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Overdose Deaths Involving Prescription Opioids Among Medicaid Enrollees – Washington, 2004–2007

During 1999–2006, the number of poisoning deaths in the United States nearly doubled, from approximately 20,000 to 37,000, largely because of overdose deaths involving prescription opioid painkillers (1). This increase coincided with a nearly fourfold increase in the use of prescription opioids nationally (2). In Washington, in 2006, the rate of poisoning involving opioid painkillers was significantly higher than the national rate (1). To better characterize the prescription opioids associated with these deaths and to reexamine previously published results indicating higher drug overdose rates in lower-income populations (3), health and human services agencies in Washington analyzed overdose deaths involving prescription opioids during 2004–2007. This report describes the results of that analysis, which found that 1,668 persons died from prescription opioid-related overdoses during the period (6.4 deaths per 100,000 per year); 58.9% of decedents were male, the highest percentage of deaths (34.4%) was among persons aged 45–54 years, and 45.4% of deaths were among persons enrolled in Medicaid. The age-adjusted rate of death was 30.8 per 100,000 in the Medicaid-enrolled population, compared with 4.0 per 100,000 in the non-Medicaid population, an age-adjusted relative risk of 5.7. Methadone, oxycodone, and hydrocodone were involved in 64.0%, 22.9%, and 13.9% of deaths, respectively. These findings highlight the prominence of methadone in prescription opioid-related overdose deaths and indicate that the Medicaid population is at high risk. Efforts to minimize this risk should focus on assessing the patterns of opioid prescribing to Medicaid enrollees and intervening with Medicaid enrollees who appear to be misusing these drugs.

For this analysis, the Washington State Department of Health defined an overdose death involving prescription opioids as a death in Washington during 2004–2007 of a state resident whose death certificate had 1) a manner of death of

“accidental” or “natural”; 2) one or more contributing causes coded to “poisoning by narcotics” or a “mental and behavioral disorder due to use of opioids” (based on *International Classification of Diseases, 10th Revision* codes T40.0–T40.6 and F11*); 3) specific words compatible with an acute drug intoxication recorded in any of the cause of death fields (e.g., “overdose”); and 4) a prescription opioid term in any of the cause of death fields. Examples of prescription opioid terms sought on manual review of the certificates were “oxycodone,” “methadone,” and “hydrocodone.” Although morphine is a prescription opioid painkiller, it is also a metabolite of heroin. Therefore, mention of morphine on a death certificate was only accepted as evidence that a death was prescription opioid-related when the certificate specified that the morphine was a prescription drug. As a result, 82 deaths involving morphine and no other opioids (36.6% of all deaths in which morphine was mentioned) were excluded from this analysis.

The Washington State Health and Recovery Services Administration (WSHRSA), which operates Medicaid and several associated medical-assistance programs, determined which deaths occurred among persons who were enrolled in

* Available at <http://apps.who.int/classifications/apps/icd/icd10online>.

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Medicaid at some time during the year of their death. During 2004–2007, the Medicaid-enrolled population (5,109,363 person-years) represented 20.2% of the Washington population (25,287,800 person-years). WSHRSA also linked the deaths from prescription opioids to records of clients in the Medicaid Patient Review and Coordination (PRC) program, a special state program for clients who overuse or inappropriately use medical services.[†] PRC program members (5,858 person-years) represented 0.1% of the Medicaid population during 2004–2007. Rates were age adjusted because the Medicaid population was younger than the non-Medicaid population.

During 2004–2007, a total of 2,282 deaths in Washington met the manner and cause of death case definition criteria. Of these, 2,194 (96.1%) had a death certificate that included a term indicating acute drug intoxication. Of these 2,194, a total of 1,668 (76.0%) had a death certificate that included a prescription opioid term and were included in this analysis. The age-adjusted prescription opioid overdose rate was 6.4 per 100,000 per year (Table 1). The male mortality rate was 1.4 times the female rate. Rates increased with age to a peak of 15.0 per 100,000 in the 45–54 years age group and then declined.

Among all decedents, 758 (45.4%) were enrolled in Medicaid at some point during the year of their death. Medicaid-enrolled decedents had an age distribution comparable with that of decedents statewide. However, the percentage of females was greater among Medicaid-enrolled decedents (52.2%) than among decedents statewide (41.1%). A total of 34 Medicaid-enrolled decedents were in the PRC program, representing 4.5% of all Medicaid-enrolled decedents.

