	29	300	1,160	1,543	—	3	33	97	165	—	5	36	156	198
Connecticut	—	0	284	284	430	—	0	33	33	67	—	0	29	29	43
Maine§	—	2	7	62	81	—	0	2	9	12	—	0	2	3	2
Massachusetts	—	20	47	578	689	—	2	6	32	51	—	4	27	110	128
New Hampshire	—	3	9	105	204	—	1	2	15	22	—	0	2	4	13
Rhode Island§	—	2	17	97	92	—	0	26	2	—	—	0	7	9	8
Vermont§	—	1	4	34	47	—	0	2	6	13	—	0	1	1	4
Mid. Atlantic	84	95	208	2,780	3,002	17	8	24	257	230	18	35	90	975	1,872
New Jersey	—	14	47	347	626	—	1	5	21	65	—	6	23	172	394
New York (Upstate)	42	24	78	747	689	12	3	15	110	66	8	4	19	116	131
New York City	7	25	46	687	688	—	1	4	30	38	—	7	15	171	262
Pennsylvania	35	29	67	999	999	5	2	12	96	61	10	18	63	516	1,085
E.N. Central	45	82	202	2,659	3,148	10	11	29	331	451	17	26	235	1,046	1,850
Illinois	—	25	101	913	899	—	1	6	30	115	—	9	228	583	403
Indiana	—	9	24	215	364	—	1	8	46	60	—	1	5	22	49
Michigan	4	15	34	450	597	—	2	16	91	79	2	4	10	129	150
Ohio	41	24	47	804	872	10	2	11	88	71	15	7	31	208	883
Wisconsin	—	10	38	277	416	—	3	8	76	126	—	4	16	104	365
W.N. Central	41	46	94	1,329	1,638	10	11	42	363	428	28	49	88	1,611	575
Iowa	5	7	36	277	260	—	2	15	90	96	1	1	5	35	44
Kansas	—	7	20	219	240	—	1	6	41	41	—	3	14	152	147
Minnesota	—	7	32	178	353	—	1	17	31	106	—	0	6	14	48
Missouri	26	13	37	438	354	9	3	29	145	83	26	44	75	1,383	313
Nebraska§	10	4	12	129	246	1	1	6	42	58	1	0	4	23	17
North Dakota	—	0	39	16	34	—	0	7	—	4	—	0	5	—	3
South Dakota	—	2	6	72	151	—	0	12	14	40	—	0	2	4	3
S. Atlantic	397	264	511	6,465	6,562	25	12	26	365	383	59	40	78	1,259	1,513
Delaware	1	3	9	72	57	—	0	2	3	10	—	3	10	36	58
District of Columbia	—	1	4	37	60	—	0	1	4	2	—	0	4	16	17
Florida	158	126	277	2,796	2,792	14	4	10	131	94	38	12	49	526	268
Georgia	65	40	105	1,054	1,198	—	1	6	40	44	12	12	25	400	401
Maryland§	42	15	43	513	427	3	2	6	50	48	6	3	12	68	267
North Carolina	38	32	91	804	916	3	1	5	33	71	1	3	12	95	292
South Carolina§	60	20	66	573	430	—	0	3	12	21	—	1	5	41	80
Virginia§	30	18	68	510	546	3	2	15	80	77	2	3	15	76	124
West Virginia	3	3	17	106	136	2	0	5	12	16	—	0	2	1	6
E.S. Central	27	50	111	1,417	1,643	1	4	10	126	135	2	11	40	398	552
Alabama§	—	14	40	326	456	—	0	4	27	33	—	2	10	72	106
Kentucky	4	8	29	279	281	—	1	4	23	47	1	4	28	171	134
Mississippi	—	13	42	392	472	—	0	2	10	6	—	1	3	22	26
Tennessee§	23	14	33	420	434	1	2	8	66	49	1	5	11	133	286
W.S. Central	93	109	547	2,291	2,794	5	4	68	125	167	39	47	251	1,283	1,883
Arkansas§	29	10	36	325	326	—	1	5	32	21	4	2	10	33	214
Louisiana	—	20	46	502	601	—	0	3	7	15	—	3	10	128	130
Oklahoma	27	10	46	292	321	1	0	27	13	16	3	6	96	166	160
Texas§	37	56	477	1,172	1,546	4	3	41	73	115	32	34	144	956	1,379
