CDC

MMWR

Morbidity and Mortality Weekly Report

www.cdc.gov/mmwr

Weekly December 25, 2009 / Vol. 58 / No. 50

Intent to Receive Influenza A (H1N1) 2009 Monovalent and Seasonal Influenza Vaccines — Two Counties, North Carolina, August 2009

On September 15, 2009, the Food and Drug Administration approved the manufacture of four influenza A (H1N1) 2009 monovalent vaccines.* Before release of the first batches of the vaccine on September 30, intent to receive the vaccine was estimated at 50% among selected U.S. adult populations (*1,2*) and as high as 70% for children (*2*). However, studies in previous years of seasonal influenza vaccination in children, who might require 2 doses based on age and prior vaccination status, have indicated poor compliance with recommendations (*3*). To measure intent to receive H1N1 and seasonal influenza vaccines among children and adults, during August 28–29, 2009, the North Carolina Center for Public Health Preparedness, with state and local public health officials, conducted a community assessment in two counties. This report summarizes the results of that assessment, which determined that 64% of adults reported intent to receive H1N1 vaccine. In addition, 65% of parents reported intent to have all their children (aged 6 months to <18 years) vaccinated with H1N1 vaccine, and 51% said they would have all their children vaccinated with both H1N1 and seasonal influenza vaccines. The most commonly reported reasons for not intending to receive H1N1 vaccine were belief in a low likelihood of infection (18%) and concern over vaccine side effects (14%); 85% of participants said they received their H1N1 information from television. To increase coverage with H1N1 and seasonal influenza vaccines, public health departments should use television to focus public health messages on the risks for infection and severe illness and the safety profile of the vaccine.

* Food and Drug Administration. FDA approves vaccines for 2009 H1N1 influenza virus. Available at http://www.fda.gov/newsevents/newsroom/pressannouncements/ucm182399.htm.

Alamance and Orange counties were selected for the assessment because they were convenient venues with population age distributions similar to those for all of North Carolina. However, the education and race/ethnicity profiles of the two counties differ substantially from those of the entire state (Table 1), and Orange County has a generally higher socioeconomic status. A two-stage sampling method consisting of 30 random census tracts with seven randomly distributed households within each tract was used to identify 210 target households in the two counties, using parcel maps and a geographic information system-based toolkit. This sampling and data collection method, developed by CDC and referred to as Community Assessment for Public Health Emergency Response (CASPER),† has been validated and used effectively in postdisaster settings (*4*).

At the time of the survey, in late August 2009, H1N1 vaccine was in production but had not yet been approved by the Food and Drug Administration and released. Based on information available at the time, the survey assumed that 2 doses might be

† Additional information available at http://emergency.cdc.gov/disasters/surveillance/pdf/casper_toolkit_508%20compliant.pdf.

INSIDE

Department of Health and Human Services
Centers for Disease Control and Prevention

The *MMWR* series of publications is published by 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 2009;58:[inclusive page numbers].

TABLE 1. Percentage of population by age group, race/ethnicity, and education level — Alamance and Orange counties and North Carolina, 2008

Characteristic	Alamance County %	Orange County %	North Carolina %
Age group (yrs)			
<18	24	19	24
≥65	14	10	12
Race/Ethnicity			
White, non-Hispanic	79	79	74
Black, non-Hispanic	19	13	22
Asian	1	6	2
Hispanic	11	6	7
Education level			
High school	77	88	78
Bachelors degree	19	52	23

SOURCE: U.S. Census Bureau. State and county QuickFacts. Available at http://quickfacts.census.gov/qfd/states/37000.html.

needed for adults and children. After the survey was completed, a single dose of vaccine was determined to be sufficient for persons aged ≥10 years.

During August 28–29, 2009, the assessment team visited the 210 households initially targeted. If no one answered at a household or the residents declined to participate, team members visited immediate neighboring households until an interview was completed. Oral informed consent was obtained, and responses were recorded using handheld computers. Household respondents aged ≥18 years represented themselves in the interviews and also any children in the household for questions pertaining to children aged <18 years. The survey consisted of 26 questions and required about 15 minutes to administer. Most questions required a yes/no response, including: "Are you aware that a pandemic H1N1 (or swine flu) vaccine is in production?" "Do you intend to receive the pandemic H1N1 vaccine when it becomes available [if the interviewee had no current knowledge, the interviewer prefaced this question with the fact that pandemic vaccine was in production]?" and "Do you intend to vaccinate all children in your household with pandemic H1N1 vaccine when it becomes available?" Additional questions pertained to prior history of and intent to receive seasonal influenza vaccine, reasons for intending or not intending to receive both vaccines (by selecting one or more from a list of 12 reasons), and level of concern about acquiring H1N1 illness (not at all, somewhat, or very concerned).

Of 258 houses at which a resident answered the door, 207 (80%) interviews were completed; 51 interviews were not completed because the residents declined participation. The median age of respondents was 49 years (range: 18–92 years), and 116 (56%) were female; 140 (68%) were non-Hispanic white, 52 (25%) were non-Hispanic black, and seven (3%) were Hispanic. A total of 165 (80%) respondents were aware that an H1N1 vaccine was in production, but only 75 (36%) were aware that the vaccine might require 2 doses for some persons. Knowledge about H1N1 vaccine was obtained from multiple sources: 85% received information from television, 52% from newspapers, 46% from radio, 36% from the Internet, and 35% from family or friends.

A total of 133 (64%) respondents reported intent to receive the H1N1 vaccine, and 109 (53%) intended to receive both vaccines (Table 2). Young adults aged 18–24 years (64%) were as likely to report intent to receive H1N1 vaccine as persons aged ≥65 years (66%). However, a greater percentage of persons aged ≥65 years (66%) reported intent to receive both H1N1 and seasonal influenza vaccines than persons aged 18–24 years (45%). Among 74 households with children aged <18 years, 48 (65%) respondents reported intent to vaccinate all their children with H1N1 vaccine; 38 (51%) said they would have all their children vaccinated with both H1N1 and seasonal influenza vaccines.

Among 74 (36%) respondents reporting no intent to receive H1N1 vaccine, reasons included the belief that they were unlikely to be infected (18%), concern over vaccine side effects (14%), a perception that if infected the illness would be mild (12%), the belief they were not included in a vaccination priority group (11%), and the inconvenience of a vaccine that might require 2 doses (8%). Intent to receive H1N1 vaccine was associated with intent to receive the 2009–10 seasonal influenza vaccine (prevalence ratio [PR] = 2.6), a high level of concern over becoming ill with the H1N1 virus (PR = 1.9), and previous 2008–09 influenza vaccination (PR = 1.5) (Table 3). Age, sex, and race/ethnicity were not associated with reported intent to receive H1N1 vaccine.

What is already known on this topic?

Two previous studies of intent to receive influenza A (H1N1) 2009 monovalent vaccine estimated potential vaccination coverage at 50%–53% for adults and 70% for children, using nationally representative samples and online or telephone survey methods.

What is added by this report?

This survey, conducted in August 2009 before the release of H1N1 vaccine, estimated intent to receive the vaccine in two North Carolina counties at 64% for adults and 65% for children; those with no intent cited belief in a low likelihood of infection (18%) and concern over vaccine side effects (14%), and 85% of participants said they received their H1N1 information from television.

What are the implications for public health practice?

To increase coverage with H1N1 influenza vaccine, public health departments should use television to focus public health messages on the risk for infection and severe illness and the safety profile of the vaccine.

Reported by: *Z Moore, MD, N Standberry, MPH, D Bergmire-Sweat, MPH, J-M Maillard, MD, North Carolina Div of Public Health; J Horney, PhD, PDM MacDonald, PhD, North Carolina Center for Public Heath Preparedness; AT Fleischauer, PhD, Career Epidemiology Field Officer Program; NJ Dailey, MD, EIS Officer, CDC.*

Editorial Note: This report describes a novel use of CASPER methodology to measure community knowledge of and intent to receive H1N1 and seasonal influenza vaccines. The results indicate that, in late August 2009, the majority of the North Carolina interviewees were aware that an H1N1 vaccine was in production. Among all respondents, 64% reported intent to receive the H1N1 vaccine, a finding consistent among age

TABLE 2. Number and percentage of persons reporting intent to receive influenza A (H1N1) 2009 monovalent vaccine and intent to receive both H1N1 and seasonal influenza vaccines, by knowledge of vaccine, age group, race/ethnicity, and sex — Alamance and Orange counties, North Carolina, August 2009

	Total respondents (N = 207)	Intent to receive H1N1 vaccine (n = 133)			Intent to receive both H1N1 and seasonal influenza vaccine (n = 109)		
Characteristic	**No.**	**No.**	**%**	**(95% CI)**	**No.**	**%**	**(95% CI)**
Knowledge of vaccine*	**165**	103	62	(53–71)	86	52	(41–63)
Age group (yrs)							
18–24	**22**	14	64	(36–89)	10	45	(14–76)
25–64	**138**	88	64	(54–74)	68	49	(37–61)
≥65	**47**	31	66	(49–83)	31	66	(49–83)
Children aged <18 yrs†	**74**	48	65	(51–79)	38	51	(35–67)
Race/Ethnicity§							
White, non-Hispanic	**140**	87	62	(52–72)	75	54	(43–65)
Black, non-Hispanic	**52**	36	69	(54–84)	28	54	(36–72)
Sex							
Male	**91**	61	67	(55–79)	49	54	(40–68)
Female	**116**	71	61	(51–73)	59	51	(38–64)

* A "yes" response to the question, "Are you aware that a pandemic H1N1 (or swine flu vaccine is in production?"

† Respondents reported intent to vaccinate all children in their household aged <18 years with H1N1 vaccine or with both H1N1 and seasonal influenza vaccines.

§ Sample sizes for other race/ethnicities were too small to provide reliable estimates.

TABLE 3. Persons reporting intent to receive influenza A (H1N1) 2009 monovalent vaccine, by selected characteristics — Alamance and Orange counties, North Carolina, August 2009

Characteristic	No. respondents	Intent to receive H1N1 vaccine (n = 133) No.	(%)	Prevalence ratio	(95% CI)
All respondents	**207**	**133**	**(64)**	**—**	
Age group (yrs)					
18–24	22	14	(64)	Referent	—
25–64	138	88	(64)	1.0	(0.7–1.4)
≥65	47	31	(66)	1.0	(0.7–1.5)
Sex					
Female	116	71	(61)	Referent	—
Male	91	61	(67)	1.1	(0.8–1.3)
Race/Ethnicity					
White, non-Hispanic	140	87	(62)	Referent	—
Other	59	44	(75)	1.2	(0.9–1.5)
Knowledge of vaccine*					
No/Don't know	42	30	(71)	Referent	—
Yes	165	103	(62)	0.9	(0.7–1.2)
Level of concern†					
Not at all concerned	57	26	(46)	Referent	—
Somewhat concerned	92	57	(62)	1.3	(0.9–1.9)
Very concerned	58	50	(86)	1.9	(1.4–2.6)
Received 2008–09 seasonal vaccine§					
No	102	53	(52)	Referent	—
Yes	105	80	(76)	1.5	(1.2–1.8)
Intent to receive 2009–10 seasonal¶ vaccine					
No	75	24	(32)	Referent	—
Yes	132	109	(83)	2.6	(1.8–3.6)
Children at home**					
No	133	85	(64)	Referent	—
Yes	74	48	(65)	1.0	(0.8–1.3)

* In response to the question, "Are you aware that a pandemic H1N1 (or swine flu) vaccine is in production?"
† In response to the question, "How concerned are you about becoming sick with the pandemic H1N1 virus?"
§ In response to the question, "Did you receive seasonal influenza vaccine last year?"
¶ In response to the question, "Do you intend to receive the seasonal influenza vaccine this year?"
** In response to the question, "Do you have children less than 18 years of age currently living in your home?"

groups, among racial/ethnic populations, and by sex. By comparison, national assessments conducted during May 26–June 8 and September 14–20 estimated intent among adults to receive H1N1 vaccine at 50% (*1*) and 53% (*2*) and intent to have their children vaccinated at 70% (*2*). Although the assessment described in this report is not entirely comparable to the national studies (in part because of different methodologies), the findings in this report are similar to the second study (*2*) regarding the two leading reasons offered by respondents for not intending to receive H1N1 vaccine: belief of a low risk for infection and concern over possible vaccine side effects.

The relationship between intent to receive vaccine and actual vaccination has not been well studied. For the assessment described in this report, no vaccine coverage data were available for the two counties. However, intentions to receive H1N1 vaccine (64%) and both H1N1 and 2009–10 seasonal influenza vaccines (54%) were substantially higher than the 33% coverage rate reported for seasonal influenza vaccine among the U.S. population during the 2008–09 season, the most recent data available (*5*). Intent to receive H1N1 vaccine among adults aged ≥65 years (66%) was similar to the seasonal influenza vaccination coverage rate of 65% for that age group reported nationally for 2008–09 (*5*). Additional research on the relationship between intent to receive vaccine and subsequent vaccination is needed.

The finding that respondents received H1N1 vaccine information primarily from popular media, particularly television, affirms the need for public health agencies to work closely with those media outlets most commonly used by the public. Public health agencies might be able to increase vaccination coverage by providing more information regarding 1) who should receive the vaccine first, 2) safety characteristics of the vaccine, and 3) severe illness that can be prevented by vaccination.

The findings in this report are subject to at least three limitations. First, the survey sample size was small, which reduced the precision of the estimates, especially for smaller subgroups.

Second, the results are representative only of the populations of the two counties and are not generalizable to the entire population of North Carolina. Finally, widespread media coverage and face-to-face interviews might have increased the possibility of social desirability bias, resulting in an overestimate of the percentage of participants with intent to be vaccinated.

Influenza vaccination is the most effective method for preventing influenza and influenza-related complications. Currently available seasonal vaccine is unlikely to be protective against H1N1 (*6*). CDC has issued recommendations for use of influenza A (H1N1) 2009 monovalent vaccine (*7*).

References

1. Maurer J, Harris KM, Parker A, Lurie N. Does receipt of seasonal influenza vaccine predict intention to receive H1N1 vaccine: evidence from a nationally representative survey of US adults. Vaccine 2009;27:5732–34.
2. Blendon RJ, Steelfisher GK, Benson JM, Weldon KJ, Herrmann MJ. Survey finds just 40% of adults "absolutely certain" they will get H1N1 vaccine. Available at http://www.hsph.harvard.edu/news/press-releases/2009-releases/survey-40-adults-absolutely-certain-h1n1-vaccine.html. Accessed December 21, 2009.
3. Jackson LA, Neuzil KM, Baggs J, et al. Compliance with the recommendations for 2 doses of trivalent inactivated vaccine in children <9 years of age receiving influenza vaccine for the first time: a Vaccine Safety Datalink study. Pediatrics 2006;118:2032–7.
4. Malilay J, Flanders WD, Brogan D. A modified cluster-sampling method for post-disaster rapid assessment of needs. Bull WHO 1996;74:399–405.
5. CDC. Influenza vaccination coverage among children and adults—United States, 2008–09 influenza season MMWR 2009;58:1091–5.
6. CDC. Serum cross-reactive antibody response to a novel influenza A (H1N1) virus after vaccination with seasonal influenza vaccine. MMWR 2009;58:521–4.
7. CDC. Use of influenza A (H1N1) 2009 monovalent vaccine: recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009. MMWR 2009;58 (No. RR-10).

Impact of Seasonal Influenza-Related School Closures on Families — Southeastern Kentucky, February 2008

During influenza epidemics, little is known about how influenza-related school closures affect families (*1–6*). Many children meet nutritional needs through school food programs (*7*), and schools provide child care both during and after school. Moreover, schools rely on student attendance to meet federal and state funding and educational requirements. To assess the impact of school closings on families, the Kentucky Department for Public Health (KDPH) conducted a telephone survey of randomly sampled households whose children attended schools in two adjacent school districts that had been closed because of high absenteeism during an outbreak of seasonal influenza in the community in February 2008. This report summarizes the results of that survey, which indicated that 97.0% of respondents agreed with the decision to close schools. In 29.1% of households, an adult had to miss work to provide child care, and in 15.7% of households, at least one adult lost pay because of missed work. Although the schools closed because of high absenteeism affecting school operations and funding, this was not fully communicated to families; 64.4% of respondents believed the closures would "keep people from getting ill," and 90.8% thought it was "extremely or very important" to disinfect schools while closed to reduce community spread of influenza. School districts and health departments should provide families with specific information about the reason for school closings and provide recommendations for reducing the spread of influenza while students are dismissed from school.

School closures can be triggered by illness-related absenteeism during periods of peak influenza activity (*1*), primarily when local officials decide that high absenteeism compromises the school's ability to function normally. On February 4, 2008, officials in two school districts (school districts A and B) in rural, southeastern Kentucky closed all schools for 3 (district A) or 4 school days (district B) because of high absenteeism related to a community outbreak of seasonal influenza. In 2008, the two districts enrolled approximately 7,300 students in grades K–12. Districts did not differ on grade distribution of students. School officials informed the community that schools were closing because of "high absenteeism due to illness" in the community via radio announcements and information sent home with students. The information sent home by school district A included a CDC handout that described ways of lowering the risk for influenza.

As of the 2000 census, the racial/ethnic composition of the population was approximately 98% white in both districts. School district A is in a rural, farming area with some manufacturing and coal mining. District A schools are located mainly in two cities that have a combined population of 7,884 covering one county with a population of 35,865. School district B is located in a city with a population of 7,742 that is legally incorporated into two counties with 17,558 persons living in the surrounding suburban developments. It is at the epicenter of three county seats with a cumulative population of approximately 100,000. The area was built on the rail industry, the major employers are in manufacturing, and the area is home to the regional medical referral center for southeastern Kentucky. In this rural, mountainous setting, school closures caused by weather conditions are common; therefore, the community has a heightened level of logistical preparedness.

To examine the effects of school closure on families, KDPH asked CDC to help conduct a telephone survey approximately

3 weeks after the closing, during Wednesday, February 27, through Monday, March 3, 2008, in a random sample of households. Telephone numbers for all households were obtained for all 14 schools in districts A and B, and a random sample of 602 households (11%) was selected. Of the 602 telephone numbers dialed, 282 (46.8%) did not result in contact, and 58 (9.6%) reached households in which a person either hung up or refused to participate in the survey. For each household, interviews were conducted with one adult parent or guardian of a school-aged child. Of the 320 households reached by telephone, a total of 262 surveys (81.9%) were completed; one respondent was not an adult member of the household, and that household was excluded from the analyses. Thus, the response rate, based on Council of American Survey and Research Organizations (CASRO) guidelines, was 43.3% (261 of 602 households). Surveys were conducted by staff members of KDPH, the local county health department, and CDC, mainly during 4:00–8:00 p.m., with follow-up calls conducted at times requested by respondents. All statistical tests of proportions were conducted using chi-square tests.