The risk for prescription opioid overdose death varied substantially by Medicaid status (Table 2). The crude annual risk for prescription opioid overdose death was approximately one in 6,757 in the Medicaid-enrolled population and one in 172 in the Medicaid-enrolled PRC program population.

Medical examiners and coroners recorded methadone on death certificates nearly three times more often than the next most common opioid, oxycodone (Table 3). At least one nonopioid prescription drug was reported in 54.6% of the deaths. A benzodiazepine was listed on the death certificate in 20.9% of the deaths, and an antidepressant in 31.7%. An illegal drug was reported in 21.8% of the deaths. Cocaine was involved in 15.7%, methamphetamine in 5.5%, heroin

[†] During 2004–2007, approximately 90% of clients in the Washington PRC program misused prescription opioids by doctor shopping, frequent cycling through emergency departments, and prescription forgery. WSHRSA attempted to limit such misuse by restricting PRC clients to one primary-care provider, one narcotics prescriber, one pharmacy, and one hospital for nonemergency care. In addition, WSHRSA could require prior authorization for all opioid prescriptions.

TABLE 1. Number, percentage, and rate of deaths attributed to overdoses of prescription opioid drugs among the total and Medicaid-enrolled populations, by selected characteristics — Washington, 2004–2007

Characteristic	Total population			Medicaid-enrolled population		
	No.	(%)	Rate*	No.	(%)	Rate
Sex						
Male	977	(58.9)	7.4	362	(47.8)	41.2
Female	691	(41.1)	5.3	396	(52.2)	24.8
Age group (yrs)						
<18	16	(1.0)	0.3	10	(1.3)	0.4
18–24	117	(7.0)	4.6	32	(4.2)	4.4
25–34	285	(17.1)	8.4	133	(17.5)	22.6
35–44	425	(25.5)	11.3	200	(26.4)	53.2
45–54	573	(34.4)	15.0	284	(37.5)	101.9
55–64	211	(12.6)	7.7	89	(11.7)	50.4
≥65	41	(2.5)	1.4	10	(1.3)	2.9
Year						
2004	351	(21.0)	5.5	114	(15.0)	19.9
2005	399	(23.9)	6.1	190	(25.1)	32.2
2006	464	(27.8)	7.0	213	(28.1)	33.4
2007	454	(27.2)	6.7	241	(31.8)	37.2
Total	1,668	(100.0)	6.4	758	(100.0)	30.8

* Per 100,000, age-adjusted to the 2000 U.S. standard population for all but the age-specific rates. Total rates are based on 25,287,800 person-years for the total population and 5,109,363 person-years for the Medicaid-enrolled population.

TABLE 2. Number and rate of deaths attributed to overdoses of prescription opioid drugs, by Medicaid status — Washington, 2004–2007

Status	No.	Crude rate*	Age-adjusted rate†	Age-adjusted RR§ (95% CI¶)
Medicaid	758	14.8	30.8	5.7 (5.3–6.1)
Medicaid PRC** program	34	580.4	381.4	92.6 (64.1–129.5)
Non-Medicaid	910	4.5	4.0	Referent

* Per 100,000. Rates are based on 5,109,363 person-years for the Medicaid population, 5,858 person-years for the Medicaid PRC program, and 20,178,437 person-years for the non-Medicaid population.

† Per 100,000, adjusted to the 2000 U.S. standard population.

§ Relative risk, adjusted to the age distribution of the non-Medicaid population.

¶ Confidence interval.

** Patient Review and Coordination.

in 2.4%, and alcohol in 17.1% of the deaths. More than one drug was listed for 72.3% of decedents. The mean and median numbers of drugs per death were 2.7 and 2.0, respectively.

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Editorial Note: The number of deaths attributed to poisoning, more than 90% of which involve drugs, has risen steadily in the United States for the past decade (1). Poisoning became second only to motor-vehicle crashes among leading causes of injury death in the United States in 2004 (4). By 2006, poisoning had become the leading cause of unintentional injury death in

TABLE 3. Number and percentage of deaths attributed to overdoses of prescription opioid drugs, by specific drug involved — Washington, 2004–2007

Drug	No.	(%)*
Methadone	1,068	(64.0)
Oxycodone	382	(22.9)
Hydrocodone	232	(13.9)
Fentanyl	76	(4.6)
Propoxyphene	61	(3.7)
Hydromorphone	60	(3.6)
Codeine	53	(3.2)
Morphine†	40	(2.4)
Meperidine	11	(0.7)
Sufentanil	1	(0.1)

* Percentages are based on 1,668 deaths. Percentages add to more than 100% because some deaths involved more than one opioid drug.