Mountain	22	49	133	1,395	1,752	8	9	26	285	322	5	14	39	377	706
Arizona	5	18	50	446	555	4	1	5	44	41	4	8	32	201	507
Colorado	—	11	33	351	374	—	2	18	112	111	—	2	6	64	55
Idaho§	6	3	10	89	104	2	1	7	36	42	—	0	3	16	4
Montana§	2	2	7	60	75	—	1	7	25	16	—	0	1	4	11
Nevada§	4	4	14	148	151	—	0	4	15	18	—	1	7	19	38
New Mexico§	1	5	20	143	236	—	1	3	17	23	1	1	6	61	76
Utah	—	5	17	131	201	—	1	11	26	64	—	0	4	12	14
Wyoming§	4	1	9	27	56	2	0	2	10	7	—	0	2	—	1
Pacific	128	115	299	3,266	3,520	28	10	46	293	222	20	21	64	530	672
Alaska	—	1	5	47	43	—	0	1	1	1	—	0	2	—	1
California	102	84	227	2,439	2,676	9	5	35	127	132	17	16	51	428	528
Hawaii	—	4	62	67	161	—	0	4	9	3	—	0	4	7	23
Oregon	1	8	48	331	265	1	2	11	47	26	1	1	4	35	34
Washington	25	15	61	382	375	18	3	19	109	60	2	2	22	60	86
American Samoa	—	1	1	2	—	—	0	0	—	—	—	0	1	1	3
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	3	7	—	0	0	—	—	—	0	3	1	5
Puerto Rico	6	6	39	110	304	—	0	0	—	—	—	0	1	—	9
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 *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 August 7, 2010, and August 8, 2009 (31st week)*

Reporting area	Spotted Fever Rickettsiosis (including RMSF)†									
	Confirmed					Probable				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009
United States	2	2	9	73	98	18	14	421	637	907
New England	—	0	1	—	1	—	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	1	—	—	—	0	0	—	—
Mid. Atlantic	—	0	2	12	7	—	1	6	30	64
New Jersey	—	0	0	—	2	—	0	3	—	44
New York (Upstate)	—	0	1	1	—	—	0	3	6	5
New York City	—	0	1	1	—	—	0	3	16	5
Pennsylvania	—	0	2	10	5	—	0	1	8	10
E.N. Central	—	0	1	2	8	—	0	5	35	61
Illinois	—	0	1	2	1	—	0	5	14	40
Indiana	—	0	0	—	3	—	0	5	17	8
Michigan	—	0	1	—	3	—	0	2	3	1
Ohio	—	0	0	—	—	—	0	4	1	10
Wisconsin	—	0	0	—	1	—	0	1	—	2
W.N. Central	—	0	3	7	10	3	2	23	156	185
Iowa	—	0	0	—	1	—	0	1	1	4
Kansas	—	0	1	2	1	—	0	0	—	—
Minnesota	—	0	1	—	—	—	0	1	—	—
Missouri	—	0	1	4	4	3	2	22	153	178
Nebraska§	—	0	2	1	4	—	0	1	1	3
North Dakota	—	0	0	—	—	—	0	1	1	—
South Dakota	—	0	0	—	—	—	0	0	—	—
S. Atlantic	2	1	6	32	52	10	4	27	200	275
Delaware	—	0	1	1	—	—	0	3	10	10
District of Columbia	—	0	0	—	—	—	0	1	—	—
Florida	—	0	1	2	—	—	0	1	6	3
Georgia	—	0	4	19	43	—	0	0	—	—
Maryland§	—	0	1	2	2	—	0	3	14	32
North Carolina	—	0	3	6	5	—	1	21	98	173
South Carolina§	—	0	1	—	2	—	0	2	8	15
Virginia§	2	0	1	2	—	10	0	7	64	41
West Virginia	—	0	0	—	—	—	0	1	—	1
E.S. Central	—	0	2	10	5	5	3	27	181	183
Alabama§	—	0	1	1	2	—	1	8	36	41
Kentucky	—	0	2	6	1	—	0	0	—	—
Mississippi	—	0	0	—	—	—	0	1	2	9
Tennessee§	—	0	2	3	2	5	2	19	143	133
W.S. Central	—	0	3	1	5	—	1	408	29	112
Arkansas§	—	0	1	—	—	—	0	110	9	59