A total of 480 children lived in the 261 surveyed households (1.8 per household). Of the 480 children, 327 (69.3%) attended school district A, and 145 (30.7%) attended school district B; for eight children, the school district was unknown. In 112 (42.9%) households, at least one child was enrolled in a school meal program (the National School Lunch Program or the School Breakfast Program). School district A has a lower socioeconomic status than school district B; school district B households were significantly less likely to have children participating in the school meal programs than were school district A households ($p<0.05$), and school district B households had significantly higher annual household income and education levels than school district A households ($p<0.05$) (Table 1). In 11 (10.0%) households with children enrolled in the school meal programs (4.2% of all households surveyed), the school closure caused difficulty for their family because of the loss of these meals.*

The survey inquired into what places in the community children visited during the school closures, and in what activities they participated (Table 2). Children in school district B were more likely to have attended religious services while schools were closed than children in school district A ($p<0.05$), and although not statistically significant, children in school district B also more frequently visited restaurants, a friend, sporting events, and social gatherings. Of note, some parents expressed concern that school athletic events such as practices and games were still held on the days when schools were otherwise closed.

* Based on a "yes" response to the survey question, "Did the school closure cause difficulty for your family because of the loss of these meals?"

The most frequent activities for both districts were visiting strip malls or Wal-Mart (the only large store in the area) (113 [43.3%]) or visiting family (112 [42.9%]) while schools were closed.

Of the 261 households surveyed, in only 39 (14.9%) did any adult have the option to work from home. A total of 104 (39.8%) households had a "nonworking adult household member or homemaker" provide child care during the closure,[†] and 157 (60.1%) households had to make alternative arrangements to provide child care for at least one child in the household. In 76 (29.1%) households, a "working adult household member" provided child care during the closure, and in 41 (15.7%) households, at least one adult missed work and lost pay, and all 41 adults took care of a child who was not ill. No statistically significant differences were observed between school districts for provision of child care or work missed.

A total of 233 (89.3%) household respondents stated that they knew ways to lower the risk for acquiring influenza, and 200 (76.6%) stated that they did (or told their children to do) something to lower their risk.[§] A total of 171 (65.5%) household respondents reported that they washed their hands to lower their risk for becoming ill or told their children to do so, and 73 (28.0%) household respondents reported telling their children to cover coughs and sneezes or did so themselves as a way to reduce risk for influenza (Table 3).

A total of 252 household respondents (96.6%) agreed with the decision to close schools.[¶] When asked why they agreed, 168 (64.4%) said that it would keep more persons from becoming ill, 97 (37.2%) specifically mentioned that it would keep their children from becoming ill, and 237 (90.8%) households stated that it was either "extremely important or very important" to disinfect the schools while they were closed.[**††]

Reported by: *CG Timperio, Whitley County Health Dept; K Humbaugh, MD, Kentucky Dept for Public Health. M Riggs, PhD, D Thoroughman, PhD, Career Epidemiology Field Officer Program, Office of Public Health Preparedness and Response; L Barrios, DrPH, D Copeland, MD, A Waller, MPH, M Denniston, MSPH, Div of Adolescent and School Health, National Center for Chronic Disease Prevention and Health Promotion; S Beavers, MD, C Broussard, PhD, EIS Officers, CDC.*

† Based on a "yes" response to the survey question, "Is there usually an adult capable of providing child care at home during the day?"

§ Based on responses to the survey questions "Did you do (or did you tell your child or children to do) any of these things to lower their risk of getting sick?" and "If yes, what did you do or tell them to do?"

¶ Based on a "yes" response to the survey question, "Did you agree with the decision to close the schools?"

** Based on response to the survey question, "How important do you think it is for schools to be disinfected while the school is closed to prevent the spread of illness?"

†† School staff members should routinely clean areas that students and staff touch often with the cleaners they typically use. CDC does not believe any additional disinfection of environmental surfaces beyond the recommended routine cleaning is required (*8*).

TABLE 1. Socioeconomic characteristics of households in two adjacent school districts — southeastern Kentucky, February 2008

	Total households (N = 261)*		Households in district A (n = 172)		Households in district B (n = 86)	
Characteristic	**No.**	**(%)**	**No.**	**(%)**	**No.**	**(%)**
Annual household income†						
<$20,000	**49**	**(19.1)**	42	(24.6)	7	(8.1)
$20,000–$29,999	**37**	**(14.4)**	32	(18.7)	5	(5.8)
$30,000–$49,999	**50**	**(19.5)**	33	(19.3)	17	(19.8)
$50,000–$74,999	**39**	**(15.2)**	20	(11.7)	19	(22.1)
$75,000–$99,999	**24**	**(9.3)**	15	(8.8)	9	(10.5)
≥$100,000	**18**	**(7.0)**	5	(2.9)	13	(15.1)
Prefer not to answer	**40**	**(15.6)**	24	(14.0)	16	(18.6)
Highest education level§						
Less than grade 12	**29**	**(11.3)**	28	(16.4)	1	(1.2)
High school graduate or GED¶	**103**	**(40.2)**	72	(42.1)	31	(36.5)
1–3 yrs of college	**49**	**(19.1)**	33	(19.3)	16	(18.8)
≥4 yrs of college	**48**	**(18.8)**	23	(13.5)	25	(29.4)
Graduate or professional school	**22**	**(8.6)**	12	(7.0)	10	(11.8)
Prefer not to answer	**5**	**(2.0)**	3	(1.8)	2	(2.4)
At least one child participates in free or reduced breakfast or lunch program**	**112**	**(42.9)**	92	(53.8)	19	(22.1)

* Data on school district missing for three households.
† Excludes four households; p<0.05 by chi-square test of overall difference between districts.
§ Excludes five households; p<0.05 by chi-square test of overall difference between districts.
¶ General Education Development certificate.
** Excludes four households; p<0.05 by chi-square test of difference between districts.

TABLE 2. Community sites visited and activities engaged in by children in two adjacent school districts while schools were closed — southeastern Kentucky, February 2008

	Total households (N = 261)*		Households in district A (n = 172)		Households in district B (n = 86)	
Sites and activities	**No.**	**(%)**†	**No.**	**(%)**	**No.**	**(%)**
Strip malls or Wal-Mart	**113**	**(43.3)**	75	(43.6)	36	(41.9)
Visit family	**112**	**(42.9)**	76	(44.2)	35	(40.7)
Grocery shopping	**101**	**(38.7)**	64	(37.2)	35	(40.7)
Restaurants	**85**	**(32.6)**	49	(28.6)	34	(39.5)
Friends' houses or friends visiting their house	**79**	**(30.3)**	46	(26.7)	31	(36.1)
Religious services§	**76**	**(29.1)**	40	(23.3)	34	(39.5)
Sports activities (e.g., practices, games, events, roller rink, or four-wheeling)	**62**	**(23.8)**	34	(19.8)	28	(32.6)
Public gatherings (e.g., concerts, movies, or festivals)	**46**	**(17.6)**	25	(14.5)	20	(23.3)
Part-time job	**22**	**(8.4)**	14	(8.1)	7	(8.1)

* Data on school district missing for three households.
† Excludes households with missing data and when questions did not apply. Categories are not mutually exclusive.
§ p<0.05 by chi-square test of difference between districts.

Editorial Note: During seasonal influenza epidemics, decisions about school closure are made by state and local authorities. However, little is known about the impact of school closures on families with respect to work time lost, provision of child care, and loss of school meals. A principle of such school closures is that they must balance the potential negative consequences of school closure with the reasons for closing the school (*1*). Communities generally are supportive of school closures during large community outbreaks to reduce risk for children getting ill (*3*), but without accurate public health messages, the spread of communicable illness might not be mitigated (*6*). In this report, schools were closed because of influenza-related absenteeism >15%, which affected school funding and operation. Parents were told that the schools were closing because of "high absenteeism due to illness," and they inferred that the closing was to disinfect the schools and reduce transmission. Despite this, the children who attended the closed schools gathered in many social activities during the closure.

For the 3–4 day school closure described in this report, provision of child care in the home was available for approximately two thirds of households, but adults missed work in nearly one quarter of households, and only a small percentage of households had an adult who could work from home. When schools are closed for longer periods, parents might need alternative means of child care to avoid missing work beyond what is described in this report. Findings from a recent public deliberation indicated that participants were concerned about job security and economic strain on families in the event of prolonged school closures (*9*). During the short school closures described in this report, substantial socioeconomic differences between school district A and school district B appeared to influence several of the children's activities and sites visited during the closure but did not influence child care arrangements, workplace absenteeism, or use of risk-reduction methods. However, whether this lack of difference by socioeconomic variables would be maintained during a longer school closure period is unknown.

The findings in this report are subject to at least three limitations. First, telephone numbers (for landline and cellular telephones) were randomly sampled from school district rosters available at the time of survey administration. Student households without a telephone were not eligible to be sampled. Second, the response rate among households successfully contacted was high (81.9%); however, a substantial proportion of telephone numbers originally sampled were unreachable (e.g., no answer, phone disconnected, or not accepting calls), which might have introduced response bias. Finally, because household respondents were surveyed retrospectively on events occurring approximately 3 weeks before, recall bias might have reduced the accuracy of responses.

CDC policies for school closures during the current pandemic of influenza A (H1N1) (*8*) have been used to guide state and local officials, who must weigh public perception, the need to reduce spread of illness, severity of the illness, and protection of high-risk students and staff, in addition to considerations of the impact on children and families and whether high absenteeism compromises the school's ability to function normally. If school closure is necessary, school districts and health departments should work together to explain to parents their reasons for closing schools and appropriate actions to take (e.g., staying home if ill) while students are dismissed from school.

What is already known on this topic?

Public health and education officials base their recommendation to close schools during influenza outbreaks on local circumstances, such as attendance rates, prevalence of illness in their community, severity of the illness, and the community's acceptability of the actions of officials.

What is added by this report?

This report indicates that despite parental concerns about reducing risk for illness during a seasonal influenza epidemic in 2008, nearly 40% of children gathered for social activities during a school closure, and parents' perceptions about the reasons for the closure often were inaccurate; in 15.7% of households, at least one adult lost pay because of missed work during the closings.

What are the implications for public health practice?

When school closures are necessary, school districts and health departments should enumerate the reasons and recommend measures to reduce the transmission of influenza during the closures.

Acknowledgments

This report is based, in part, on contributions by V Lawson, T Johnson, C Parks, S Damron, S Richardson, S Walden, K Croley, M Whitman, T McKinney, G Young, D McNaughton, Whitley County Health Dept; W Hacker, MD, S Robeson, MPH, Kentucky

TABLE 3. Behaviors respondents thought could reduce the risk for becoming ill from influenza and frequency of use of those behaviors by households in two adjacent school districts (N = 261) — southeastern Kentucky, February 2008

	Thought behavior could reduce risk for influenza		Engaged in or told child to engage in the behavior	
Behavior*	**No.**	**(%)**	**No.**	**(%)**
Wash hands	196	(75.0)	171	(65.5)
Cover cough or sneeze	79	(30.3)	73	(28.0)
Avoid sharing drinks and utensils	54	(20.7)	69	(26.4)
Stay home	38	(14.6)	25	(9.6)
Avoid crowds	44	(16.9)	23	(8.8)
Use hand sanitizer	11	(4.2)	16	(6.1)
Eat right	16	(6.1)	13	(5.0)
Vaccination ("flu shot")	55	(21.1)	10	(3.8)
Get enough sleep	10	(3.8)	9	(3.5)
Take vitamins	13	(5.0)	9	(3.5)
Stay warm	9	(3.4)	7	(2.7)
Clean surfaces	12	(4.6)	5	(1.9)
Keep child out of school (beyond the school closure)	9	(3.4)	4	(1.5)
Keep hands away from mouth	3	(1.2)	3	(1.2)

* Categories are not mutually exclusive.

Dept for Public Health; P Edelson, MD, H Hastings, MPH, V Moody, MHA, Div of Global Migration and Quarantine, National Center for Preparedness, Detection, and Control of Infectious Diseases; P Casteel, MPH, K Nicholson, MPH, Div of Adolescent and School Health, National Center for Chronic Disease Prevention and Health Promotion; C Dao, MPH, Influenza Div, National Center for Immunization and Respiratory Diseases, CDC.

References

1. Cauchemez S, Ferguson NM, Wachtel C, et al. Closure of schools during an influenza pandemic. Lancet Infect Dis 2009;9:473–81.
2. Inglesby TV, Nuzzo JB, O'Toole T, Henderson DA. Disease mitigation measures in the control of pandemic influenza. Biosecur Bioterror 2006;4:366–75.
3. Johnson AJ, Moore ZS, Edelson PJ. Household responses to school closure resulting from outbreak of influenza B, North Carolina. Emerg Infect Dis 2008;14:1024–30.
4. Koonin LM, Cetron MS. School dismissal to reduce influenza transmission [letter]. Emerg Infect Dis 2009;15(1).
5. Cowling BJ, Lau EHY, Lam CLH, et al. Effects of school closures, 2008 winter influenza season, Hong Kong. Emerg Infect Dis 2008;14(10).
6. Luckhaupt S, Hastings H, Hunter D, et al. Social distancing during a school closure due to communicable disease—Rhode Island, 2007. In: Late breaking reports of the 56th Annual Epidemic Intelligence Service Conference (April 17–20, 2007). Atlanta, GA: US Department of Health and Human Services, CDC; 2007. Available at http://www.cdc.gov/eis/downloads/2007.latebreakingreports.pdf. Accessed December 21, 2009.
7. Clark MA, Fox MK. Nutritional quality of the diets of US public school children and the role of the school meal programs. J Am Diet Assoc 2009;109(2 Suppl):S44–56.
8. CDC. CDC guidance for state and local public health officials and school administrators for school (K–12) responses to influenza during the 2009–2010 school year. Available at http://www.cdc.gov/h1n1flu/schools/schoolguidance.htm. Accessed December 21, 2009.
9. Baum NM, Jacobson PD, Goold SD. "Listen to the people": public deliberation about social distancing measures in a pandemic. Am J Bioeth 2009;9:4–14.

Hantavirus Pulmonary Syndrome in Five Pediatric Patients — Four States, 2009

Hantavirus pulmonary syndrome (HPS) is a reportable infectious disease with a high case-fatality rate, transmitted to humans by exposure to rodents. Each year, 20–40 cases of HPS occur in the United States; cases in persons aged <17 years make up fewer than 7% of those cases, and cases in children aged <10 years are exceptionally rare. CDC received reports of five pediatric cases of HPS occurring during May 16–November 25, 2009, among children aged 6–14 years from Arizona, California, Colorado, and Washington. Three of the children were aged <10 years, and all five had exposure to rodents. This report summarizes the five cases, including the clinical findings and likely means of transmission of a hantavirus. Thrombocytopenia, elevated white blood cell (WBC) count, and pulmonary infiltrates were observed in all five children; elevated hematocrit was observed in three. One child died, and three of the four children who recovered required mechanical ventilation during hospitalization. Clinicians should consider HPS in the differential diagnosis for children with unexplained acute respiratory distress, especially if recent rodent exposure is noted. Public health agencies should promote preventive measures, including rodent control in housing and play areas, and children should be advised to avoid contact with rodents and areas of infestation.

Case 1

On May 16, a boy aged 6 years who lived in Colorado went to a Texas hospital with a 2-day history of diarrhea and shortness of breath. On initial examination, the child had cyanotic lips and nail beds, with cold extremities. His pulse was 163, and his temperature was 101°F (38.3°C). Soon after arrival at the hospital, the child became apneic and had no palpable pulse. Chest compressions were initiated, and the child was intubated and ventilated. A chest radiograph revealed bilateral infiltrates, and blood analysis demonstrated elevated hematocrit, elevated WBC count, and thrombocytopenia (Table). Within 2 hours of admission to the hospital, the boy died from apparent cardiac failure secondary to shock. The child had been treated with intravenous fluids, ceftriaxone, epinephrine, atropine, and albuterol. The working diagnosis at the time of the child's death was shock and sepsis caused by pneumonia.

An enzyme-linked immunosorbant assay (ELISA) performed by the Colorado Department of Public Health and Environment revealed Sin Nombre hantavirus–specific serum immunoglobulin M (IgM). An environmental assessment conducted at the boy's home in Colorado found rodent droppings and nesting materials under his bed and in bushes in front of the home where the boy had played.

Case 2

On June 7, an adolescent boy aged 14 years went to a Washington emergency department with a 5-day history of shortness of breath, chest pain, cough, and fever. Upon admission, the child had a fever of 103°F (39.4°C), pulse of 100, and a respiratory rate varying between 40 and 60. He was thrombocytopenic and had elevated WBC with atypical lymphocytosis (Table). A chest radiograph revealed bilateral interstitial infiltrates. No details were provided regarding treatment or any suspicion of HPS.

Because of worsening respiratory distress and hypoxia, the patient was intubated and mechanically ventilated for approximately 24 hours. He improved and was discharged home on June 13. An ELISA of serum detected Sin Nombre hantavirus–specific IgM at the Washington State Public Health Laboratories. A follow-up environmental assessment found rodent fecal contamination in a container of corn that the youth reported hand-grinding 8 days before illness onset.

Case 3

On July 12, a boy aged 6 years went to a Colorado emergency department with a 5-day history of fever (maximum 103°F [39.4°C]), erythematous facial rash, and myalgia. Upon admission the boy's pulse was 120, respiratory rate 48, and oxygen saturation 72% on room air. Dyspnea was apparent with coarse breath sounds, wheezes, and crackles on auscultation. His WBC count was elevated, and thrombocytopenia was noted (Table). A chest radiograph revealed bilateral diffuse pulmonary infiltrates with pleural effusions. HPS was suspected, and the boy was treated with intravenous fluids, ceftriaxone, and azithromycin.

The boy was intubated and mechanically ventilated from July 12 to July 20; he was discharged on July 22. Serum ELISA performed by the Colorado Department of Public Health and Environment revealed positive Sin Nombre hantavirus IgM. Family members reported that approximately 10 days before hospitalization the child was bitten on the finger by a mouse. During environmental assessment, evidence of rodent infestation was observed in outbuildings and abandoned vehicles but not within the house.