† Includes only morphine attributed to prescription drugs.

Washington, five other states,§ and the District of Columbia. Overdoses associated with prescription opioid painkillers are driving increases in poisoning death rates nationally (1), which parallel increases in opioid prescribing in the United States (2). Opioids are subject to abuse and are frequently used recreationally in combination with other drugs, including alcohol. In 2006, Washington's opioid overdose death rate was 8.2 per 100,000 population, compared with a national rate of 4.6 per 100,000 (1). Some of this might be attributable to Washington's high rate of self-reported nonmedical use of prescription opioid painkillers, which was the fourth highest in the United States during 2006–2007 (5). The findings of

§ Connecticut, Massachusetts, New Jersey, Ohio, and Rhode Island.

What is already known on this topic?

Since 1999, deaths from overdoses of prescription opioid painkillers have been increasing in the United States, but no study has determined whether the rate of such deaths is higher in the Medicaid population.

What is added by this report?

The rate of prescription opioid-related overdose death during 2004–2007 in Washington state was 30.8 in the Medicaid population and 4.0 per 100,000 in the non-Medicaid population (a relative risk of 5.7), and methadone was involved more frequently than any other prescription opioid.

What are the implications for public health practice?

Health authorities (e.g., state and local health departments, coroner and medical examiner offices, and substance abuse programs) in other states should examine trends in and risks for prescription opioid-related overdose death in their jurisdictions, especially among Medicaid clients.

this analysis indicate that deaths from prescription opioid drug overdose in Washington occurred disproportionately among males and persons aged 45–54 years. This analysis also is the first to show an increased risk among persons enrolled in Medicaid. The age-adjusted risk of such a death for a Medicaid enrollee was 5.7 times the risk for a person not enrolled in Medicaid. These findings are similar to previous research showing a higher risk for such deaths in lower-income populations (3) and can be used to better focus preventive interventions.

The cause of the higher death rate in Washington's Medicaid enrolled population might be related, in part, to differences in opioid prescribing in the Medicaid population. Although comparable prescribing data for Medicaid and non-Medicaid populations are not available for Washington, studies indicate that opioid prescribing rates among Medicaid enrollees are at least twofold higher than rates for persons with private insurance (6,7). In one of these studies, both the percentage of patients with pain being treated with opioids and the opioid dose per prescription were higher in Medicaid patients than in non-Medicaid patients (6). The higher death rate among Medicaid enrollees in Washington also might be related to a higher prevalence of substance abuse and other mental health problems, which has been found in other Medicaid populations (8). In this analysis, medical examiners and coroners reported the presence of an illegal drug (e.g., cocaine, methamphetamine, and heroin) in nearly a fifth of deaths, and psychotherapeutic drugs such as benzodiazepines and antidepressants were reported in a high proportion of deaths.

Methadone, a drug used both for treatment of heroin addiction and as a long-acting, inexpensive painkiller, has become increasingly prominent among drugs involved in overdoses, both nationally and in state studies (1,9,10). Methadone's use

as a painkiller increased more than twelvefold in the United States and Washington during 1997–2006 (2), driven in part by its low cost. Washington ranked fourth among states in the per-capita consumption of methadone in 2005 and 2006 (2).

The findings in this report are subject to at least two limitations. First, the number of overdoses involving prescription opioids might be underestimated because 1) such drugs might not have been specified on the death certificates even though they contributed to death and 2) some deaths involving morphine and no other opioids were not included because the morphine detected might have been a metabolite of heroin. Second, some deaths labeled unintentional might have been suicides by poison or vice-versa, but the net effect of such errors likely is minimal.

Surveillance for prescription drug overdose deaths should be improved. Drugs listed on death certificates for overdoses are coded into broad categories, making identification of specific drugs difficult. Use of uncoded text in the cause-of-death fields on death certificates, as was done in this study, might be a promising strategy at the state or national level. Health authorities (e.g., state and local health departments, coroner and medical examiner offices, and substance abuse programs) in other states should examine trends in and risks for prescription opioid-related overdose death in their jurisdictions, especially among Medicaid clients.