Louisiana	—	0	0	—	—	—	0	1	1	2
Oklahoma	—	0	2	—	4	—	0	287	15	37
Texas§	—	0	1	1	1	—	0	11	4	14
Mountain	—	0	2	2	9	—	0	3	4	18
Arizona	—	0	2	—	3	—	0	2	1	7
Colorado	—	0	0	—	1	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	1	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	0	—	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	—	—
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 August 7, 2010, and August 8, 2009 (31st week)*

Reporting area	*Streptococcus pneumoniae*,† invasive disease — All ages: Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009	*Streptococcus pneumoniae*,† invasive disease — Age <5: Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009	Syphilis, primary and secondary: Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2010	Cum 2009
United States	50	180	486	9,491	2,001	11	50	156	1,488	1,510	81	238	413	6,645	8,338
New England	—	7	100	545	36	—	1	24	70	49	4	8	22	257	194
Connecticut	—	0	93	245	—	—	0	22	23	—	—	1	10	46	39
Maine§	—	1	6	80	9	—	0	2	7	4	—	0	3	14	1
Massachusetts	—	1	5	52	2	—	1	4	32	35	—	5	12	157	134
New Hampshire	—	0	7	59	—	—	0	2	3	7	—	0	1	12	11
Rhode Island§	—	0	34	53	14	—	0	2	2	1	4	0	3	26	9
Vermont§	—	1	6	56	11	—	0	1	3	2	—	0	2	2	—
Mid. Atlantic	2	12	53	802	120	—	7	48	234	194	38	33	45	1,008	1,083
New Jersey	—	1	8	71	—	—	1	4	37	32	4	4	12	135	144
New York (Upstate)	—	3	12	111	48	—	3	19	82	88	5	2	11	78	73
New York City	—	3	25	292	6	—	1	24	77	62	25	18	31	583	668
Pennsylvania	2	6	22	328	66	—	0	5	38	12	4	7	15	212	198
E.N. Central	10	25	98	1,886	460	4	8	18	234	252	1	29	45	719	895
Illinois	—	0	7	61	—	—	1	5	54	41	—	12	21	238	444
Indiana	—	6	23	369	180	—	1	6	31	50	—	3	13	90	89
Michigan	3	7	27	448	19	—	1	6	55	47	—	3	13	131	136
Ohio	7	13	49	799	261	4	2	6	65	87	1	7	13	234	197
Wisconsin	—	4	22	209	—	—	1	4	29	27	—	1	3	26	29
W.N. Central	1	8	182	570	132	—	3	12	102	124	1	5	12	171	184
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	8	13
Kansas	—	1	7	68	46	—	0	2	11	14	—	0	3	10	18
Minnesota	—	0	179	287	31	—	0	10	44	55	—	1	9	65	45
Missouri	—	2	9	77	46	—	0	3	28	37	1	3	8	83	101
Nebraska§	1	1	7	90	—	—	0	2	10	7	—	0	1	5	4
North Dakota	—	0	11	34	7	—	0	1	2	4	—	0	1	—	3
South Dakota	—	0	3	14	2	—	0	2	7	7	—	0	0	—	—
S. Atlantic	15	40	143	2,209	893	5	12	28	375	356	16	57	218	1,624	1,964
Delaware	—	0	3	24	13	—	0	2	—	—	—	0	2	4	22
District of Columbia	—	0	4	21	16	—	0	2	7	3	3	2	8	81	112
Florida	9	18	89	1,021	529	5	3	18	139	131	2	19	31	561	643
Georgia	2	10	28	354	248	—	4	12	101	83	—	14	167	339	440
Maryland§	1	5	25	315	4	—	1	6	35	57	—	6	12	157	163
North Carolina	—	0	0	—	—	—	0	0	—	—	2	8	31	222	325