Case 4

On July 12, a girl aged 9 years living in Arizona went to a New Mexico hospital with chest pain and shortness of breath. Symptoms began with abdominal discomfort on July 6, which was followed by headache, vomiting, and myalgia. Upon examination, the girl's temperature was 99.9°F (37.7°C), and her pulse was 162. Laboratory findings included thrombocytopenia, elevated hematocrit, and elevated WBC count (Table). A chest radiograph revealed diffuse interstitial infiltrates. During transport to a tertiary care facility for further treatment, the child's temperature reached 103.8°F (39.9°C). HPS was suspected, and the girl was treated with intravenous fluids, ceftriaxone, and vancomycin.

Because of worsening signs of pulmonary distress, the girl was intubated and received extracorporeal membrane oxygenation therapy for 4 days. She remained on a ventilator until July 22 and was hospitalized until August 5. Serum tested with a commercial immunoblot assay revealed Sin Nombre hantavirus immunoglobulin G (IgG). Evidence of rodents was found at three residences frequented by the girl in Arizona: the family home, grandparents' home, and a summer home where she played in an underground dugout that had rodent burrows.

Case 5

On November 25, an adolescent boy aged 13 years went to a California emergency department with a 5-day history of fever (maximum 102.6°F [39.2°C]), cough, posttussive vomiting, diarrhea, and abdominal pain. Physical examination revealed a tender chest, with crackles and diminished breath sounds in the lower lobes of the lungs, and a respiratory rate of 30. Laboratory findings included elevated WBC, elevated hematocrit, and thrombocytopenia (Table). Chest radiographs revealed diffuse interstitial opacities with pleural effusion. Treatment included intravenous fluids, ceftriaxone, clindamycin, and azithromycin. The patient received supplemental oxygen by nasal cannula and was discharged home on December 3.

Testing for hantavirus was requested on day 4 of hospitalization. Serum was submitted to a commercial diagnostic laboratory, and Sin Nombre hantavirus IgM and IgG antibodies were detected by immunoblot assay. Extensive remodeling was under way in the youth's home at the time of illness, including removal and replacement of floors and walls. Three mice were trapped in the youth's kitchen and garage approximately 3 months before disease onset, but the patient had no known direct or indirect contact with the rodents.

TABLE. Cases of hantavirus pulmonary syndrome, by selected patient and clinical characteristics — four states, 2009

Characteristic	Case 1	Case 2	Case 3	Case 4	Case 5
State of residence	Colorado	Washington	Colorado	Arizona	California
Patient age (yrs)	6	14	6	9	13
Days from illness onset to hospitalization	2	5	5	6	5
Days in hospital	1	6	11	25	8
Maximum white blood cell count (x 10^9/L) (reference range: 4–11 x 10^9/L)	57	25	15	38	27
Maximum hematocrit (%) (reference range*: males, 36%–47%; females, 35%–45%)	55	39	33	52	63
Minimum platelets (x 10^9/L) (reference range: 150–400 x 10^9/L)	40	19	56	24	39
Chest radiograph with infiltrates	Yes	Yes	Yes	Yes	Yes
Outcome	Died	Fully recovered	Fully recovered	Fully recovered	Fully recovered

* For persons aged 10–18 years.

What is already known on this topic?

Hantavirus pulmonary syndrome (HPS) is an uncommon but severe disease that can occur after contact with an infected rodent or rodent-infested area.

What is added by this report?

Although reports of HPS are uncommon in children, the five pediatric cases in this report affirm that children can experience severe morbidity and a clinical course similar to that of adults.

What are the implications for public health practice?

HPS should be considered in children with unexplained acute respiratory distress, especially if rodent exposure is noted; preventive measures include rodent control in housing and play areas and instructing children to avoid contact with rodents or areas of infestation.

Reported by: *C Levy, MS, Arizona Dept of Health Svcs. K Gains, MS, Southeast Land and Environment, Prowers County; V Crocco, Chaffee County Environmental Health Dept; J Brown, MSN, Prowers County Nursing Svc; E Lawaczeck, DVM, W Ray, M Miller, MS, M Klaber, MS, A Doussette, MS, Colorado Dept of Public Health and Environment. C Ralston, Benton-Franklin Health District; N Marsden-Haug, MPH, Washington State Dept of Health. C Fritz, DVM, California Dept of Public Health. C Watson, MSN, Nevada County Public Health Dept. A MacNeil, PhD, J Mills, PhD, PE Rollin, MD, S Nichol, PhD, Special Pathogens Bur, Div of Viral and Rickettsial Diseases, National Center for Zoonotic Vector-Borne, and Enteric Diseases; B Knust, DVM, EIS Officer, CDC.*

Editorial Note: HPS was first described in 1993 and has been a nationally notifiable disease* since 1995. As of December 18, 2009, a total of 537 cases of HPS had been reported to CDC, with a case-fatality rate of 36%. Of all confirmed cases, <7% have occurred in children aged <17 years, and only four cases have occurred in children aged <10 years, including the two children aged 6 years and one child aged 9 years described in this report (the fourth case was in a child aged 8 years). Although reports of HPS in persons aged <17 years are uncommon, the clinical illnesses of the pediatric patients in this report were similar to those observed in adults. HPS typically has a 2–10 day prodrome with nonspecific viral symptoms, and the acute respiratory phase often commences abruptly (*2*). In all five cases summarized in this report, the children had illnesses for 2–6 days preceding onset of acute respiratory symptoms. Thrombocytopenia and elevated WBC count were observed in all five cases, and three children had elevated hematocrit; these hematologic signs are comparable to those typical of HPS in adult patients (*3,4*). A previous review of 12 pediatric HPS cases in New Mexico found thrombocytopenia in 100% and elevated WBC count and hemoconcentration in 27% of cases (*5*).

Children infected with hantavirus can develop severe illness, similar to adults. Antivirals have not been shown to be effective in the treatment of HPS (*6*); therefore, medical interventions consist primarily of supportive care. Respiratory distress requiring mechanical ventilation was observed in four of the cases described in this report, similar to trends observed nationally (*4*). In case 1, the child died from apparent cardiac failure secondary to shock. Although cardiac functioning tests could not be obtained, abnormally low cardiac index and stroke volume with increased vascular resistance has been reported previously in HPS cases and is considered to be an important cause of death in persons with HPS (*7*). In case 4, the patient received extracorporeal membrane oxygenation therapy, which might be of benefit to HPS patients who require both oxygenation and circulatory support (*8*).

Hantaviruses are transmitted from rodent hosts to humans through inhalation of infectious aerosols of rodent excreta or direct inoculation into broken skin. In North America, Sin Nombre virus is the most common cause of HPS, and its reservoir is the deer mouse (*Peromyscus maniculatus*). The largest number of HPS illnesses has occurred in the southwestern United States, although cases have been reported in 31 states. Several rodent species distributed throughout the United States have been identified as reservoirs for hantaviruses, many of which have been associated with HPS. All the patients in this report had evidence of rodents in and around their homes, including places where the patients in cases 1 and 4 played. The patient in case 2 likely was exposed by hand-grinding contaminated corn; the patient in case 5 might have been exposed to rodent-contaminated areas or a virus-containing aerosol during remodeling of his home. The likely means of hantavirus transmission to the patient in case 3 was a mouse bite, reported previously in two pediatric cases (*9*). No evidence exists of person-to-person hantavirus transmission in the United States.

Current CDC recommendations to reduce the risk for hantavirus infection include trapping and excluding rodents and using personal protective equipment when handling potentially infected rodents or disturbing areas of rodent infestation. Recommended cleaning agents include household disinfectant or bleach solution (*10*). Rodent control activities should include outbuildings and places where children play. Educational efforts aimed at parents and children, including

* A clinical case of HPS is defined by CDC as illness in a previously healthy person with acute febrile respiratory illness and thrombocytopenia, characterized by bilateral diffuse interstitial edema that can radiographically resemble acute respiratory distress syndrome, with respiratory compromise requiring supplemental oxygen, and/or an autopsy examination demonstrating noncardiogenic pulmonary edema without an identifiable cause. A confirmed case requires detection of hantavirus-specific IgM or IgG, a positive reverse transcription–polymerase chain reaction result in clinical specimens, or detection of antigen by immunohistochemistry (*1*).

how to recognize the signs of rodent infestation and take proper precautions, are recommended. Although the reasons for the infrequent occurrence of HPS in children remain unknown, the cases in this report serve as a reminder that children are susceptible to hantavirus infection. More information is available from CDC at http://www.cdc.gov/ncidod/diseases/hanta/hps/index.htm.

References

1. Nationally notifiable conditions. Annual lists of infectious conditions. Available at: http://www.cdc.gov/ncphi/disss/nndss/phs/infdis.htm. Accessed December 21, 2009.
2. Mertz GJ, Hjelle B, Crowley M, Iwamoto G, Tomicic V, Vial PA. Diagnosis and treatment of new world hantavirus infections. Curr Opin Infect Dis 2006;19:437–42.
3. Koster F, Foucar K, Hjelle B, et al. Rapid presumptive diagnosis of hantavirus cardiopulmonary syndrome by peripheral blood smear review. Am J Clin Pathol 2001;116:665–72.
4. Khan AS, Khabbaz RF, Armstrong LR, et al. Hantavirus pulmonary syndrome: the first 100 US cases. J Infect Dis 1996;173:1297–303.
5. Ramos MM, Overturf GD, Crowley MR, Rosenberg RB, Hjelle B. Infection with Sin Nombre hantavirus: clinical presentation and outcome in children and adolescents. Pediatrics 2001;108:e27.
6. Mertz GJ, Miedzinski L, Goade D. Placebo-controlled, double-blind trial of intravenous ribavirin for the treatment of hantavirus cardiopulmonary syndrome in North America. Clin Infect Dis 2004;39:1307–13.
7. Hallin GW, Simpson SQ, Crowell RE, et al. Cardiopulmonary manifestations of hantavirus pulmonary syndrome. Crit Care Med 1996;24:252–8.
8. Dietl CA, Wernle JA, Pett SB, et al. Extracorporeal membrane oxygenation support improves survival of patients with severe hantavirus cardiopulmonary syndrome. J Thorac Cardiovasc Surg 2008;135:579–84.
9. St Jeor S. Three-week incubation period for hantavirus infection. Pediatr Infect Dis J 2004;23:974–5.
10. CDC. Hantavirus pulmonary syndrome—United States: updated recommendations for risk reduction. MMWR 2002;51(No. RR-9).

Coal Workers' Pneumoconiosis-Related Years of Potential Life Lost Before Age 65 Years — United States, 1968–2006

Coal workers' pneumoconiosis (CWP) is a preventable, slowly progressive parenchymal lung disease caused by inhalation and deposition of coal mine dust in the lungs. The incidence and rate of CWP progression is related to the amount of respirable coal dust to which miners were exposed during their working lifetime (*1*). Early pneumoconiosis can be asymptomatic, but advanced disease often leads to disability and premature death (*1,2*). To characterize the impact of premature mortality attributed to CWP in the United States, CDC's National Institute for Occupational Safety and Health (NIOSH) analyzed annual underlying cause of death data from 1968–2006, the most recent years for which complete data were available. Years of potential life lost before age 65 years (YPLL), and mean YPLL were calculated using standard methodology. This report describes the results of that analysis, which indicate that during 1968–2006, a total of 22,625 YPLL were attributed to CWP (mean per decedent: 5.7). Annual YPLL attributed to CWP decreased 91.2%, from an average of 1,484 YPLL per year during 1968–1972 to 154 per year during 2002–2006. However, annual YPLL from CWP have been increasing since 2002, from 135 in that year to 169 YPLL in 2006, suggesting a need for strengthening CWP prevention measures. CDC intends to maintain surveillance of CWP deaths to determine future trends and promote safer work environments.

NIOSH maintains a mortality surveillance system for work-related respiratory diseases.* Data are drawn from CDC's National Center for Health Statistics (NCHS) multiple cause-of-death data files, which include all deaths in the United States since 1968. YPLL and mean YPLL (*3*) were calculated using mortality data for 5-year age groups. For this analysis, decedents for whom the *International Classification of Diseases* (ICD) code for CWP was listed as the underlying† cause of death were identified from 1968–2006 mortality data.§ Deaths with the ICD-10 underlying cause of death coded as J65 (pneumoconiosis associated with tuberculosis) were included if code J60 (coal workers' pneumoconiosis) also was recorded on the death certificate.¶ Because CWP results solely from >10 years of occupational exposure (*1,2*), only deaths of persons aged ≥25 years were considered. A simple linear regression model was used for time-trend analysis of YPLL (using 5-year moving averages).

During 1968–2006, CWP was identified as the underlying cause of death for 28,912 decedents aged ≥25 years. Of these, 3,983 (13.8%) were aged 25–64 years, including four (0.1%) aged 25–34 years, 40 (1.0%) aged 35–44 years, 494 (12.4%) aged 45–54 years, and 3,445 (86.5%) aged 55–64 years, accounting for 22,625 YPLL (mean per decedent: 5.7). Among CWP decedents aged 25–64 years, 3,954 (99.3%) were male and 3,891 (97.7%) were white, accounting for 22,283

* Information available at http://webappa.cdc.gov/ords/norms.html.

† Underlying cause of death is defined as "the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury," in accordance with ICD guidance. Additional information available at http://www.cdc.gov/nchs/injury/injury_mortality.htm.

§ ICDA-8 code 515.1 (anthracosilicosis) for years 1968–1978, ICD-9 code 500 (coal workers' pneumoconiosis) for years 1979–1998, and ICD-10 code J60 (coal workers' pneumoconiosis) for years 1999–2006.

¶ Multiple cause-of-death data code-field "entity axis" includes information on all of the diseases, injuries, or medical complications, and the location (part, line, and sequence) of the information recorded on each death certificate. Data available at http://www.cdc.gov/nchs/about/major/dvs/mcd/msb.htm.

(98.5%) and 21,893 (96.8%) YPLL, respectively (Table). The mean YPLL per decedent was greatest for the few females (11.8) and blacks (8.1).

Overall, CWP deaths among U.S. residents aged ≥25 years declined 73%, from an average of 1,106.2 per year during 1968–1972 to 300.0 per year during 2002–2006 (regression trend, p<0.001). Age-adjusted death rates among residents aged 25–64 years declined 96%, from 1.78 per million in 1968 to 0.07 in 2006; age-adjusted death rates among residents aged ≥65 years declined 84%, from 6.24 per million in 1968 to 1.02 in 2006 (Figure 1).

CWP-attributable YPLL varied annually, from a high of 1,768 (mean per decedent: 6.0) in 1970 to a low of 66 (mean per decedent: 5.5) in 2001 (Figure 2). YPLL increased from 66 in 2001 to 198 in 2005, and then declined to 169 in 2006. Overall, YPLL decreased 91%, from an average of 1,484.2 per year during 1968–1972 to 153.8 per year during 2002–2006 (regression trend, p<0.001). The mean YPLL per decedent increased 47%, from 5.3 per decedent during 1968–1972 to 7.8 during 2002–2006 (regression trend, p<0.001). During 1968–2006, CWP deaths in Pennsylvania (2,845; 15,420 YPLL), West Virginia (281; 1,640 YPLL), Virginia (191; 1,314 YPLL), Kentucky (209; 1,273 YPLL), and Ohio (91; 543 YPLL) accounted for 90.8% of all decedents aged 25–64 years with CWP as the underlying cause of death and 89.2% of the total YPLL attributed to CWP (Table).

Reported by: *JM Mazurek, MD, AS Laney, PhD, JM Wood, MS, Div of Respiratory Disease Studies, National Institute for Occupational Safety and Health, CDC.*

Editorial Note: Age-adjusted CWP death rates have declined dramatically during the past 38 years (1968–2006) in the United States, and annual CWP-attributable YPLL before age 65 years also have decreased, from a high of nearly 1,800 in 1970 to a low of 66 in 2001. However, the findings in this report indicate that YPLL before age 65 years have been increasing since 2002. This is consistent with the observed increase in the percentage of underground coal miners identified with CWP, in particular among younger workers (*2,4*). In addition, the mean YPLL per decedent has been increasing since the early 1990s, and, like annual YPLL, has increased more sharply since 2002. Continuing surveillance of CWP deaths is needed to ascertain whether these trends will continue and to promote safer work environments.