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Perceived Insufficient Rest or Sleep Among Adults – United States, 2008

The importance of chronic sleep insufficiency is under-recognized as a public health problem, despite being associated with numerous physical and mental health problems, injury, loss of productivity, and mortality (1,2). Approximately 29% of U.S. adults report sleeping <7 hours per night (3) and 50–70 million have chronic sleep and wakefulness disorders (1). A CDC analysis of 2006 data from the Behavioral Risk Factor Surveillance System (BRFSS) in four states showed that an estimated 10.1% of adults reported receiving insufficient rest or sleep on all days during the preceding 30 days (4). To examine the prevalence of insufficient rest or sleep in all states, CDC analyzed BRFSS data for all 50 states, the District of Columbia (DC), and three U.S. territories (Guam, Puerto Rico, and U.S. Virgin Islands) in 2008. This report summarizes the results, which showed that among 403,981 respondents, 30.7% reported no days of insufficient rest or sleep and 11.1% reported insufficient rest or sleep every day during the preceding 30 days. Females (12.4%) were more likely than males (9.9%) and non-Hispanic blacks (13.3%) were more likely than other racial/ethnic groups to report insufficient rest or sleep. State estimates of 30 days of insufficient rest or sleep ranged from 7.4% in North Dakota to 19.3% in West Virginia. Health-care providers should consider adding an assessment of chronic rest or sleep insufficiency to routine office visits so they can make needed interventions or referrals to sleep specialists.

BRFSS* is a state-based, random-digit-dialed telephone survey of the noninstitutionalized U.S. civilian population aged ≥18 years, which is conducted by state health departments in collaboration with CDC (5). In 2008, response rates† among all 50 states, DC, and territories ranged from 35.8% to 65.9% (median: 53.3%), based on Council of American Survey and

Research Organizations (CASRO) guidelines. Cooperation rates§ ranged from 59.3% to 87.8% (median: 75.0%).

The 2008 survey included the question, “During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?” Data from all sites were aggregated, and the numbers of days of perceived insufficient rest or sleep were categorized as zero days, 1–13 days, 14–29 days, and 30 days. Analyses were stratified by age group, race/ethnicity, sex, employment status, education level, marital status, and geographic area. Age-adjusted prevalence estimates were obtained and standardized to the projected U.S. 2000 population and 95% confidence intervals were calculated using statistical software to account for the complex sampling design. Age-adjusted estimates account for variations within state populations and permit comparisons between states and the 2006 report (4) examining data from four states. Statistical significance was determined by using t-tests. Unless otherwise indicated, all comparisons mentioned in this report were significant at the $p < 0.001$ level.

Among the 403,981 adult respondents, an estimated 30.7% reported no days of insufficient rest or sleep in the preceding 30 days, 41.3% reported 1–13 days, 16.8% reported 14–29 days, and 11.1% reported 30 days (Table 1). The prevalence of adults reporting no days of insufficient rest or sleep in the preceding 30 days increased with age; persons aged ≥45 years were more likely to report no days than adults aged <45 years. Hispanic (38.8%) and other non-Hispanic racial/ethnic groups (35.4%) were more likely to report no days in comparison with non-Hispanic whites (27.9%) and non-Hispanic blacks (30.4%). Men (33.6%) were more likely to report no days than women (28.1%). Retired persons (43.8%) were most likely to report no days of insufficient rest or sleep in comparison with adults reporting other types of employment status ($p = 0.003$). Those with less than a high school diploma or general education development certificate (GED) (37.9%) also were more likely to report no days of insufficient rest or sleep in comparison with those with a high school diploma or GED (33.8%) or with some college or college degree (28.0%). Finally, reports of no days of insufficient rest or sleep were similar among adults of varying marital status, although never married adults (31.6%) were more likely to report no days than members of an unmarried couple (28.4%; $p = 0.005$).

The percentage of adults reporting insufficient rest or sleep every day during the preceding 30 days generally declined with age (Table 1). The percentage was highest among persons aged 25–34 years (13.8%) and lowest among persons aged ≥65 years (7.4%). Non-Hispanic blacks (13.3%) were significantly

* Information regarding BRFSS data and methods is available at http://www.cdc.gov/brfss/technical_infodata/surveydata/2005.htm.

† The percentage of persons who completed interviews among all eligible persons, including those who were not successfully contacted.

§ The percentage of persons who completed interviews among all eligible persons who were contacted.

TABLE 1. Age-adjusted* percentage of adults who reported insufficient rest or sleep† during the preceding 30 days, by number of days and selected characteristics — Behavioral Risk Factor Surveillance System, United States,§ 2008.