South Carolina§	2	5	25	350	—	—	1	4	38	33	3	2	6	82	69
Virginia§	—	0	4	41	—	—	1	4	39	31	6	4	22	175	186
West Virginia	1	1	21	83	83	—	0	4	16	18	—	0	2	3	4
E.S. Central	4	16	50	845	197	—	2	8	82	90	8	18	40	528	700
Alabama§	—	0	0	—	—	—	0	0	—	—	2	5	12	144	282
Kentucky	1	2	16	128	55	—	0	2	10	7	4	2	13	79	36
Mississippi	—	1	6	39	32	—	0	2	8	17	2	5	17	118	124
Tennessee§	3	11	44	678	110	—	2	7	64	66	—	6	17	187	258
W.S. Central	13	15	90	1,200	80	2	6	41	194	224	2	36	71	893	1,708
Arkansas§	—	2	9	114	38	—	0	3	10	31	2	4	14	97	129
Louisiana	—	1	8	54	42	—	0	3	17	17	—	5	23	64	512
Oklahoma	—	0	5	33	—	—	1	5	33	36	—	2	6	46	55
Texas§	13	10	82	999	—	2	3	34	134	140	—	26	46	686	1,012
Mountain	2	18	83	1,228	81	—	5	12	170	200	2	9	20	266	310
Arizona	2	7	52	575	—	—	2	7	75	88	—	3	10	92	148
Colorado	—	6	20	359	—	—	1	4	46	29	—	2	5	69	54
Idaho§	—	0	2	10	—	—	0	2	5	7	—	0	1	2	3
Montana§	—	0	2	14	—	—	0	1	1	—	—	0	1	1	—
Nevada§	—	1	4	53	31	—	0	1	5	7	—	1	10	58	58
New Mexico§	—	2	8	110	—	—	0	4	14	24	2	1	4	25	28
Utah	—	2	9	99	41	—	1	4	22	44	—	0	4	19	17
Wyoming§	—	0	1	8	9	—	0	1	2	1	—	0	1	—	2
Pacific	3	4	14	206	2	—	0	7	27	21	9	39	64	1,179	1,300
Alaska	—	1	9	76	—	—	0	5	17	13	—	0	0	—	—
California	3	2	12	130	—	—	0	2	10	—	9	36	59	1,067	1,157
Hawaii	—	0	1	—	2	—	0	1	—	8	—	0	3	20	22
Oregon	—	0	0	—	—	—	0	0	—	—	—	0	5	6	34
Washington	—	0	0	—	—	—	0	0	—	—	—	3	7	86	87
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	—	—	4	3	17	129	123
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 August 7, 2010, and August 8, 2009 (31st week)*

	Varicella (chickenpox)§					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive¶				
	Current	Previous 52 weeks		Cum	Cum	Current	Previous 52 weeks		Cum	Cum	Current	Previous 52 weeks		Cum	Cum
Reporting area	week	Med	Max	2010	2009	week	Med	Max	2010	2009	week	Med	Max	2010	2009
United States	62	330	547	9,009	14,578	—	0	46	42	132	1	0	49	43	125
New England	1	16	36	417	684	—	0	0	—	—	—	0	0	—	—
Connecticut	—	6	20	183	327	—	0	0	—	—	—	0	0	—	—
Maine§	—	4	15	123	122	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	1	—	3	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	2	8	82	139	—	0	0	—	—	—	0	0	—	—
Rhode Island§	1	1	12	17	23	—	0	0	—	—	—	0	0	—	—
Vermont§	—	0	10	12	70	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	6	33	66	1,027	1,383	—	0	2	3	1	—	0	1	—	—
New Jersey	—	9	30	380	288	—	0	1	—	—	—	0	0	—	—
New York (Upstate)	N	0	0	N	N	—	0	1	—	1	—	0	1	—	—
New York City	—	0	0	—	—	—	0	2	3	—	—	0	0	—	—
Pennsylvania	6	22	52	647	1,095	—	0	0	—	—	—	0	0	—	—
E.N. Central	12	108	176	3,100	4,459	—	0	4	—	2	—	0	3	—	—