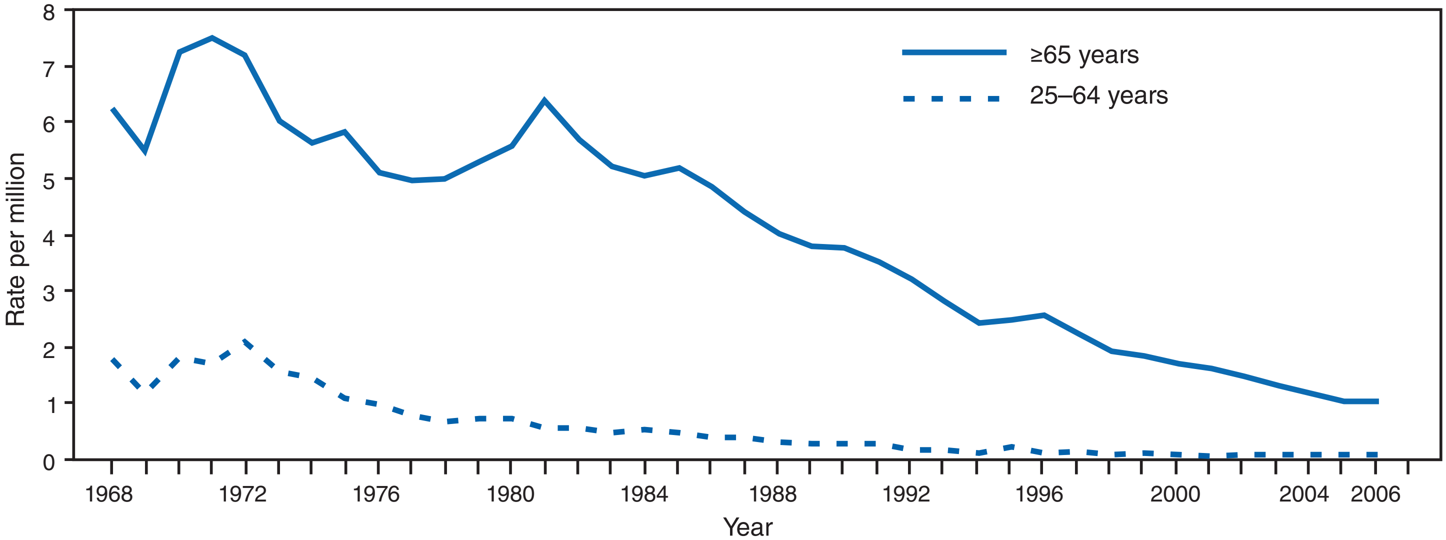
One cause of the increased YPLL in recent years might be greater exposure of workers to coal dust. Inadequate enforcement standards (i.e., exposure limits that are too high) and unrepresentative dust measurements (i.e., dust levels reported for enforcement purposes that do not reflect individual exposure) might contribute to the continued occurrence of CWP-attributable YPLL (*2*). Additionally, increased coal

TABLE. Years of potential life lost before age 65 years (YPLL) for decedents aged 25–64 years with coal workers' pneumoconiosis as the underlying cause of death, by sex, race, and state of residence* — United States, 1968–2006

Characteristics	Deaths No.	Deaths (%)†	YPLL No.	YPLL (%)†	Mean YPLL per decedent
Total	**3,983**	**(100.0)**	**22,625**	**(100.0)**	**5.7**
Sex					
Male	3,954	(99.3)	22,283	(98.5)	5.6
Female	29	(0.7)	342	(1.5)	11.8
Race					
White	3,891	(97.7)	21,893	(96.8)	5.6
Black	89	(2.2)	718	(3.2)	8.1
Other	3	(0.1)	14	(0.1)	4.7
State/Area of residence					
Alabama	27	(0.7)	228	(1.0)	8.4
Alaska	0	(0.0)	0	(0.0)	0.0
Arizona	9	(0.2)	57	(0.3)	6.3
Arkansas	1	(0.0)	8	(0.0)	8.0
California	19	(0.5)	144	(0.6)	7.6
Colorado	7	(0.2)	51	(0.2)	7.3
Connecticut	3	(0.1)	9	(0.0)	3.0
Delaware	2	(0.1)	6	(0.0)	3.0
District of Columbia	0	(0.0)	0	(0.0)	0.0
Florida	40	(1.0)	217	(1.0)	5.4
Georgia	10	(0.3)	50	(0.2)	5.0
Hawaii	0	(0.0)	0	(0.0)	0.0
Idaho	2	(0.1)	21	(0.1)	10.5
Illinois	32	(0.8)	183	(0.8)	5.7
Indiana	28	(0.7)	154	(0.7)	5.5
Iowa	2	(0.1)	11	(0.0)	5.5
Kansas	3	(0.1)	19	(0.1)	6.3
Kentucky	209	(5.2)	1,273	(5.6)	6.1
Louisiana	9	(0.2)	112	(0.5)	12.4
Maine	0	(0.0)	0	(0.0)	0.0
Maryland	10	(0.3)	50	(0.2)	5.0
Massachusetts	5	(0.1)	12	(0.1)	2.4
Michigan	19	(0.5)	118	(0.5)	6.2
Minnesota	1	(0.0)	3	(0.0)	3.0
Mississippi	1	(0.0)	3	(0.0)	3.0
Missouri	5	(0.1)	35	(0.2)	7.0
Montana	1	(0.0)	8	(0.0)	8.0
Nebraska	0	(0.0)	0	(0.0)	0.0
Nevada	2	(0.1)	31	(0.1)	15.5
New Hampshire	2	(0.1)	11	(0.0)	5.5
New Jersey	28	(0.7)	206	(0.9)	7.4
New Mexico	4	(0.1)	17	(0.1)	4.3
New York	18	(0.5)	71	(0.3)	3.9
North Carolina	12	(0.3)	66	(0.3)	5.5
North Dakota	0	(0.0)	0	(0.0)	0.0
Ohio	91	(2.3)	543	(2.4)	6.0
Oklahoma	7	(0.2)	86	(0.4)	12.3
Oregon	1	(0.0)	8	(0.0)	8.0
Pennsylvania	2,845	(71.4)	15,420	(68.2)	5.4
Rhode Island	0	(0.0)	0	(0.0)	0.0
South Carolina	2	(0.1)	11	(0.0)	5.5
South Dakota	0	(0.0)	0	(0.0)	0.0
Tennessee	38	(1.0)	274	(1.2)	7.2
Texas	3	(0.1)	29	(0.1)	9.7
Utah	4	(0.1)	17	(0.1)	4.3
Vermont	0	(0.0)	0	(0.0)	0.0
Virginia	191	(4.8)	1,314	(5.8)	6.9
Washington	5	(0.1)	52	(0.2)	10.4
West Virginia	281	(7.1)	1,640	(7.2)	5.8
Wisconsin	2	(0.1)	6	(0.0)	3.0
Wyoming	2	(0.1)	51	(0.2)	25.5

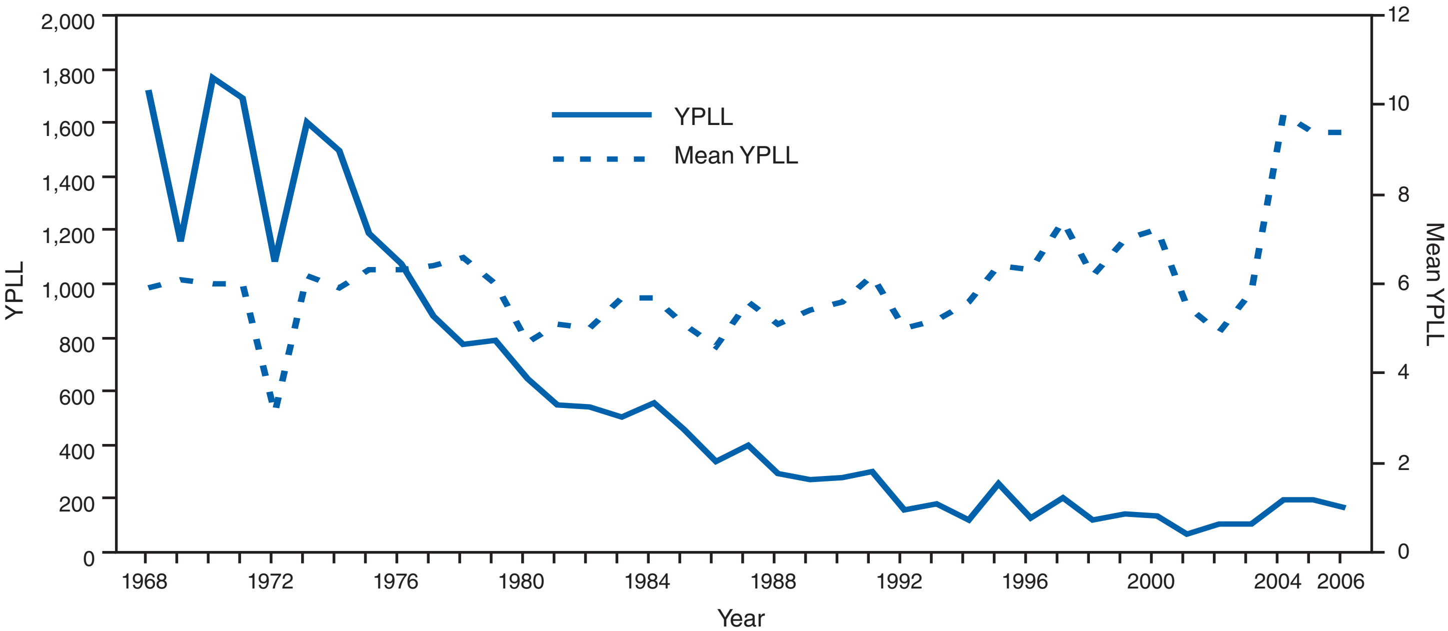
* Based on multiple cause-of-death data files, National Center for Health Statistics, CDC.
† Percentages might not total 100% because of rounding.

FIGURE 1. Age-adjusted death rates* (per million) for decedents aged ≥25 years with coal workers' pneumoconiosis as the underlying cause of death — United States, 1968–2006



* Based on annual multiple cause-of-death data, National Center for Health Statistics, CDC.

FIGURE 2. Years of potential life lost (YPLL) before age 65 years and mean YPLL per decedent* for decedents aged ≥25 years with coal workers' pneumoconiosis as the underlying cause of death — United States, 1968–2006



* Based on annual underlying cause of death obtained from multiple cause-of-death data files, National Center for Health Statistics, CDC.

production per shift** (*5*) can make dust suppression more difficult. Technology advances aimed at improving the health of coal workers in the United States, including improvements in ventilation systems and the development of dust suppression devices, might not be keeping pace with technology advances that have increased production (*6*). Larger, more powerful machines generate larger quantities of dust in shorter periods, potentially exposing workers to higher concentrations of dust

** Previously, NIOSH examined industry and occupation data for the 4,893 CWP deaths that occurred during 1990–1999, the most recent year for which such data are available. After 1999, coding information for industry and occupation were no longer available. Among all industries reported, the greatest significant proportionate mortality ratio (PMR) was found for coal mining (53.2; 95% confidence interval [CI] = 51.5–54.9), and among all occupations reported, the greatest significant PMR was for mining machine operators (51.7; CI = 50.0–53.4) (*5*).

(*7*). Among coal mine dust samples collected by Mine Safety and Health Administration inspectors during 1995–2003, 24.6% exceeded the NIOSH recommended exposure limit of 1.0 mg/m^3 for respirable coal dust (*4*). Dust hazards also might increase when workers cut into quartz-bearing rock in thin-seam underground mines, which creates maintenance problems for the machine and dust control systems, and is associated with high exposure to silica dust (*1,2*).

In addition, the total number of hours worked in underground coal mines increased 25.6%, from an annual average of 1,671 per miner during 1978–1982 to 2,099 per miner during 2003–2007 (*5*). Increased hours of work can result in increased inhaled dust, which might exceed the lungs' ability to remove dust. CWP survival decreases with increasing dust exposure (*1*). Finally, another cause of increased CWP-attributable YPLL could be missed opportunities by miners for early disease screening, which could exacerbate disease progression (*1,2*).

The findings in this report are subject to at least five limitations. First, this report used a death certificate–based definition of CWP as the underlying cause of death. Because some deaths from CWP might have been attributed to other diseases (e.g., unspecified pneumoconiosis or silicosis) instead of to CWP, the findings in this report likely underestimate deaths and YPLL attributable to CWP. Second, complete work histories are not listed on death certificates, and the relevance of the reported usual industry and occupation to actual hazardous exposures could not be verified. Although no studies have examined the accuracy of usual industry and occupation information on death certificates specifically for CWP decedents, research suggests a generally good agreement of this information compared with that from other sources (*8*). Third, the state issuing a death certificate is not always the state in which the decedent's coal dust exposure occurred. Fourth, although women and blacks appeared to die earlier from CWP than men and other races, this observation was based on a small percentage of overall deaths. However, a similar effect has been observed for silicosis deaths (*9*). Finally, ICD cause-of-death codes used in this analysis changed twice during 1968–2005. Slight differences exist in the ICD coding for CWP between the 8th and 9th revisions. In the 9th and 10th revisions, the rubric for code 500 is "coal workers' pneumoconiosis," whereas the 8th revision used "anthracosilicosis." The overall effect of this change is unclear but might have resulted in an increase in the number of cases between the 8th and 9th revisions (i.e., between 1978 and 1979).

The continuing occurrence of fatal cases of CWP (CWP-attributable YPLL) underscores the need for increased efforts to prevent this disease. In 2006, NIOSH published the results of a collaborative study designed to verify the performance of the personal respirable dust monitor in laboratory and underground coal mine environments. The monitor was shown to be acceptable to miners and accurate, precise, and durable in providing continuous exposure information previously not available to coal miners and coal mine operators. Use of the monitor can assist in rapid action to correct adverse conditions (*10*).

CDC continues to conduct surveillance for CWP deaths to follow future trends and to identify problems. Guidance for persons concerned about exposure to coal mine dust, and for health-care providers about working with potentially exposed patients, is available at http://www.cdc.gov/niosh/topics/pneumoconioses.

What is already known on this topic?

Coal workers' pneumoconiosis (CWP) is an occupational lung disease that can lead to disability and premature mortality but is preventable through appropriate control of coal mine dust exposures.

What is added by this report?

The annual years of potential life lost before age 65 years (YPLL) attributed to CWP decreased 91.2%, from an average of 1,484 YPLL per year during 1968–1972 to 154 per year during 2002–2006; however, both YPLL and mean YPLL per decedent have been increasing since 2002, from 135 to 169 YPLL in 2006 and from 4.9 in 2002 to 9.4 YPLL in 2006.

What are the implications for public health practice?

Prevention and elimination efforts for CWP should be strengthened, and surveillance for CWP deaths should continue to follow future trends.

Acknowledgments

This report is based, in part, on contributions by EL Petsonk, MD, West Virginia University, and MD Attfield, PhD, National Institute for Occupational Safety and Health, CDC.

References

1. Attfield M, Wagner GR. Coal. In: Harber P, Schenker MB, Balmes JR, eds. Occupational and environmental respiratory disease. St. Louis, MO: Mosby; 1996:362–72.
2. CDC. Advanced pneumoconiosis among working underground coal miners—eastern Kentucky and southwestern Virginia, 2006. MMWR 2007;56:652–5.
3. Wise RP, Livengood JR, Berkelman RL, Goodman RA. Methodological alternatives for measuring premature mortality. Am J Prev Med 1988;4:268–73.
4. CDC. Work-related lung disease surveillance report 2007. Cincinnati, OH: US Department of Health and Human Services, CDC; 2008. DHHS (NIOSH) publication no. 2008-143a. Available at http://www.cdc.gov/niosh/docs/2008-143. Accessed December 17, 2009

5. Mine Safety and Health Administration. Mining industry accident, injuries, employment, and production statistics. All coal mining data. Arlington, VA: US Department of Labor, Mine Safety and Health Administration; 2008. Available at http://www.msha.gov/accinj/bothcl.htm. Accessed December 17, 2009.
6. Chekan GJ, Rider JP, Listak JM, Colinet JF, Potts JD. Impact of air velocity and support advance on shield-generated dust. 2009 SME Annual Meeting and Exhibit, February 22–25, Denver, Colorado, preprint 09-087. Littleton, CO: Society for Mining, Metallurgy, and Exploration; 2009:1–5. Available at http://www.cdc.gov/niosh/mining/pubs/pdfs/ioava.pdf. Accessed December 17, 2009.
7. Suttill KR. Surface-mine loaders get bigger, stronger, smarter, and faster—engineering enhancements and increased versatility improve performance. Eng Min J 1988;189:56–61.
8. Steenland K, Beaumont J. The accuracy of occupation and industry data on death certificates. J Occup Med 1984;26:288–296.
9. Mazurek JM, Attfield MD. Silicosis mortality among young adults in the United States, 1968–2004. Am J Ind Med. 2008;51:568–78.
10. Volkwein JC, Vinson RP, Page SJ, et al. Laboratory and field performance of a continuously measuring personal respirable dust monitor. Pittsburgh, PA: US Department of Health and Human Services, CDC; 2006. DHHS (NIOSH) publication no. 2006-145. Available at http://www.cdc.gov/niosh/mining/pubs/pdfs/2006-145.pdf. Accessed December 17, 2009.

Errata: Vol. 58, No. 13

In the report, "HIV-Associated Behaviors Among Injecting-Drug Users — 23 Cities, United States, May 2005–February 2006," errors occurred in the text and table. Following are the corrected text and table. An explanation of changes is available at http://www.cdc.gov/hiv/resources/reports/mmwr/mm5813_err/mm5813_err_qa.htm.

The third sentence of the first paragraph should read: "The results of that analysis indicated that, during that period, 32.8% of participating IDUs reported sharing syringes, and 63.4% had unprotected vaginal sex; 66.3% had been tested for HIV, and 29.7% had participated in an HIV behavioral intervention."

The last sentence of the fifth paragraph should read: "Overall, by demographic characteristic, the highest percentages of participants were men (67.3%), non-Hispanic blacks (46.0%), and persons aged 45–54 years (37.2%)."

The sixth, seventh, and eighth paragraphs should read: "Among the participating IDUs, 32.8% reported sharing syringes, and 58.5% reported sharing injection equipment during the preceding 12 months (Table). Syringes were shared most commonly among non-Hispanic white IDUs (41.1%) and persons aged 18–24 years (45.4%).

Overall, 82.4% of the IDUs reported having vaginal sex, and 63.4% reported having unprotected vaginal sex; 47.8% had more than one opposite-sex partner during the preceding 12 months. The prevalence of having unprotected vaginal sex was highest among those aged 18–24 years (68.4%). The prevalence of having more than one opposite-sex partner was highest among those aged 18–24 years (60.3%) (Table).

During the 12 months preceding their interviews, 66.3% of participants had been tested for HIV infection; the prevalence of testing was lowest among men (64.4%), non-Hispanic whites (62.4%), and persons aged 45–54 years (63.6%). Among the IDUs, 29.7% reported participating in an individual or group HIV behavioral intervention; such participation was least common among non-Hispanic whites (23.4%). HCV testing or diagnosis had been received by 72.7% of participants at some time in their lives; HCV testing was least common among those aged 18–24 years (66.0%) (Table)."

In the first paragraph of the Editorial Note, the second and fourth sentences should read: "The finding that approximately one third of participants reported sharing syringes and over half reported sharing injection equipment (32.8% and 58.5%, respectively) underscores the need to continue to focus HIV prevention strategies on these behaviors despite declines in HIV incidence among IDUs (*1*)." … "However, the NHBS data also indicate that approximately half of participants had unprotected vaginal sex (63.4%) or multiple opposite-sex partners (47.8%), suggesting that a substantial proportion of IDUs are at risk for acquiring HIV infection through their sexual behavior in addition to their drug use practices."

In the second paragraph of the Editorial Note, the second sentence should read: "However, only 29.7% of NHBS participants had participated in individual or group HIV behavioral interventions during the preceding 12 months."