Illinois	—	26	49	775	1,053	—	0	3	—	1	—	0	0	—	—
Indiana§	—	5	35	286	329	—	0	1	—	1	—	0	1	—	—
Michigan	1	35	62	966	1,301	—	0	1	—	—	—	0	0	—	—
Ohio	8	28	56	862	1,374	—	0	0	—	—	—	0	2	—	—
Wisconsin	3	7	24	211	402	—	0	1	—	—	—	0	0	—	—
W.N. Central	4	13	40	356	929	—	0	5	1	9	1	0	11	11	26
Iowa	N	0	0	N	N	—	0	0	—	—	—	0	1	—	1
Kansas§	—	4	18	99	385	—	0	1	—	—	—	0	1	2	4
Minnesota	—	0	0	—	—	—	0	1	—	—	—	0	1	—	1
Missouri	3	6	16	208	450	—	0	2	1	1	—	0	1	—	—
Nebraska§	N	0	0	N	N	—	0	2	—	3	1	0	6	3	13
North Dakota	—	0	26	28	57	—	0	0	—	—	—	0	1	2	—
South Dakota	1	0	7	21	37	—	0	1	—	5	—	0	2	4	7
S. Atlantic	14	37	99	1,384	1,783	—	0	4	—	4	—	0	2	3	—
Delaware§	—	0	4	11	9	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	4	14	22	—	0	1	—	2	—	0	0	—	—
Florida§	7	15	57	707	902	—	0	1	—	—	—	0	1	—	—
Georgia	N	0	0	N	N	—	0	1	—	1	—	0	1	3	—
Maryland§	N	0	0	N	N	—	0	0	—	—	—	0	1	—	—
North Carolina	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
South Carolina§	—	0	35	74	92	—	0	2	—	1	—	0	0	—	—
Virginia§	3	11	34	302	477	—	0	2	—	—	—	0	0	—	—
West Virginia	4	8	26	276	281	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	6	28	181	366	—	0	6	1	19	—	0	4	1	10
Alabama§	—	6	27	174	363	—	0	0	—	—	—	0	1	1	—
Kentucky	N	0	0	N	N	—	0	1	—	2	—	0	0	—	—
Mississippi	—	0	2	7	3	—	0	5	1	15	—	0	4	—	9
Tennessee§	N	0	0	N	N	—	0	2	—	2	—	0	1	—	1
W.S. Central	25	60	285	1,832	3,595	—	0	19	2	43	—	0	6	—	13
Arkansas§	1	3	32	117	361	—	0	1	—	4	—	0	0	—	—
Louisiana	—	1	8	40	92	—	0	1	—	6	—	0	2	—	5
Oklahoma	N	0	0	N	N	—	0	2	—	2	—	0	2	—	—
Texas§	24	50	272	1,675	3,142	—	0	16	2	31	—	0	4	—	8
Mountain	—	25	48	684	1,301	—	0	12	29	31	—	0	17	22	48
Arizona	—	0	0	—	—	—	0	7	28	10	—	0	7	15	3
Colorado§	—	9	41	266	706	—	0	7	1	6	—	0	14	6	19
Idaho§	N	0	0	N	N	—	0	3	—	4	—	0	5	—	13
Montana§	—	3	17	145	115	—	0	1	—	1	—	0	1	—	2
Nevada§	N	0	0	N	N	—	0	0	—	7	—	0	0	—	5
New Mexico§	—	1	7	69	94	—	0	2	—	2	—	0	1	—	1
Utah	—	6	22	191	386	—	0	1	—	—	—	0	0	—	1
Wyoming§	—	0	3	13	—	—	0	1	—	1	—	0	2	1	4
Pacific	—	1	5	28	78	—	0	12	6	23	—	0	12	6	28
Alaska	—	0	4	25	45	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	8	6	14	—	0	6	6	16
Hawaii	—	0	2	3	33	—	0	0	—	—	—	0	0	—	—
Oregon	N	0	0	N	N	—	0	1	—	—	—	0	4	—	4
Washington	N	0	0	N	N	—	0	6	—	9	—	0	3	—	8
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	3	9	14	—	0	0	—	—	—	0	0	—	—
Puerto Rico	1	5	30	152	371	—	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 August 7, 2010 (31st week)

Reporting area	All causes, by age (years)						P&I[†]
	All Ages	≥65	45–64	25–44	1–24	<1	Total
New England	476	323	109	20	13	11	40
Boston, MA	131	80	37	5	5	4	17
Bridgeport, CT	21	14	5	2	—	—	3
Cambridge, MA	14	14	—	—	—	—	2