TABLE. Estimated percentage* of injecting-drug users (IDUs) engaging in selected behaviors associated with human immunodeficiency virus (HIV) infection during the preceding 12 months,† by sex, race/ethnicity, and age group — National HIV Behavioral Surveillance System, 23 cities,§ United States, May 2005–February 2006

Characteristic	Shared syringes % (SE¶)	Shared injection equipment % (SE)	Had vaginal sex % (SE)	Had unprotected vaginal sex % (SE)	Had more than one opposite-sex partner % (SE)	Tested for HIV infection % (SE)	Participated in HIV behavioral intervention % (SE)	Tested for hepatitis C % (SE)
Overall	**32.8 (0.9)**	**58.5 (1.0)**	**82.4 (0.8)**	**63.4 (1.0)**	**47.8 (1.0)**	**66.3 (0.9)**	**29.7 (0.9)**	**72.7 (0.9)**
Sex								
Men	33.1 (1.1)	58.9 (1.2)	83.5 (0.9)	63.6 (1.2)	51.7 (1.1)	64.4 (1.1)	28.5 (1.0)	74.4 (1.0)
Women	32.4 (1.6)	57.6 (1.9)	80.3 (1.5)	62.9 (1.8)	40.1 (1.6)	69.8 (1.6)	32.3 (1.7)	69.5 (1.7)
Race/Ethnicity								
White, non-Hispanic	41.1 (1.7)	65.9 (1.7)	82.0 (1.3)	65.0 (1.7)	48.6 (1.8)	62.4 (1.7)	23.4 (1.5)	75.8 (1.5)
Black, non-Hispanic	29.9 (1.2)	55.8 (1.4)	85.5 (1.0)	65.1 (1.3)	52.5 (1.3)	66.2 (1.2)	31.1 (1.2)	69.2 (1.2)
Hispanic	30.1 (2.1)	56.7 (2.5)	77.3 (2.3)	58.7 (2.5)	39.1 (2.3)	70.2 (2.1)	33.3 (2.2)	75.1 (2.1)
Other**	37.5 (5.0)	63.5 (4.8)	82.5 (3.4)	60.2 (4.6)	49.2 (5.3)	64.0 (4.5)	35.1 (5.1)	78.5 (3.9)
Age group (yrs)								
18–24	45.4 (4.8)	70.5 (4.3)	88.7 (2.6)	68.4 (3.9)	60.3 (4.4)	72.6 (3.3)	24.4 (4.7)	66.0 (4.1)
25–34	40.2 (2.3)	63.0 (2.3)	87.6 (1.6)	65.5 (2.4)	58.9 (2.0)	70.2 (1.8)	29.9 (2.2)	69.0 (2.1)
35–44	33.1 (1.6)	59.9 (1.8)	84.4 (1.5)	67.5 (1.7)	48.8 (1.7)	67.4 (1.6)	32.5 (1.7)	67.9 (1.8)
45–54	33.0 (1.4)	58.5 (1.6)	80.8 (1.3)	62.8 (1.6)	44.7 (1.6)	63.6 (1.5)	29.9 (1.4)	77.7 (1.4)
≥55	24.9 (2.5)	51.7 (3.0)	71.1 (2.8)	49.6 (2.7)	37.7 (2.8)	65.1 (2.8)	24.3 (2.4)	79.9 (2.1)

* Percentages were weighted to adjust for differences in recruitment, the size of participant IDU peer networks, and the size of the IDU population in each city.

† Sharing syringes was defined as "using needles that might have already been used by someone else," and sharing injection equipment was defined as using equipment such as cookers, cottons, or water used to rinse needles or prepare drugs "that someone else used." Unprotected vaginal sex was defined as "sex without a condom." Persons tested for HIV infection include those with results that were negative, indeterminate, or unknown. Participating in an individual or group HIV behavioral intervention did not include counseling received as part of an HIV test. Testing for hepatitis C virus infection was measured as ever tested or ever received a diagnosis of hepatitis C.

§ Atlanta, Georgia; Baltimore, Maryland; Boston, Massachusetts; Chicago, Illinois; Dallas, Texas; Denver, Colorado; Detroit, Michigan; Fort Lauderdale, Florida; Houston, Texas; Las Vegas, Nevada; Los Angeles, California; Miami, Florida; Nassau-Suffolk, New York; New Haven, Connecticut; New York, New York; Newark, New Jersey; Norfolk, Virginia; Philadelphia, Pennsylvania; San Diego, California; San Francisco, California; San Juan, Puerto Rico; St. Louis, Missouri; and Seattle, Washington.

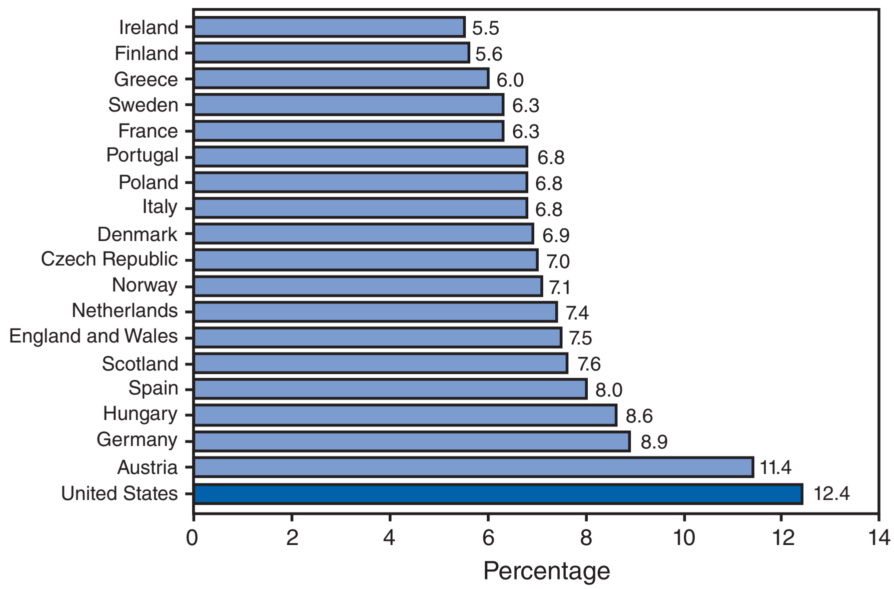
¶ Standard error.

** Includes American Indian/Alaska Natives, Asians, Native Hawaiian or other Pacific Islanders, persons of multiple race, and those for whom race/ethnicity information was missing.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Preterm Births* — United States and Selected European Countries, 2004



* Excludes births at <22 weeks of gestation to promote comparability between countries. Preterm births are those from 22 to 36 weeks of gestation.

Compared with 18 European countries, the United States had the highest percentage of preterm births (12.4%) in 2004. Except for Austria (11.4%), the other countries had levels of 8.9% or less. Ireland had the lowest percentage (5.5%), followed by Finland (5.6%) and Greece (6.0%), each less than half the U.S. percentage. Because preterm infants are at greater risk for death than term infants, countries with a higher percentage of preterm births tend to have higher infant mortality rates.

SOURCE: MacDorman MF, Mathews TJ. Behind international rankings of infant mortality: How the United States compares with Europe. NCHS data brief, no 23. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics; 2009. Available at http://www.cdc.gov/nchs/data/databriefs/db23.pdf.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending December 19, 2009 (50th week)*

Disease	Current week	Cum 2009	5-year weekly average[†]	Total cases reported for previous years 2008	2007	2006	2005	2004	States reporting cases during current week (No.)
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	—	12	1	17	32	20	19	16	
infant	—	55	2	109	85	97	85	87	
other (wound and unspecified)	—	21	1	19	27	48	31	30	
Brucellosis	1	93	3	80	131	121	120	114	FL (1)
Chancroid	—	23	1	25	23	33	17	30	
Cholera	—	8	0	5	7	9	8	6	
Cyclosporiasis[§]	—	120	2	139	93	137	543	160	
Diphtheria	1	1	—	—	—	—	—	—	OH (1)
Domestic arboviral diseases[§,¶]:									
California serogroup	—	39	0	62	55	67	80	112	
eastern equine	—	4	0	4	4	8	21	6	
Powassan	—	1	—	2	7	1	1	1	
St. Louis	—	10	—	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis[§,**]:									
Ehrlichia chaffeensis	4	776	21	1,137	828	578	506	338	NY (3), OH (1)
Ehrlichia ewingii	—	6	—	9	—	—	—	—	
Anaplasma phagocytophilum	21	678	35	1,026	834	646	786	537	NY (1), MN (19), MO (1)
undetermined	—	115	3	180	337	231	112	59	
Haemophilus influenzae,[††] invasive disease (age <5 yrs):									
serotype b	—	25	1	30	22	29	9	19	
nonserotype b	2	196	5	244	199	175	135	135	CO (1), WA (1)
unknown serotype	2	209	4	163	180	179	217	177	MD (1), WA (1)
Hansen disease[§]	—	57	2	80	101	66	87	105	
Hantavirus pulmonary syndrome[§]	—	12	1	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal[§]	1	202	8	330	292	288	221	200	FL (1)
Hepatitis C viral, acute	8	814	26	878	845	766	652	720	PA (1), MI (1), MD (1), FL (1), OK (1), TX (1), CA (2)
HIV infection, pediatric (age <13 years)[§§]	—	—	4	—	—	—	380	436	
Influenza-associated pediatric mortality[§,¶¶]	9	352	0	90	77	43	45	—	NY (2), NJ (1), OH (1), IA (3), SC (1), WV (1)
Listeriosis	9	728	20	759	808	884	896	753	NY (2), OH (1), MO (1), NC (1), FL (1), WA (1), CA (2)
Measles***	1	63	1	140	43	55	66	37	FL (1)
Meningococcal disease, invasive[†††]:									
A, C, Y, and W-135	7	251	7	330	325	318	297	—	NC (2), CO (2), WA (3)
serogroup B	5	135	5	188	167	193	156	—	CO (1), WA (4)
other serogroup	—	21	1	38	35	32	27	—	
unknown serogroup	6	440	16	616	550	651	765	—	MO (1), MD (1), FL (1), OR (1), CA (2)
Mumps	64	938	22	454	800	6,584	314	258	NY (64)
Novel influenza A virus infections	—	[§§§]	0	2	4	N	N	N	
Plague	—	7	0	3	7	17	8	3	
Poliomyelitis, paralytic	—	—	—	—	—	—	1	—	
Polio virus infection, nonparalytic[§]	—	—	—	—	—	N	N	N	
Psittacosis[§]	—	8	0	8	12	21	16	12	
Q fever total[§,¶¶¶]:	—	81	3	124	171	169	136	70	
acute	—	68	1	110	—	—	—	—	
chronic	—	13	—	14	—	—	—	—	
Rabies, human	—	4	0	2	1	3	2	7	
Rubella****	—	4	0	16	12	11	11	10	
Rubella, congenital syndrome	—	1	—	—	—	1	1	—	
SARS-CoV[§,††††]	—	—	—	—	—	—	—	—	
Smallpox[§]	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome[§]	—	123	4	157	132	125	129	132	
Syphilis, congenital (age <1 yr)	—	251	9	434	430	349	329	353	
Tetanus	—	12	1	19	28	41	27	34	
Toxic-shock syndrome (staphylococcal)[§]	1	76	3	71	92	101	90	95	OH (1)
Trichinellosis	—	12	0	39	5	15	16	5	
Tularemia	2	76	3	123	137	95	154	134	CO (1), WA (1)
Typhoid fever	1	316	8	449	434	353	324	322	MO (1)
Vancomycin-intermediate *Staphylococcus aureus*[§]	—	69	1	63	37	6	2	—	
Vancomycin-resistant *Staphylococcus aureus*[§]	—	—	0	—	2	1	3	1	
Vibriosis (noncholera *Vibrio* species infections)[§]	7	575	6	492	549	N	N	N	GA (1), FL (4), CA (2)
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 December 19, 2009 (50th week)*

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

* Incidence data for reporting year 2009 is provisional, whereas data for 2004 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. The total sum of incident cases is then divided by 25 weeks. Additional information is available at http://www.cdc.gov/epo/dphsi/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 and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/epo/dphsi/phs/infdis.htm.

¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.

** The names of the reporting categories changed in 2008 as a result of revisions to the case definitions. Cases reported prior to 2008 were reported in the categories: Ehrlichiosis, human monocytic (analogous to *E. chaffeensis*); Ehrlichiosis, human granulocytic (analogous to *Anaplasma phagocytophilum*), and Ehrlichiosis, unspecified, or other agent (which included cases unable to be clearly placed in other categories, as well as possible cases of *E. ewingii*).

†† Data for *H. influenzae* (all ages, all serotypes) are available in Table II.

§§ Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Updates of pediatric HIV data have been temporarily suspended until upgrading of the national HIV/AIDS surveillance data management system is completed. Data for HIV/AIDS, when available, are displayed in Table IV, which appears quarterly.

¶¶ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Since April 26, 2009, a total of 241 influenza-associated pediatric deaths associated with 2009 pandemic influenza A (H1N1) virus infection have been reported. Since August 30, 2009, a total of 221 influenza-associated pediatric deaths occurring during the 2009–10 influenza season have been reported. A total of 130 influenza-associated pediatric death occurring during the 2008-09 influenza season have been reported.

*** The one measles case reported for the current week was indigenous.

††† Data for meningococcal disease (all serogroups) are available in Table II.

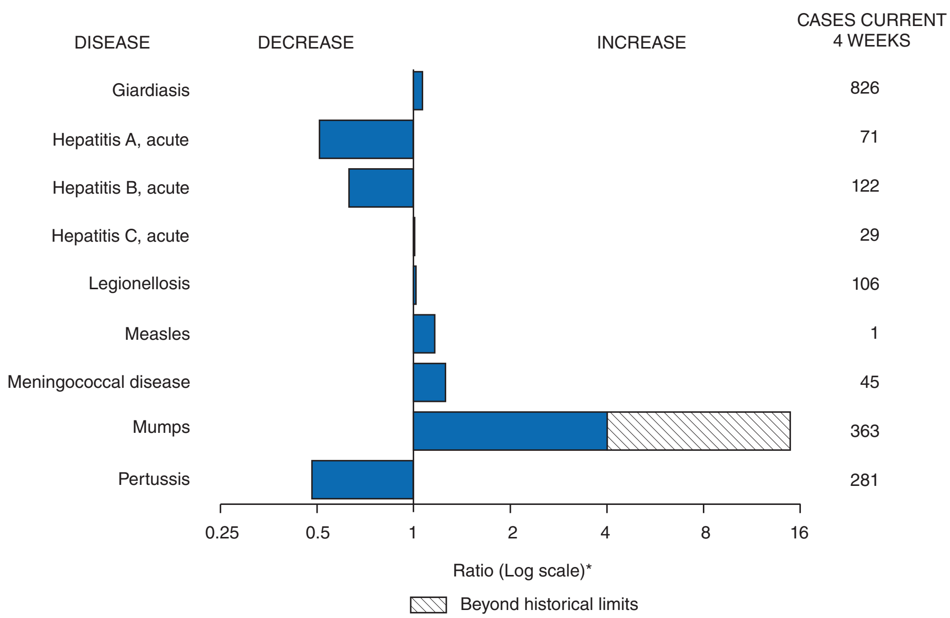
§§§ CDC discontinued reporting of individual confirmed and probable cases of novel influenza A (H1N1) viruses infections on July 24, 2009. CDC will report the total number of novel influenza A (H1N1) hospitalizations and deaths weekly on the CDC H1N1 influenza website (http://www.cdc.gov/h1n1flu).

¶¶¶ In 2008, Q fever acute and chronic reporting categories were recognized as a result of revisions to the Q fever case definition. Prior to that time, case counts were not differentiated with respect to acute and chronic Q fever cases.

**** No rubella cases were reported for the current week.

†††† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals December 19, 2009, with historical data



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

Notifiable Disease Data Team and 122 Cities Mortality Data Team

Patsy A. Hall

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

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending December 19, 2009, and December 13, 2008 (50th week)*

	Chlamydia†					Coccidiodomycosis					Cryptosporidiosis				
		Previous 52 weeks					Previous 52 weeks					Previous 52 week			
Reporting area	Current week	Med	Max	Cum 2009	Cum 2008	Current week	Med	Max	Cum 2009	Cum 2008	Current week	Med	Max	Cum 2009	Cum 2008
United States	9,779	22,372	26,455	1,081,083	1,144,923	139	240	507	12,034	6,749	50	114	369	6,502	8,580
New England	939	760	1,655	38,529	35,851	—	0	1	1	1	—	6	45	409	384
Connecticut	354	225	1,306	11,184	10,647	N	0	0	N	N	—	0	38	38	41
Maine§	59	47	75	2,359	2,480	N	0	0	N	N	—	0	4	43	45
Massachusetts	423	375	944	18,837	16,416	N	0	0	N	N	—	2	16	164	167
New Hampshire	3	34	61	1,519	2,009	—	0	1	1	1	—	1	5	70	58
Rhode Island§	70	63	244	3,507	3,180	—	0	0	—	—	—	0	8	20	10
Vermont§	30	22	63	1,123	1,119	N	0	0	N	N	—	1	9	74	63
Mid. Atlantic	2,203	3,015	6,734	149,758	141,854	—	0	0	—	—	5	13	37	764	717
New Jersey	—	431	838	20,556	21,400	N	0	0	N	N	—	1	5	42	40
New York (Upstate)	662	589	4,563	30,726	26,744	N	0	0	N	N	3	3	12	208	256
New York City	1,047	1,160	1,956	57,650	53,701	N	0	0	N	N	—	1	8	72	105
Pennsylvania	494	830	1,001	40,826	40,009	N	0	0	N	N	2	8	19	442	316
E.N. Central	782	3,399	4,281	163,274	185,511	—	1	4	35	40	11	27	54	1,428	2,109
Illinois	4	1,046	1,426	48,499	56,844	N	0	0	N	N	—	2	8	138	202
Indiana	—	407	695	20,410	20,865	N	0	0	N	N	—	4	17	185	181
Michigan	533	872	1,332	43,873	42,947	—	0	3	19	30	1	5	11	266	272
Ohio	37	770	1,177	32,970	44,395	—	0	2	16	10	9	6	16	375	678
Wisconsin	208	357	463	17,522	20,460	N	0	0	N	N	1	7	24	464	776
W.N. Central	230	1,338	1,697	63,801	64,834	—	0	1	10	3	5	18	61	994	963
Iowa	165	174	256	9,055	8,883	N	0	0	N	N	3	3	14	199	281
Kansas	1	178	561	9,526	8,780	N	0	0	N	N	—	1	6	61	83
Minnesota	—	254	338	12,135	13,799	—	0	0	—	—	2	4	34	336	221
Missouri	—	509	638	24,368	23,604	—	0	1	10	3	—	3	12	179	175
Nebraska§	64	104	225	5,186	5,203	N	0	0	N	N	—	2	9	111	112
North Dakota	—	29	77	1,386	1,762	N	0	0	N	N	—	0	10	13	6
South Dakota	—	54	80	2,145	2,803	N	0	0	N	N	—	1	10	95	85
S. Atlantic	1,641	3,839	5,395	188,476	235,030	—	0	1	5	5	7	19	45	1,015	1,016
Delaware	72	88	180	4,529	3,627	—	0	1	1	2	—	0	2	12	12
District of Columbia	—	124	226	6,210	6,620	—	0	0	—	—	—	0	1	2	15
Florida	547	1,420	1,671	69,713	67,829	N	0	0	N	N	4	8	24	442	458
Georgia	4	696	1,909	28,957	39,382	N	0	0	N	N	3	5	23	316	250
Maryland§	486	425	889	21,371	22,975	—	0	1	4	3	—	1	5	40	51
North Carolina	—	0	998	—	35,742	N	0	0	N	N	—	0	9	58	75
South Carolina§	—	524	1,421	23,838	25,660	N	0	0	N	N	—	1	7	54	54
Virginia§	532	602	926	30,424	30,050	N	0	0	N	N	—	1	7	75	77
West Virginia	—	69	136	3,434	3,145	N	0	0	N	N	—	0	2	16	24
E.S. Central	1,252	1,756	2,209	86,204	82,373	—	0	0	—	—	—	3	10	208	169
Alabama§	15	462	629	22,135	23,694	N	0	0	N	N	—	1	5	56	72
Kentucky	543	249	642	13,166	11,723	N	0	0	N	N	—	1	4	62	35
Mississippi	—	457	840	21,808	20,093	N	0	0	N	N	—	0	3	15	17
Tennessee§	694	569	809	29,095	26,863	N	0	0	N	N	—	1	5	75	45
W.S. Central	971	2,973	5,809	146,258	144,421	—	0	1	1	3	8	9	271	499	2,248
Arkansas§	312	266	417	13,120	13,746	N	0	0	N	N	—	1	5	54	91
Louisiana	440	515	1,130	24,986	21,706	—	0	1	1	3	—	0	6	29	65
Oklahoma	219	172	2,717	12,901	12,630	N	0	0	N	N	2	2	11	125	132
Texas§	—	2,011	2,521	95,251	96,339	N	0	0	N	N	6	5	258	291	1,960
Mountain	459	1,424	2,088	71,756	73,024	62	194	454	9,678	4,407	1	8	26	493	566
Arizona	86	496	758	23,951	23,748	62	192	452	9,582	4,309	—	1	3	33	87
Colorado	332	314	727	16,362	17,914	N	0	0	N	N	1	2	10	133	109
Idaho§	—	69	184	3,501	3,915	N	0	0	N	N	—	1	7	91	69
Montana§	—	56	87	2,807	2,953	N	0	0	N	N	—	1	4	54	44
Nevada§	—	170	477	9,341	9,220	—	1	4	54	51	—	0	2	5	17
New Mexico§	—	182	540	8,677	8,074	—	0	2	10	33	—	2	8	122	171
Utah	15	113	176	5,247	5,706	—	0	2	31	12	—	0	3	31	46
Wyoming§	26	33	69	1,870	1,494	—	0	1	1	2	—	0	2	24	23
Pacific	1,302	3,460	4,686	173,027	182,025	77	40	172	2,304	2,290	13	14	25	692	408
Alaska	—	96	199	3,994	4,503	N	0	0	N	N	—	0	1	6	3
California	1,068	2,687	3,592	135,548	140,713	77	40	172	2,304	2,290	9	8	20	427	248
Hawaii	—	117	147	5,376	5,728	N	0	0	N	N	—	0	1	1	2
Oregon§	—	188	387	9,332	10,380	N	0	0	N	N	—	3	9	171	63
Washington	234	388	571	18,777	20,701	N	0	0	N	N	4	1	8	87	92
American Samoa	—	0	0	—	73	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	124	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	135	331	6,826	6,734	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	8	17	369	586	—	0	0	—	—	—	0	0	—	—

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

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 19, 2009, and December 13, 2008 (50th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive All ages, all serotypes†				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	188	323	498	16,948	17,821	2,181	5,349	6,562	257,177	319,842	34	59	124	2,767	2,628
New England	5	30	64	1,593	1,595	117	97	301	4,908	4,968	2	3	16	182	169
Connecticut	—	6	15	269	317	71	48	275	2,392	2,426	1	0	12	50	41
Maine§	2	3	13	207	181	4	2	9	135	92	—	0	2	18	18
Massachusetts	—	12	36	672	654	37	38	112	1,909	2,015	—	2	5	89	78
New Hampshire	—	3	11	175	157	—	2	6	109	99	1	0	2	12	9
Rhode Island§	—	1	6	59	87	3	6	19	314	301	—	0	2	8	15
Vermont§	3	4	14	211	199	2	1	5	49	35	—	0	1	5	8
Mid. Atlantic	26	61	104	3,056	3,331	383	588	1,138	30,227	31,308	7	12	25	588	503
New Jersey	—	4	17	215	495	—	91	124	4,290	5,054	—	2	7	105	92
New York (Upstate)	17	24	81	1,289	1,182	92	106	664	5,642	5,834	1	3	20	153	148
New York City	2	15	25	764	812	163	212	366	10,735	9,954	—	2	11	117	86
Pennsylvania	7	15	34	788	842	128	193	263	9,560	10,466	6	4	10	213	177
E.N. Central	16	44	72	2,259	2,638	250	1,086	1,394	51,038	66,185	2	12	28	551	435
Illinois	—	9	18	440	683	—	341	524	15,439	19,784	—	3	9	141	144
Indiana	N	0	11	N	N	—	139	223	6,436	8,282	—	1	22	70	68
Michigan	4	12	24	613	590	183	277	501	14,183	16,350	—	0	3	24	27
Ohio	12	16	28	783	860	14	252	431	10,532	15,825	2	2	6	97	130
Wisconsin	—	9	19	423	505	53	86	143	4,448	5,944	—	3	20	219	66
W.N. Central	18	24	141	1,690	1,930	31	274	365	13,587	16,171	—	3	15	154	190
Iowa	1	6	15	288	310	10	32	47	1,543	1,604	—	0	0	—	2
Kansas	—	2	11	96	157	2	43	83	2,236	2,182	—	0	2	13	20
Minnesota	—	0	124	539	665	—	40	65	2,002	2,920	—	0	10	54	57
Missouri	12	9	27	505	447	—	125	173	6,127	7,629	—	1	4	56	70
Nebraska§	5	3	9	170	200	19	24	55	1,334	1,356	—	0	4	25	29
North Dakota	—	0	16	27	19	—	1	14	87	136	—	0	4	6	12
South Dakota	—	1	5	65	132	—	5	20	258	344	—	0	0	—	—
S. Atlantic	46	69	109	3,497	2,929	512	1,125	1,776	54,534	82,156	13	13	31	683	666
Delaware	—	0	3	25	42	16	18	37	924	989	—	0	1	4	8
District of Columbia	—	0	5	22	64	—	49	88	2,448	2,515	—	0	1	2	8
Florida	36	38	59	1,870	1,295	196	409	476	19,996	22,352	3	4	10	218	182
Georgia	—	10	67	750	665	2	216	876	9,860	14,890	1	3	9	145	135
Maryland§	2	5	13	263	273	109	114	208	5,784	6,228	4	1	6	92	91
North Carolina	N	0	0	N	N	—	0	383	—	15,307	4	0	17	69	74
South Carolina§	2	2	8	101	131	—	160	412	7,504	9,161	1	1	5	68	58
Virginia§	5	8	31	413	388	189	147	276	7,567	9,998	—	1	6	56	84
West Virginia	1	1	5	53	71	—	9	20	451	716	—	0	3	29	26
E.S. Central	8	7	22	382	485	333	500	687	24,709	29,327	4	3	9	151	142
Alabama§	3	3	11	177	272	9	137	184	6,406	9,340	1	1	4	36	24
Kentucky	N	0	0	N	N	138	72	156	3,795	4,405	—	0	5	19	8
Mississippi	N	0	0	N	N	—	142	252	6,756	7,085	—	0	1	5	13
Tennessee§	5	4	18	205	213	186	156	230	7,752	8,497	3	2	6	91	97
W.S. Central	5	7	22	403	442	278	876	1,556	42,766	48,869	—	2	22	109	108
Arkansas§	2	2	9	145	136	88	82	134	4,040	4,409	—	0	3	19	15
Louisiana	—	1	7	96	147	128	167	418	8,095	9,094	—	0	1	12	11
Oklahoma	3	3	18	162	159	62	62	612	4,307	4,606	—	1	20	73	72
Texas§	N	0	0	N	N	—	556	695	26,324	30,760	—	0	1	5	10
Mountain	18	26	59	1,464	1,583	47	175	243	8,411	11,116	3	5	11	228	279
Arizona	2	3	7	188	137	22	58	110	2,942	3,304	—	1	7	77	103
Colorado	11	8	26	469	544	23	43	106	2,261	3,577	3	1	6	68	54
Idaho§	1	3	10	198	196	—	2	8	95	178	—	0	1	4	12
Montana§	1	2	11	125	90	—	1	5	73	115	—	0	1	2	5
Nevada§	—	1	10	69	117	—	28	93	1,642	2,065	—	0	2	15	16
New Mexico§	—	2	8	104	103	—	22	52	1,064	1,297	—	0	3	27	47
Utah	—	5	12	251	349	—	5	12	262	459	—	1	2	32	38
Wyoming§	3	1	4	60	47	2	1	7	72	121	—	0	1	3	4
Pacific	46	51	130	2,604	2,888	230	544	764	26,997	29,742	3	2	8	121	136
Alaska	—	2	7	104	103	—	17	29	733	532	—	0	3	20	19
California	30	34	60	1,713	1,901	199	451	657	22,743	24,414	—	0	4	25	43
Hawaii	—	0	2	17	41	—	12	24	576	583	—	0	3	24	19
Oregon§	7	7	18	387	444	—	20	44	945	1,188	1	1	4	47	53
Washington	9	7	74	383	399	31	39	71	2,000	3,025	2	0	2	5	2
American Samoa	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	73	—	0	0	—	—
Puerto Rico	—	2	10	102	206	—	3	24	219	271	—	0	1	3	1
U.S. Virgin Islands	—	0	0	—	—	—	2	7	93	118	N	0	0	N	N

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is 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 December 19, 2009, and December 13, 2008 (50th week)*