Fall River, MA	25	20	5	—	—	—	2
Hartford, CT	50	33	11	3	3	—	1
Lowell, MA	24	14	7	2	—	1	—
Lynn, MA	11	6	3	—	2	—	1
New Bedford, MA	18	15	2	1	—	—	1
New Haven, CT	27	22	2	2	—	1	6
Providence, RI	48	32	14	1	—	1	1
Somerville, MA	4	3	1	—	—	—	—
Springfield, MA	27	15	11	1	—	—	2
Waterbury, CT	17	11	3	2	1	—	—
Worcester, MA	59	44	8	1	2	4	4
Mid. Atlantic	1,921	1,295	437	112	42	33	87
Albany, NY	44	29	12	1	2	—	—
Allentown, PA	24	18	4	2	—	—	1
Buffalo, NY	72	47	18	6	1	—	5
Camden, NJ	25	13	8	2	1	1	—
Elizabeth, NJ	21	12	8	1	—	—	—
Erie, PA	41	33	5	1	—	2	4
Jersey City, NJ	15	10	3	1	1	—	2
New York City, NY	998	690	220	62	17	8	44
Newark, NJ	30	12	14	3	1	—	2
Paterson, NJ	18	9	4	—	—	5	—
Philadelphia, PA	334	208	82	23	13	8	8
Pittsburgh, PA[§]	27	13	8	2	—	4	3
Reading, PA	27	22	3	1	—	1	1
Rochester, NY	76	54	17	2	2	1	5
Schenectady, NY	23	19	3	1	—	—	3
Scranton, PA	27	21	3	—	1	2	—
Syracuse, NY	55	42	10	2	1	—	5
Trenton, NJ	29	16	8	2	2	—	1
Utica, NY	18	15	3	—	—	—	2
Yonkers, NY	17	12	4	—	—	1	1
E.N. Central	1,725	1,113	448	86	46	32	95
Akron, OH	43	30	10	2	—	1	3
Canton, OH	21	15	3	1	—	2	2
Chicago, IL	213	133	60	13	7	—	12
Cincinnati, OH	93	51	28	4	3	7	8
Cleveland, OH	226	142	72	6	2	4	7
Columbus, OH	129	80	33	7	4	5	5
Dayton, OH	125	78	31	9	3	4	15
Detroit, MI	182	110	53	13	6	—	6
Evansville, IN	41	27	10	2	1	1	1
Fort Wayne, IN	70	46	20	2	2	—	2
Gary, IN	10	6	2	—	2	—	1
Grand Rapids, MI	36	21	10	3	1	1	6
Indianapolis, IN	168	113	38	8	7	2	6
Lansing, MI	42	29	7	4	2	—	2
Milwaukee, WI	68	48	15	3	2	—	4
Peoria, IL	45	31	10	3	—	1	4
Rockford, IL	45	29	12	3	—	1	3
South Bend, IN	43	26	9	2	4	2	2
Toledo, OH	84	61	21	1	—	1	3
Youngstown, OH	41	37	4	—	—	—	3
W.N. Central	559	362	134	31	13	18	37
Des Moines, IA	93	65	22	2	3	1	4
Duluth, MN	31	25	4	1	1	—	4
Kansas City, KS	U	U	U	U	U	U	U
Kansas City, MO	113	68	30	6	2	7	6
Lincoln, NE	33	31	1	1	—	—	1
Minneapolis, MN	62	37	16	3	2	4	2
Omaha, NE	81	59	13	6	1	2	8
St. Louis, MO	79	33	28	9	4	4	9
St. Paul, MN	67	44	20	3	—	—	3
Wichita, KS	U	U	U	U	U	U	U
S. Atlantic	1,161	703	333	72	33	20	78
Atlanta, GA	149	75	55	14	3	2	9
Baltimore, MD	141	82	39	8	6	6	15
Charlotte, NC	111	76	25	5	3	2	8
Jacksonville, FL	140	79	41	13	3	4	4
Miami, FL	168	112	43	6	7	—	8
Norfolk, VA	45	30	13	—	—	2	2
Richmond, VA	62	35	23	3	1	—	5
Savannah, GA	45	24	11	7	2	1	4
St. Petersburg, FL	52	33	12	3	4	—	1
Tampa, FL	163	108	42	9	3	1	13
Washington, D.C.	75	42	26	4	1	2	6
Wilmington, DE	10	7	3	—	—	—	3
E.S. Central	823	538	211	47	15	12	66
Birmingham, AL	150	96	46	4	4	—	11
Chattanooga, TN	86	56	14	11	3	2	7
Knoxville, TN	107	77	27	3	—	—	16
Lexington, KY	59	39	14	2	3	1	1
Memphis, TN	189	121	45	15	2	6	14
Mobile, AL	71	45	22	4	—	—	4
Montgomery, AL	22	13	7	1	1	—	2
Nashville, TN	139	91	36	7	2	3	11
W.S. Central	1,052	676	256	77	21	22	54
Austin, TX	107	59	39	7	2	—	9
Baton Rouge, LA	79	40	17	13	7	2	—
Corpus Christi, TX	65	45	15	4	1	—	4
Dallas, TX	189	108	54	17	5	5	9
El Paso, TX	67	53	12	—	1	1	1
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	142	93	34	8	1	6	7
Little Rock, AR	U	U	U	U	U	U	U
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	247	171	47	18	3	8	12
Shreveport, LA	21	15	4	2	—	—	4
Tulsa, OK	135	92	34	8	1	—	8
Mountain	1,017	619	272	72	23	28	51
Albuquerque, NM	88	57	26	4	—	1	10
Boise, ID	59	37	17	3	2	—	2
Colorado Springs, CO	79	43	21	6	5	4	2
Denver, CO	67	30	24	6	3	4	1
Las Vegas, NV	255	165	63	16	7	2	17
Ogden, UT	25	14	9	2	—	—	3
Phoenix, AZ	161	78	49	19	3	11	7
Pueblo, CO	26	19	5	1	—	1	1
Salt Lake City, UT	129	90	26	8	1	4	4
Tucson, AZ	128	86	32	7	2	1	4
Pacific	1,568	1,080	323	91	41	32	125
Berkeley, CA	12	9	2	—	—	1	3
Fresno, CA	117	81	26	6	2	2	8
Glendale, CA	31	26	4	1	—	—	4
Honolulu, HI	64	46	13	2	2	1	8
Long Beach, CA	63	41	12	6	2	2	5
Los Angeles, CA	228	140	67	13	4	4	16
Pasadena, CA	26	21	4	1	—	—	3
Portland, OR	119	77	30	7	2	3	9
Sacramento, CA	168	112	39	10	5	2	22
San Diego, CA	155	107	27	6	6	8	12
San Francisco, CA	111	79	23	6	3	—	12
San Jose, CA	184	140	24	12	6	2	12
Santa Cruz, CA	34	23	6	5	—	—	3
Seattle, WA	115	83	18	6	4	4	4
Spokane, WA	61	38	12	4	4	3	2
Tacoma, WA	80	57	16	6	1	—	2
Total[¶]	**10,302**	**6,709**	**2,523**	**608**	**247**	**208**	**633**

U: Unavailable. —: No reported cases.
* Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of >100,000. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.
† Pneumonia and influenza.
§ Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.
¶ Total includes unknown ages.

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format. To receive an electronic copy each week, visit *MMWR*'s free subscription page at *http://www.cdc.gov/mmwr/mmwrsubscribe.html*. Paper copy subscriptions are available through the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone 202-512-1800.

Data presented by the Notifiable Disease Data Team and 122 Cities Mortality Data Team in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. Address all inquiries about the *MMWR* Series, including material to be considered for publication, to Editor, *MMWR* Series, Mailstop E-90, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333 or to *mmwrq@cdc.gov.*

☆ U.S. Government Printing Office: 2010-623-026/41268 Region IV ISSN: 0149-2195