Reporting area	Hepatitis (viral, acute), by type† A Current week	A Previous 52 weeks Med	A Previous 52 weeks Max	A Cum 2009	A Cum 2008	B Current week	B Previous 52 weeks Med	B Previous 52 weeks Max	B Cum 2009	B Cum 2008	Legionellosis Current week	Legionellosis Previous 52 weeks Med	Legionellosis Previous 52 weeks Max	Legionellosis Cum 2009	Legionellosis Cum 2008
United States	20	36	89	1,784	2,427	42	61	197	2,917	3,666	26	54	158	3,028	2,970
New England	—	2	5	92	127	—	1	3	44	76	2	2	17	170	218
Connecticut	—	0	2	18	26	—	0	3	14	28	2	1	5	53	45
Maine§	—	0	1	1	18	—	0	2	15	12	—	0	3	8	11
Massachusetts	—	1	4	56	57	—	0	2	12	21	—	1	9	73	84
New Hampshire	—	0	1	7	12	—	0	1	3	8	—	0	2	10	30
Rhode Island§	—	0	1	8	12	—	0	0	—	4	—	0	4	19	43
Vermont§	—	0	1	2	2	—	0	0	—	3	—	0	1	7	5
Mid. Atlantic	1	5	10	244	312	4	5	17	287	424	7	15	69	1,081	985
New Jersey	—	1	5	55	77	—	1	6	66	117	—	2	13	155	141
New York (Upstate)	—	1	3	45	62	3	1	11	51	61	4	5	29	340	328
New York City	—	2	5	81	106	—	1	4	67	98	—	3	20	207	129
Pennsylvania	1	1	6	63	67	1	2	7	103	148	3	6	25	379	387
E.N. Central	—	4	18	245	327	4	7	21	357	499	3	9	34	578	642
Illinois	—	2	12	107	108	—	1	7	79	180	—	1	10	104	119
Indiana	—	0	4	15	19	—	1	18	56	47	—	1	4	44	55
Michigan	—	1	4	69	118	1	2	8	110	141	1	2	11	142	171
Ohio	—	0	3	36	49	3	1	13	84	114	2	4	17	278	259
Wisconsin	—	0	4	18	33	—	0	4	28	17	—	0	2	10	38
W.N. Central	—	2	16	109	237	—	3	16	164	83	—	2	6	104	138
Iowa	—	0	3	32	107	—	0	3	30	22	—	0	2	21	20
Kansas	—	0	1	7	15	—	0	2	5	8	—	0	1	3	2
Minnesota	—	0	12	21	36	—	0	11	26	10	—	0	4	12	23
Missouri	—	0	3	25	34	—	1	5	79	33	—	1	5	53	69
Nebraska§	—	0	3	20	41	—	0	2	22	9	—	0	2	12	21
North Dakota	—	0	2	1	—	—	0	1	—	1	—	0	3	2	—
South Dakota	—	0	1	3	4	—	0	1	2	—	—	0	1	1	3
S. Atlantic	8	8	14	404	380	14	16	32	841	919	9	10	21	533	475
Delaware	—	0	1	4	7	U	0	1	U	U	—	0	5	18	13
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	9	16
Florida	3	3	9	173	142	13	6	11	294	321	4	3	10	191	139
Georgia	1	1	3	53	54	1	3	9	132	178	—	1	5	50	39
Maryland§	—	1	4	41	43	—	1	5	67	80	3	3	12	143	132
North Carolina	4	0	3	31	62	—	0	19	148	76	—	0	6	39	37
South Carolina§	—	1	4	57	19	—	1	4	50	67	1	0	2	13	11
Virginia§	—	1	3	40	48	—	1	10	88	114	1	1	5	61	59
West Virginia	—	0	2	5	5	—	0	19	62	83	—	0	2	9	29
E.S. Central	—	1	4	41	77	2	7	11	316	388	—	2	12	130	111
Alabama§	—	0	2	10	12	—	1	7	79	103	—	0	2	15	17
Kentucky	—	0	1	10	30	—	2	6	83	95	—	1	3	49	53
Mississippi	—	0	2	12	5	—	1	2	30	47	—	0	2	4	1
Tennessee§	—	0	2	9	30	2	2	5	124	143	—	1	9	62	40
W.S. Central	3	3	43	169	235	9	9	99	470	720	2	2	21	113	93
Arkansas§	—	0	1	8	10	—	1	5	48	61	—	0	1	8	14
Louisiana	—	0	1	3	11	—	0	4	33	91	—	0	2	4	10
Oklahoma	—	0	6	6	7	2	2	17	101	109	—	0	2	6	10
Texas§	3	3	37	152	207	7	6	76	288	459	2	2	19	95	59
Mountain	2	3	8	153	211	—	2	6	114	195	1	2	7	128	96
Arizona	1	1	4	70	112	—	1	3	41	76	1	1	4	49	23
Colorado	1	1	5	49	36	—	0	2	20	33	—	0	2	19	14
Idaho§	—	0	1	4	17	—	0	2	11	9	—	0	2	7	3
Montana§	—	0	1	6	1	—	0	0	—	2	—	0	2	7	4
Nevada§	—	0	2	8	12	—	0	3	27	43	—	0	1	11	12
New Mexico§	—	0	1	7	17	—	0	2	6	12	—	0	2	8	11
Utah	—	0	2	7	13	—	0	1	5	14	—	0	4	23	29
Wyoming§	—	0	1	2	3	—	0	2	4	6	—	0	2	4	—
Pacific	6	6	17	327	521	9	6	36	324	362	2	3	12	191	212
Alaska	—	0	1	3	5	—	0	1	4	10	—	0	1	1	3
California	5	5	16	261	427	7	4	28	234	260	2	3	10	150	168
Hawaii	—	0	2	6	18	—	0	1	5	7	—	0	1	1	8
Oregon§	—	0	2	17	25	—	1	4	40	41	—	0	2	15	17
Washington	1	1	4	40	46	2	1	8	41	44	—	0	4	24	16
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	2	18	23	—	0	5	22	46	—	0	1	1	—
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. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional.
† Data for acute hepatitis C, viral 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 December 19, 2009, and December 13, 2008 (50th week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All groups				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	189	309	1,918	28,707	32,566	11	22	46	1,132	1,167	18	17	48	847	1,097
New England	5	59	457	5,734	11,373	—	1	5	49	53	—	0	4	33	35
Connecticut	—	0	23	—	3,850	—	0	4	6	10	—	0	2	5	1
Maine§	5	10	76	876	869	—	0	1	2	1	—	0	1	4	6
Massachusetts	—	18	306	3,229	4,546	—	0	3	30	32	—	0	3	16	23
New Hampshire	—	10	87	1,035	1,584	—	0	1	3	4	—	0	1	3	4
Rhode Island§	—	1	78	212	130	—	0	1	5	2	—	0	1	4	1
Vermont§	—	4	40	382	394	—	0	1	3	4	—	0	1	1	—
Mid. Atlantic	132	171	1,401	16,295	13,300	2	6	13	290	313	—	2	6	94	123
New Jersey	—	37	376	4,050	3,419	—	0	1	1	64	—	0	2	8	16
New York (Upstate)	54	51	1,368	4,060	5,333	—	1	10	49	30	—	0	2	25	32
New York City	—	3	24	260	786	2	3	11	187	179	—	0	2	16	26
Pennsylvania	78	74	631	7,925	3,762	—	1	4	53	40	—	1	4	45	49
E.N. Central	—	17	215	2,334	2,304	2	2	10	140	148	—	3	9	144	200
Illinois	—	1	11	123	108	—	1	4	54	75	—	1	4	40	81
Indiana	—	1	6	61	41	—	0	3	15	5	—	0	3	32	26
Michigan	—	1	10	99	89	—	0	3	27	18	—	0	5	20	32
Ohio	—	1	5	55	45	2	1	6	37	29	—	1	3	42	40
Wisconsin	—	15	197	1,996	2,021	—	0	1	7	21	—	0	2	10	21
W.N. Central	24	5	336	295	1,072	1	1	8	68	71	1	1	9	74	94
Iowa	—	1	14	94	107	—	0	1	10	12	—	0	2	12	18
Kansas	—	0	2	14	16	—	0	1	4	9	—	0	2	8	8
Minnesota	24	0	326	164	928	—	0	8	32	28	—	0	4	13	24
Missouri	—	0	1	3	6	1	0	2	12	14	1	0	3	28	26
Nebraska§	—	0	3	19	12	—	0	1	8	8	—	0	1	10	12
North Dakota	—	0	10	—	—	—	0	1	1	—	—	0	3	1	3
South Dakota	—	0	1	1	3	—	0	1	1	—	—	0	1	2	3
S. Atlantic	19	60	236	3,715	4,176	4	6	17	331	284	4	2	9	145	152
Delaware	2	12	65	945	759	—	0	1	5	3	—	0	1	4	2
District of Columbia	—	0	5	20	72	—	0	2	8	5	—	0	0	—	—
Florida	—	2	11	114	85	2	1	7	89	58	1	1	4	51	50
Georgia	—	1	6	53	35	2	1	5	69	57	—	0	2	29	18
Maryland§	4	25	125	1,747	2,162	—	1	13	77	78	1	0	1	11	19
North Carolina	1	0	14	63	46	—	0	5	21	28	2	0	5	21	13
South Carolina§	—	0	3	35	28	—	0	1	4	9	—	0	1	11	22
Virginia§	12	10	61	569	856	—	1	5	56	44	—	0	2	12	23
West Virginia	—	0	33	169	133	—	0	1	2	2	—	0	2	6	5
E.S. Central	1	0	2	35	46	—	0	3	27	24	—	0	4	33	53
Alabama§	—	0	1	3	9	—	0	3	8	5	—	0	1	10	10
Kentucky	—	0	1	1	5	—	0	2	9	5	—	0	1	6	9
Mississippi	—	0	0	—	1	—	0	1	1	1	—	0	1	3	12
Tennessee§	1	0	2	31	31	—	0	3	9	13	—	0	2	14	22
W.S. Central	2	1	21	48	120	1	1	10	52	82	—	1	12	79	118
Arkansas§	—	0	0	—	—	—	0	1	4	1	—	0	2	9	15
Louisiana	—	0	0	—	3	—	0	1	3	4	—	0	3	11	24
Oklahoma	—	0	2	—	—	—	0	1	1	4	—	0	2	14	18
Texas§	2	1	21	48	117	1	1	9	44	73	—	1	9	45	61
Mountain	—	1	13	46	51	—	0	6	29	35	3	1	4	60	58
Arizona	—	0	2	6	8	—	0	2	9	14	—	0	2	14	9
Colorado	—	0	1	4	3	—	0	3	8	5	3	0	2	23	15
Idaho§	—	0	3	15	9	—	0	1	3	3	—	0	1	7	5
Montana§	—	0	13	3	4	—	0	3	5	—	—	0	2	4	4
Nevada§	—	0	1	4	12	—	0	0	—	5	—	0	1	2	7
New Mexico§	—	0	1	5	8	—	0	0	—	3	—	0	1	3	8
Utah	—	0	1	7	4	—	0	2	4	5	—	0	1	2	8
Wyoming§	—	0	1	2	3	—	0	0	—	—	—	0	2	5	2
Pacific	6	4	13	205	124	1	3	9	146	157	10	3	14	185	264
Alaska	—	0	1	3	6	—	0	1	2	6	—	0	2	6	8
California	6	3	10	153	69	1	2	6	111	117	2	2	8	110	189
Hawaii	N	0	0	N	N	—	0	1	1	3	—	0	1	4	5
Oregon§	—	0	4	34	38	—	0	2	11	4	1	0	6	42	38
Washington	—	0	12	15	11	—	0	3	21	27	7	0	6	23	24
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	3	2	—	0	0	—	3
U.S. Virgin Islands	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is 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 December 19, 2009, and December 13, 2008 (50th week)*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
United States	78	269	1,697	13,030	10,735	25	64	140	3,515	4,041	5	23	179	1,369	2,308
New England	—	12	27	558	986	5	6	24	346	411	—	0	2	11	7
Connecticut	—	0	4	37	53	3	2	22	149	192	—	0	0	—	—
Maine†	—	1	10	77	45	—	1	4	50	58	—	0	2	5	1
Massachusetts	—	7	19	327	751	—	0	0	—	—	—	0	1	5	2
New Hampshire	—	1	7	75	41	1	0	3	32	56	—	0	0	—	1
Rhode Island†	—	0	7	31	84	—	1	7	51	33	—	0	0	—	3
Vermont†	—	0	1	11	12	1	1	5	64	72	—	0	1	1	—
Mid. Atlantic	17	22	64	1,079	1,150	10	11	23	569	909	—	1	29	66	123
New Jersey	—	3	12	151	220	—	0	0	—	—	—	0	1	—	83
New York (Upstate)	15	4	41	249	408	10	7	22	429	489	—	0	29	11	14
New York City	—	1	21	92	85	—	0	3	22	19	—	0	4	32	11
Pennsylvania	2	12	33	587	437	—	0	16	118	401	—	0	2	23	15
E.N. Central	29	56	238	2,893	1,879	2	2	19	219	255	—	1	7	87	148
Illinois	—	12	33	570	556	—	1	9	87	103	—	0	6	49	109
Indiana	—	7	158	317	103	—	0	6	21	10	—	0	3	13	6
Michigan	12	13	40	822	292	1	1	6	65	78	—	0	2	5	3
Ohio	17	19	57	1,052	747	1	0	5	46	64	—	0	4	18	30
Wisconsin	—	3	12	132	181	N	0	0	N	N	—	0	1	2	—
W.N. Central	12	31	872	1,645	1,363	—	7	18	325	303	1	3	27	339	435
Iowa	—	4	10	185	233	—	0	3	24	29	—	0	1	4	8
Kansas	—	3	9	146	89	—	1	6	60	64	—	0	1	2	—
Minnesota	—	0	808	165	226	—	0	11	61	64	—	0	2	4	—
Missouri	8	18	47	948	497	—	1	5	65	64	1	3	26	317	404
Nebraska†	4	2	14	142	250	—	1	6	77	33	—	0	2	12	20
North Dakota	—	0	24	29	1	—	0	9	11	25	—	0	1	—	—
South Dakota	—	0	6	30	67	—	0	4	27	24	—	0	0	—	3
S. Atlantic	4	30	71	1,519	949	8	26	111	1,593	1,586	3	8	27	450	920
Delaware	—	0	2	13	18	—	0	0	—	—	—	0	3	17	32
District of Columbia	—	0	1	3	7	—	0	0	—	—	—	0	0	—	6
Florida	—	9	29	494	291	—	0	95	153	138	1	0	2	10	16
Georgia	—	3	11	187	105	—	0	72	409	370	2	0	7	48	78
Maryland†	2	2	8	130	153	6	7	15	379	411	—	0	3	36	91
North Carolina	—	0	65	223	79	N	4	4	N	N	—	4	25	264	486
South Carolina†	1	4	18	244	131	—	0	0	—	—	—	0	5	18	56
Virginia†	1	4	24	194	154	—	10	26	536	591	—	1	8	53	145
West Virginia	—	0	5	31	11	2	3	6	116	76	—	0	1	4	10
E.S. Central	5	14	30	727	426	—	1	6	83	178	—	3	16	253	333
Alabama†	—	4	19	275	61	—	0	0	—	—	—	1	7	63	91
Kentucky	—	4	15	210	159	—	1	4	45	45	—	0	1	1	1
Mississippi	—	1	4	56	100	—	0	1	4	7	—	0	1	7	11
Tennessee†	5	3	9	186	106	—	0	4	34	126	—	3	14	182	230
W.S. Central	—	61	389	2,756	1,816	—	0	13	70	89	1	1	161	140	294
Arkansas†	—	5	38	265	157	—	0	10	36	45	—	0	61	61	65
Louisiana	—	1	8	90	85	—	0	0	—	—	—	0	1	2	6
Oklahoma	—	0	45	76	53	—	0	13	33	42	—	0	98	53	170
Texas†	—	52	304	2,325	1,521	—	0	1	1	2	1	0	6	24	53
Mountain	5	18	32	858	819	—	1	6	82	107	—	0	3	22	45
Arizona	1	4	12	207	214	N	0	0	N	N	—	0	1	7	16
Colorado	4	5	13	241	145	—	0	0	—	—	—	0	1	1	1
Idaho†	—	1	15	86	36	—	0	0	—	11	—	0	1	1	1
Montana†	—	0	6	55	84	—	0	4	25	13	—	0	2	8	3
Nevada†	—	0	3	9	28	—	0	1	1	12	—	0	0	—	3
New Mexico†	—	1	7	59	85	—	0	2	24	29	—	0	1	1	4
Utah	—	3	19	181	210	—	0	2	11	14	—	0	1	1	7
Wyoming†	—	0	5	20	17	—	0	4	21	28	—	0	1	3	10
Pacific	6	23	67	995	1,347	—	4	12	228	203	—	0	1	1	3
Alaska	—	1	8	47	262	—	0	2	12	14	N	0	0	N	N
California	—	9	22	417	506	—	4	12	201	176	—	0	1	1	—
Hawaii	—	0	3	26	17	—	0	0	—	—	N	0	0	N	N
Oregon†	—	3	15	244	174	—	0	3	15	13	—	0	0	—	3
Washington	6	5	58	261	388	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	1	—	—	1	3	38	58	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is 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 December 19, 2009, and December 13, 2008 (50th week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	514	848	2,323	43,233	46,711	31	85	255	4,205	4,903	182	285	1,268	14,059	20,463
New England	1	32	431	1,990	2,163	—	3	67	273	253	—	4	45	318	236
Connecticut	—	0	406	406	491	—	0	67	67	47	—	0	40	40	40
Maine§	—	2	7	118	148	—	0	3	19	23	—	0	2	5	20
Massachusetts	—	21	50	1,045	1,169	—	2	6	89	112	—	3	27	226	154
New Hampshire	—	3	42	240	151	—	1	3	36	31	—	0	4	19	5
Rhode Island§	—	2	11	122	110	—	0	26	38	10	—	0	7	23	12
Vermont§	1	1	5	59	94	—	0	3	24	30	—	0	1	5	5
Mid. Atlantic	41	89	196	4,895	5,630	4	6	21	340	456	14	57	87	2,593	2,431
New Jersey	—	13	46	799	1,271	—	0	4	33	132	—	9	27	516	882
New York (Upstate)	24	23	66	1,278	1,409	2	3	9	145	177	2	4	23	218	569
New York City	—	22	42	1,144	1,243	—	1	5	56	54	—	8	15	425	717
Pennsylvania	17	30	65	1,674	1,707	2	2	8	106	93	12	27	63	1,434	263
E.N. Central	18	91	152	4,503	5,013	5	15	34	767	845	25	48	121	2,239	4,044
Illinois	—	24	51	1,252	1,463	—	2	10	136	133	—	10	25	480	941
Indiana	—	6	50	344	583	—	1	7	71	92	—	1	21	56	578
Michigan	1	18	34	900	929	1	3	8	154	212	1	4	21	209	212
Ohio	17	27	52	1,377	1,296	4	3	11	131	188	23	20	67	1,079	1,761
Wisconsin	—	12	29	630	742	—	5	20	275	220	1	7	26	415	552
W.N. Central	20	45	109	2,428	2,701	4	11	37	691	787	55	21	64	1,237	893
Iowa	4	7	16	379	414	—	2	14	149	203	—	1	10	52	192
Kansas	—	6	18	269	444	—	0	4	32	50	—	3	11	159	65
Minnesota	6	12	51	570	680	3	2	19	222	187	—	2	8	80	295
Missouri	8	12	30	648	732	1	2	10	136	148	55	13	58	905	216
Nebraska§	2	5	41	335	235	—	1	6	85	146	—	0	3	32	16
North Dakota	—	0	30	71	44	—	0	28	7	2	—	0	9	5	33
South Dakota	—	2	22	156	152	—	0	12	60	51	—	0	1	4	76
S. Atlantic	198	271	451	13,099	12,190	9	12	30	617	784	21	44	79	2,211	3,069
Delaware	—	2	9	134	145	—	0	2	13	13	—	3	10	145	11
District of Columbia	—	0	5	23	60	—	0	1	1	6	—	0	2	8	21
Florida	133	126	278	6,483	5,061	6	4	7	170	138	3	9	24	448	781
Georgia	31	41	98	2,320	2,238	—	1	4	67	87	14	12	29	634	1,082
Maryland§	4	15	32	764	844	—	2	5	92	122	1	6	19	355	121
North Carolina	4	17	92	1,052	1,463	—	2	21	86	119	1	5	27	308	244
South Carolina§	17	16	67	1,121	1,135	—	0	3	29	43	1	3	9	119	541
Virginia§	9	21	88	993	1,036	3	2	16	130	224	1	4	59	185	235
West Virginia	—	4	23	209	208	—	0	5	29	32	—	0	3	9	33
E.S. Central	9	50	113	2,782	3,416	1	4	12	207	278	3	13	46	748	1,886
Alabama§	2	14	33	743	971	—	1	4	45	63	—	2	11	125	406
Kentucky	—	7	18	428	472	—	1	4	66	100	—	2	25	212	259
Mississippi	—	14	45	839	1,058	—	0	1	6	5	—	1	4	47	295
Tennessee§	7	14	33	772	915	1	2	10	90	110	3	7	20	364	926
W.S. Central	95	94	1,333	4,677	6,866	2	5	139	257	379	38	48	967	2,423	4,952
Arkansas§	5	10	25	594	759	—	1	4	43	57	7	6	16	303	559
Louisiana	—	7	43	599	1,093	—	0	1	—	8	—	2	8	108	632
Oklahoma	11	13	102	606	781	—	0	82	30	52	6	5	61	286	170
Texas§	79	56	1,204	2,878	4,233	2	4	55	184	262	25	33	889	1,726	3,591
Mountain	18	52	128	2,719	3,260	1	9	26	509	613	5	20	49	1,081	1,185
Arizona	5	20	50	1,017	1,092	—	1	4	70	63	3	16	42	792	596
Colorado	12	11	33	597	682	—	3	13	154	200	2	2	8	97	139
Idaho§	1	3	10	167	191	1	1	7	89	145	—	0	2	9	14
Montana§	—	1	7	97	123	—	0	7	35	36	—	0	5	13	8
Nevada§	—	3	11	167	225	—	0	3	14	19	—	1	7	62	226
New Mexico§	—	5	29	317	512	—	1	3	34	50	—	1	8	90	157
Utah	—	6	15	273	353	—	1	10	98	87	—	0	3	16	38
Wyoming§	—	1	9	84	82	—	0	2	15	13	—	0	1	2	7
Pacific	114	126	537	6,140	5,472	5	9	31	544	508	21	24	66	1,209	1,767
Alaska	—	1	7	68	56	—	0	0	—	6	—	0	1	2	1
California	95	97	516	4,626	4,038	5	5	15	261	249	21	19	65	987	1,530
Hawaii	—	5	59	293	251	—	0	2	8	13	—	0	4	35	44
Oregon§	4	8	19	400	417	—	1	11	78	64	—	1	3	39	93
Washington	15	13	85	753	710	—	3	17	197	176	—	3	11	146	99
American Samoa	—	0	1	—	2	—	0	0	—	—	—	1	2	3	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	13	—	0	0	—	—	—	0	0	—	15
Puerto Rico	—	7	40	376	762	—	0	0	—	—	—	0	2	10	31
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. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is 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 December 19, 2009, and December 13, 2008 (50th week)*

	Streptococcal diseases, invasive, group A					*Streptococcus pneumoniae,* invasive disease, nondrug resistant† Age <5 years				
		Previous 52 weeks					Previous 52 weeks			
Reporting area	Current week	Med	Max	Cum 2009	Cum 2008	Current week	Med	Max	Cum 2009	Cum 2008
United States	43	98	239	4,712	5,180	21	32	122	1,664	1,772
New England	—	5	28	274	356	—	1	11	68	94
Connecticut	—	0	21	72	96	—	0	11	11	11
Maine§	—	0	2	18	26	—	0	1	6	2
Massachusetts	—	2	10	120	167	—	0	4	35	60
New Hampshire	—	0	4	35	27	—	0	2	11	11
Rhode Island§	—	0	2	11	27	—	0	1	1	10
Vermont§	—	0	3	18	13	—	0	1	4	—
Mid. Atlantic	7	18	43	934	1,026	5	4	33	230	222
New Jersey	—	2	7	124	184	—	0	4	38	70
New York (Upstate)	6	6	25	310	317	5	2	17	119	97
New York City	—	4	12	177	193	—	0	31	73	55
Pennsylvania	1	5	18	323	332	N	0	2	N	N
E.N. Central	4	17	42	845	940	2	6	18	269	321
Illinois	—	4	13	239	251	—	1	3	41	93
Indiana	—	2	23	128	124	—	0	13	37	31
Michigan	—	3	11	144	174	—	1	4	69	83
Ohio	3	3	13	205	253	2	1	6	77	60
Wisconsin	1	2	11	129	138	—	1	3	45	54
W.N. Central	1	6	37	372	364	2	2	12	145	105
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	5	37	37	N	0	1	N	N
Minnesota	—	0	34	171	166	—	0	10	81	41
Missouri	1	2	8	84	89	—	0	4	36	35
Nebraska§	—	1	3	42	39	2	0	2	16	9
North Dakota	—	0	4	17	10	—	0	3	5	9
South Dakota	—	0	3	21	23	—	0	2	7	11
S. Atlantic	14	21	49	1,087	1,097	3	6	18	313	347
Delaware	—	0	1	11	9	—	0	0	—	—
District of Columbia	—	0	3	13	14	N	0	0	N	N
Florida	6	5	12	270	258	2	1	6	72	67
Georgia	2	5	13	251	252	—	1	6	82	100
Maryland§	—	3	12	187	184	—	1	7	78	58
North Carolina	1	2	12	91	134	N	0	0	N	N
South Carolina§	2	1	5	71	72	1	1	6	45	65
Virginia§	3	3	9	155	135	—	0	4	23	44
West Virginia	—	1	4	38	39	—	0	3	13	13
E.S. Central	1	3	10	186	182	3	2	7	101	90
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	5	36	39	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	20	10
Tennessee§	1	3	9	150	143	3	1	6	81	80
W.S. Central	9	8	79	421	490	1	5	46	275	286
Arkansas§	1	0	3	20	11	—	0	4	26	15
Louisiana	—	0	3	11	18	—	0	3	13	13
Oklahoma	3	2	20	127	113	—	1	7	55	66
Texas§	5	5	59	263	348	1	3	34	181	192
Mountain	7	10	22	435	555	5	4	16	232	259
Arizona	4	3	7	151	191	3	2	10	115	114
Colorado	3	2	7	123	139	2	0	4	49	60
Idaho§	—	0	2	10	16	—	0	2	9	5
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	5	13	—	0	1	—	5
New Mexico§	—	1	7	79	133	—	0	4	24	37
Utah	—	1	6	66	55	—	0	5	35	36
Wyoming§	—	0	1	1	8	—	0	0	—	2
Pacific	—	3	9	158	170	—	0	4	31	48
Alaska	—	1	4	37	38	—	0	3	23	29
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	2	8	121	132	—	0	2	8	19
Oregon§	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	—	0	0	—	30	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional.
† Includes cases of invasive pneumococcal disease, in children aged <5 years, caused by *S. pneumoniae*, which is susceptible or for which susceptibility testing is not available (NNDSS event code 11717).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 19, 2009, and December 13, 2008 (50th week)*

	Streptococcus pneumoniae, invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Aged <5 years									
	Current	Previous 52 weeks		Cum	Cum	Current	Previous 52 weeks		Cum	Cum	Current	Previous 52 weeks		Cum	Cum
Reporting area	week	Med	Max	2009	2008	week	Med	Max	2009	2008	week	Med	Max	2009	2008
United States	41	51	276	2,658	3,028	6	8	20	429	497	78	269	452	12,707	12,606
New England	—	1	50	105	116	—	0	11	14	17	3	6	15	307	297
Connecticut	—	0	50	50	55	—	0	11	11	5	—	1	5	54	31
Maine§	—	0	2	19	18	—	0	1	1	2	1	0	1	4	10
Massachusetts	—	0	1	3	—	—	0	1	2	—	2	4	10	222	209
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	14	19
Rhode Island§	—	0	4	15	29	—	0	0	—	8	—	0	5	13	18
Vermont§	—	0	2	13	14	—	0	0	—	2	—	0	1	—	10
Mid. Atlantic	1	3	14	168	294	—	0	3	25	30	13	34	50	1,705	1,627
New Jersey	—	0	0	—	—	—	0	0	—	—	—	4	13	203	208
New York (Upstate)	1	1	10	77	67	—	0	2	14	9	1	2	8	116	137
New York City	—	0	4	7	121	—	0	2	—	4	9	22	39	1,055	1,021
Pennsylvania	—	1	8	84	106	—	0	2	11	17	3	7	13	331	261
E.N. Central	8	11	41	590	600	1	2	7	88	78	4	24	39	1,179	1,245
Illinois	N	0	0	N	N	N	0	0	N	N	—	11	29	534	516
Indiana	—	3	32	186	202	—	0	6	27	23	—	2	10	137	130
Michigan	—	0	2	24	21	—	0	1	3	2	4	4	13	229	206
Ohio	8	7	18	380	377	1	1	4	58	53	—	5	12	243	329
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	0	3	36	64
W.N. Central	—	2	161	113	201	—	0	3	21	40	—	6	12	298	391
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	19	16
Kansas	—	0	5	38	77	—	0	2	13	6	—	0	3	29	29
Minnesota	—	0	156	—	28	—	0	3	—	28	—	1	4	69	111
Missouri	—	1	5	61	85	—	0	1	6	3	—	3	8	159	219
Nebraska§	—	0	1	2	—	—	0	0	—	—	—	0	3	17	15
North Dakota	—	0	3	10	2	—	0	0	—	—	—	0	1	4	—
South Dakota	—	0	2	2	9	—	0	2	2	3	—	0	1	1	1
S. Atlantic	23	24	53	1,247	1,287	3	3	12	208	240	35	63	262	3,099	2,804
Delaware	—	0	2	18	3	—	0	2	3	—	—	0	3	27	15
District of Columbia	N	0	0	N	N	N	0	0	N	N	—	3	8	163	143
Florida	16	14	36	733	730	3	2	9	127	150	3	19	32	953	995
Georgia	7	8	25	393	436	—	1	5	70	76	1	14	227	737	668
Maryland§	—	0	1	4	7	—	0	0	—	1	7	6	16	279	345
North Carolina	N	0	0	N	N	N	0	0	N	N	20	9	31	541	276
South Carolina§	—	0	0	—	—	—	0	0	—	—	—	2	6	109	92
Virginia§	N	0	0	N	N	N	0	0	N	N	4	6	15	286	258
West Virginia	—	1	13	99	111	—	0	2	8	13	—	0	2	4	12
E.S. Central	7	4	25	250	306	2	0	3	34	57	11	22	36	1,081	1,074
Alabama§	N	0	0	N	N	N	0	0	N	N	1	8	18	398	432
Kentucky	—	1	5	71	74	—	0	2	8	11	5	1	13	80	81
Mississippi	—	0	3	4	41	—	0	1	3	14	—	4	16	211	164
Tennessee§	7	2	23	175	191	2	0	3	23	32	5	8	15	392	397
W.S. Central	2	1	6	86	98	—	0	3	16	16	7	53	79	2,481	2,250
Arkansas§	2	1	5	54	21	—	0	3	11	5	7	5	35	250	166
Louisiana	—	0	5	32	77	—	0	1	5	11	—	12	41	602	667
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	5	70	81
Texas§	—	0	0	—	—	—	0	0	—	—	—	31	49	1,559	1,336
Mountain	—	2	7	96	124	—	0	2	21	17	2	8	18	420	576
Arizona	—	0	0	—	—	—	0	0	—	—	—	3	9	170	302
Colorado	—	0	0	—	—	—	0	0	—	—	2	1	4	83	126
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	1	3	7
Montana§	—	0	0	—	1	—	0	0	—	—	—	0	7	1	—
Nevada§	—	0	4	32	53	—	0	2	6	6	—	1	10	90	74
New Mexico§	—	0	1	1	—	—	0	0	—	—	—	1	5	54	40
Utah	—	1	5	51	67	—	0	2	13	11	—	0	2	16	24
Wyoming§	—	0	2	12	3	—	0	1	2	—	—	0	1	3	3
Pacific	—	0	1	3	2	—	0	1	2	2	3	43	68	2,137	2,342
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	1
California	N	0	0	N	N	N	0	0	N	N	2	40	61	1,945	2,111
Hawaii	—	0	1	3	2	—	0	1	2	2	—	0	3	27	28
Oregon§	N	0	0	N	N	N	0	0	N	N	—	1	5	44	23
Washington	N	0	0	N	N	N	0	0	N	N	1	2	7	121	179
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	3	17	209	154
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. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is provisional.
† Includes cases of invasive pneumococcal disease caused by drug-resistant *S. pneumoniae* (DRSP) (NNDSS event code 11720).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending December 19, 2009, and December 13, 2008 (50th week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease† Neuroinvasive					West Nile virus disease† Nonneuroinvasive§				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	103	316	1,035	16,697	28,315	—	0	44	359	688	—	0	47	325	667
New England	4	7	33	344	1,657	—	0	0	—	7	—	0	0	—	3
Connecticut	—	0	14	—	832	—	0	0	—	5	—	0	0	—	3
Maine¶	—	0	12	105	258	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	2	2	—	—	0	0	—	1	—	0	0	—	—
New Hampshire	4	3	10	190	256	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	1	4	—	—	0	0	—	1	—	0	0	—	—
Vermont¶	—	0	7	43	311	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	14	30	56	1,493	2,300	—	0	2	7	50	—	0	1	1	20
New Jersey	N	0	0	N	N	—	0	1	2	6	—	0	0	—	4
New York (Upstate)	N	0	0	N	N	—	0	1	3	24	—	0	1	1	7
New York City	—	0	0	—	—	—	0	1	2	8	—	0	0	—	7
Pennsylvania	14	30	56	1,493	2,300	—	0	0	—	12	—	0	0	—	2
E.N. Central	56	121	232	6,057	7,477	—	0	4	9	44	—	0	3	4	20
Illinois	10	32	73	1,528	1,416	—	0	3	5	12	—	0	0	—	8
Indiana	—	7	30	379	—	—	0	1	2	3	—	0	1	2	1
Michigan	25	41	84	1,822	2,941	—	0	1	1	11	—	0	0	—	6
Ohio	19	36	88	1,869	2,289	—	0	0	—	14	—	0	2	2	1
Wisconsin	2	8	55	459	831	—	0	1	1	4	—	0	0	—	4
W.N. Central	2	14	114	859	1,276	—	0	5	26	51	—	0	11	73	134
Iowa	N	0	0	N	N	—	0	0	—	3	—	0	1	5	3
Kansas	—	2	19	183	464	—	0	1	4	14	—	0	2	8	17
Minnesota	—	0	0	—	—	—	0	1	1	2	—	0	1	3	8
Missouri	2	8	51	576	757	—	0	2	4	12	—	0	1	1	3
Nebraska¶	N	0	0	N	N	—	0	2	11	7	—	0	6	40	40
North Dakota	—	0	108	83	—	—	0	0	—	2	—	0	1	1	35
South Dakota	—	0	2	17	55	—	0	3	6	11	—	0	2	15	28
S. Atlantic	21	32	146	1,814	4,549	—	0	3	12	20	—	0	1	3	20
Delaware	—	0	2	12	46	—	0	0	—	—	—	0	0	—	1
District of Columbia	—	0	3	13	24	—	0	0	—	4	—	0	0	—	4
Florida	16	18	67	1,117	1,616	—	0	1	2	3	—	0	1	1	—
Georgia	N	0	0	N	N	—	0	1	4	4	—	0	0	—	4
Maryland¶	N	0	0	N	N	—	0	0	—	6	—	0	1	2	8
North Carolina	N	0	0	N	N	—	0	0	—	2	—	0	0	—	1
South Carolina¶	—	0	54	154	849	—	0	2	3	—	—	0	0	—	1
Virginia¶	—	0	119	28	1,347	—	0	1	3	—	—	0	0	—	1
West Virginia	5	9	32	490	667	—	0	0	—	1	—	0	0	—	—
E.S. Central	—	10	29	521	1,109	—	0	6	36	48	—	0	4	26	57
Alabama¶	—	10	27	516	1,095	—	0	0	—	11	—	0	0	—	7
Kentucky	N	0	0	N	N	—	0	1	3	3	—	0	0	—	—
Mississippi	—	0	2	5	14	—	0	5	29	22	—	0	4	22	43
Tennessee¶	N	0	0	N	N	—	0	2	4	12	—	0	1	4	7
W.S. Central	—	79	747	4,312	7,702	—	0	17	109	69	—	0	6	34	62
Arkansas¶	—	0	25	115	746	—	0	1	6	7	—	0	0	—	2
Louisiana	—	1	7	76	70	—	0	2	10	18	—	0	4	11	31
Oklahoma	N	0	0	N	N	—	0	2	8	4	—	0	2	2	5
Texas¶	—	72	721	4,121	6,886	—	0	14	85	40	—	0	4	21	24
Mountain	6	19	65	1,209	2,108	—	0	12	75	103	—	0	17	122	184
Arizona	—	0	0	—	—	—	0	4	12	62	—	0	2	8	52
Colorado	6	9	33	501	843	—	0	7	35	17	—	0	14	66	54
Idaho¶	N	0	0	N	N	—	0	3	9	4	—	0	5	29	35
Montana¶	—	0	16	105	319	—	0	1	2	—	—	0	1	4	5
Nevada¶	N	0	0	N	N	—	0	2	7	9	—	0	1	5	7
New Mexico¶	—	0	20	134	216	—	0	2	6	5	—	0	1	2	3
Utah	—	7	32	469	720	—	0	0	—	6	—	0	0	—	20
Wyoming¶	—	0	1	—	10	—	0	1	4	—	—	0	2	8	8
Pacific	—	1	6	88	137	—	0	12	85	296	—	0	11	62	167
Alaska	—	1	5	53	74	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	7	59	291	—	0	6	45	153
Hawaii	—	0	4	35	63	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	1	1	3	—	0	3	6	13
Washington	N	0	0	N	N	—	0	6	25	2	—	0	3	11	1
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	63	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	6	26	405	575	—	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. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting year 2009 is 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.
§ 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/epo/dphsi/phs/infdis.htm.
¶ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE III. Deaths in 122 U.S. cities,* week ending December 19, 2009 (50th week)

Reporting area	All causes, by age (years) All Ages	≥65	45–64	25–44	1–24	<1	P&I[†] Total
New England	525	366	127	24	4	4	63
Boston, MA	158	90	54	10	—	4	18
Bridgeport, CT	35	28	6	1	—	—	2
Cambridge, MA	18	15	2	1	—	—	—
Fall River, MA	29	25	3	1	—	—	4
Hartford, CT	46	32	12	1	1	—	5
Lowell, MA	29	22	6	—	1	—	5
Lynn, MA	6	4	1	1	—	—	2
New Bedford, MA	20	15	5	—	—	—	—
New Haven, CT	24	19	5	—	—	—	4
Providence, RI	32	21	9	1	1	—	2
Somerville, MA	2	2	—	—	—	—	1
Springfield, MA	39	27	9	3	—	—	2
Waterbury, CT	24	20	4	—	—	—	3
Worcester, MA	63	46	11	5	1	—	15
Mid. Atlantic	1,920	1,314	442	106	32	26	89
Albany, NY	39	29	8	—	1	1	1
Allentown, PA	26	19	5	1	1	—	—
Buffalo, NY	71	55	12	1	2	1	11
Camden, NJ	U	U	U	U	U	U	U
Elizabeth, NJ	17	12	4	1	—	—	1
Erie, PA	38	30	6	1	1	—	3
Jersey City, NJ	14	6	7	1	—	—	1
New York City, NY	1,022	708	236	53	14	11	41
Newark, NJ	20	11	5	3	—	1	1
Paterson, NJ	6	3	—	1	1	1	—
Philadelphia, PA	295	172	82	26	8	7	13
Pittsburgh, PA[§]	52	33	16	1	2	—	3
Reading, PA	26	22	4	—	—	—	3
Rochester, NY	89	68	14	4	1	2	1
Schenectady, NY	21	15	2	4	—	—	—
Scranton, PA	30	19	9	2	—	—	—
Syracuse, NY	99	74	19	3	1	2	7
Trenton, NJ	24	15	7	2	—	—	—
Utica, NY	10	7	3	—	—	—	3
Yonkers, NY	21	16	3	2	—	—	—
E.N. Central	1,661	1,141	364	93	35	28	124
Akron, OH	56	39	10	3	2	2	7
Canton, OH	39	25	13	1	—	—	4
Chicago, IL	U	U	U	U	U	U	U
Cincinnati, OH	120	75	27	11	6	1	9
Cleveland, OH	254	170	62	15	1	6	16
Columbus, OH	198	138	35	15	6	4	19
Dayton, OH	140	103	22	11	3	1	15
Detroit, MI	U	U	U	U	U	U	U
Evansville, IN	60	43	14	3	—	—	8
Fort Wayne, IN	71	49	15	5	1	1	2
Gary, IN	14	8	4	1	—	1	—
Grand Rapids, MI	56	40	15	—	—	1	3
Indianapolis, IN	174	112	41	10	5	6	9
Lansing, MI	39	28	10	1	—	—	4
Milwaukee, WI	102	67	23	7	3	2	—
Peoria, IL	43	29	10	2	2	—	4
Rockford, IL	65	47	10	3	4	1	4
South Bend, IN	67	47	17	3	—	—	1
Toledo, OH	96	67	24	2	2	1	15
Youngstown, OH	67	54	12	—	—	1	4
W.N. Central	670	433	155	42	22	18	51
Des Moines, IA	55	40	10	4	—	1	4
Duluth, MN	31	22	8	1	—	—	3
Kansas City, KS	30	18	9	3	—	—	4
Kansas City, MO	112	73	23	6	4	6	5
Lincoln, NE	54	47	6	1	—	—	3
Minneapolis, MN	66	40	18	6	—	2	7
Omaha, NE	95	69	20	1	2	3	8
St. Louis, MO	79	25	29	10	12	3	6
St. Paul, MN	55	36	13	1	4	1	4
Wichita, KS	93	63	19	9	—	2	7

Reporting area	All causes, by age (years) All Ages	≥65	45–64	25–44	1–24	<1	P&I[†] Total
S. Atlantic	1,111	698	272	88	22	31	62
Atlanta, GA	156	86	47	11	2	10	3
Baltimore, MD	169	91	54	19	3	2	13
Charlotte, NC	U	U	U	U	U	U	U
Jacksonville, FL	142	98	29	7	4	4	10
Miami, FL	120	63	27	24	2	4	8
Norfolk, VA	69	48	9	4	2	6	3
Richmond, VA	59	37	19	2	1	—	1
Savannah, GA	57	39	16	2	—	—	6
St. Petersburg, FL	58	35	18	1	1	3	3
Tampa, FL	175	124	35	12	3	1	9
Washington, D.C.	100	73	17	6	3	1	5
Wilmington, DE	6	4	1	—	1	—	1
E.S. Central	976	651	238	59	10	18	88
Birmingham, AL	214	148	48	9	2	7	29
Chattanooga, TN	59	36	15	7	1	—	2
Knoxville, TN	117	81	25	10	1	—	10
Lexington, KY	59	37	18	3	—	1	6
Memphis, TN	210	135	48	17	3	7	19
Mobile, AL	118	86	28	4	—	—	4
Montgomery, AL	43	28	11	2	1	1	7
Nashville, TN	156	100	45	7	2	2	11
W.S. Central	1,522	996	359	92	42	29	94
Austin, TX	101	69	22	5	2	3	7
Baton Rouge, LA	53	43	4	2	3	1	—
Corpus Christi, TX	58	38	13	3	2	2	6
Dallas, TX	196	121	49	12	10	4	13
El Paso, TX	69	45	21	2	—	1	2
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	486	305	118	38	13	8	33
Little Rock, AR	93	65	21	2	4	1	4
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	266	187	53	17	6	3	14
Shreveport, LA	76	47	21	2	1	5	4
Tulsa, OK	124	76	37	9	1	1	11
Mountain	949	630	211	64	23	21	72
Albuquerque, NM	135	94	28	7	2	4	13
Boise, ID	53	41	7	3	2	—	3
Colorado Springs, CO	81	49	18	6	4	4	—
Denver, CO	77	45	20	8	—	4	2
Las Vegas, NV	290	181	77	22	5	5	28
Ogden, UT	42	28	7	4	3	—	6
Phoenix, AZ	U	U	U	U	U	U	U
Pueblo, CO	39	30	8	1	—	—	2
Salt Lake City, UT	131	87	31	8	3	2	13
Tucson, AZ	101	75	15	5	4	2	5
Pacific	1,718	1,193	369	104	34	18	153
Berkeley, CA	14	10	1	1	2	—	1
Fresno, CA	148	100	31	10	5	2	11
Glendale, CA	30	22	8	—	—	—	6
Honolulu, HI	75	56	16	2	—	1	7
Long Beach, CA	82	55	15	6	6	—	12
Los Angeles, CA	293	197	68	18	6	4	38
Pasadena, CA	U	U	U	U	U	U	U
Portland, OR	114	73	31	10	—	—	3
Sacramento, CA	240	167	50	18	3	2	22
San Diego, CA	U	U	U	U	U	U	U
San Francisco, CA	149	108	33	3	3	2	18
San Jose, CA	201	145	38	14	2	2	18
Santa Cruz, CA	44	34	8	2	—	—	3
Seattle, WA	129	86	26	10	3	4	6
Spokane, WA	68	50	14	1	2	1	4
Tacoma, WA	131	90	30	9	2	—	4
Total[¶]	**11,052**	**7,422**	**2,537**	**672**	**224**	**193**	**796**

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.

☆ U.S. Government Printing Office: 2009-523-019/41220 Region IV ISSN: 0149-2195