Characteristic	No. [¶]	0 days		1–13 days		14–29 days		30 days	
		%	(95% CI ^{**})	%	(95% CI)	%	(95% CI)	%	(95% CI)
Total	403,981	30.7	(30.4–31.0)	41.3	(41.0–41.6)	16.8	(16.6–17.1)	11.1	(10.9–11.4)
Age group (yrs)									
18–24	13,881	23.2	(21.9–24.5)	45.5	(44.1–47.0)	19.7	(18.5–20.8)	11.6	(10.7–12.5)
25–34	38,978	21.8	(21.0–22.6)	44.1	(43.2–45.0)	20.4	(19.7–21.1)	13.8	(13.2–14.3)
35–44	61,350	22.8	(22.2–23.4)	45.2	(44.5–45.9)	20.1	(19.5–20.6)	12.0	(11.5–12.4)
45–64	169,906	30.5	(30.0–30.9)	42.4	(41.9–42.8)	16.3	(16.0–16.6)	10.9	(10.6–11.1)
≥65	119,866	56.7	(56.2–57.2)	28.3	(27.8–28.8)	7.6	(7.3–7.9)	7.4	(7.2–7.7)
Race/Ethnicity									
White, non-Hispanic	318,694	27.9	(27.6–28.2)	42.7	(42.4–43.1)	18.2	(17.9–18.5)	11.2	(10.9–11.4)
Black, non-Hispanic	31,513	30.4	(29.4–31.3)	40.4	(39.3–41.5)	16.0	(15.1–16.8)	13.3	(12.6–14.0)
Hispanic	28,045	38.8	(37.7–39.9)	37.7	(36.6–38.8)	13.0	(12.3–13.8)	10.5	(9.9–11.2)
Other, non-Hispanic ^{††}	22,108	35.4	(34.0–36.7)	37.2	(35.8–38.6)	15.8	(14.8–16.8)	11.6	(10.8–12.5)
Sex									
Male	152,513	33.6	(33.1–34.1)	40.9	(40.4–41.5)	15.6	(15.2–16.0)	9.9	(9.6–10.2)
Female	251,468	28.1	(27.7–28.5)	41.5	(41.1–41.9)	18.0	(17.6–18.3)	12.4	(12.1–12.7)
Employment status									
Employed	215,127	28.7	(28.3–29.2)	44.2	(43.7–44.6)	17.1	(16.8–17.5)	9.9	(9.7–10.2)
Unemployed	16,797	32.5	(31.0–34.0)	36.7	(35.2–38.2)	16.9	(15.8–18.0)	13.9	(12.9–14.9)
Retired	106,325	43.8	(36.4–51.3)	33.2	(25.7–40.7)	13.4	(9.7–17.2)	9.5	(6.2–12.8)
Unable to work	25,956	24.3	(22.6–25.9)	28.4	(26.5–30.2)	21.6	(20.2–23.0)	25.8	(24.3–27.3)
Other ^{§§}	38,395	31.3	(30.5–32.2)	41.7	(40.8–42.6)	15.9	(15.3–16.5)	11.1	(10.5–11.7)
Education									
<High school diploma or GED ^{¶¶}	39,395	37.9	(36.7–39.0)	33.6	(32.5–34.8)	14.2	(13.5–15.0)	14.3	(13.5–15.0)
High school diploma or GED	121,346	33.8	(33.2–34.4)	37.3	(36.7–37.9)	15.7	(15.3–16.2)	13.2	(12.7–13.6)
Some college or college graduate	242,194	28.0	(27.7–28.4)	44.5	(44.0–44.9)	17.9	(17.5–18.2)	9.6	(9.4–9.9)
Marital status									
Married	226,418	30.9	(30.3–31.5)	42.1	(41.4–42.7)	15.9	(15.5–16.3)	11.1	(10.7–11.6)
Divorced, widowed, separated	119,372	30.4	(29.1–31.7)	35.1	(33.7–36.4)	18.6	(17.5–19.6)	16.0	(14.9–17.1)
Member of unmarried couple	8,945	28.4	(26.3–30.5)	42.8	(40.5–45.0)	16.7	(15.2–18.2)	12.1	(10.9–13.3)
Never married	48,016	31.6	(30.8–32.4)	41.0	(40.2–41.9)	16.7	(16.1–17.4)	10.6	(10.1–11.1)

* Age adjusted to 2000 projected U.S. population.

† Determined by response to the question, "During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?"

§ Includes the 50 states, District of Columbia, Guam, Puerto Rico, and U.S. Virgin Islands.

¶ Unweighted sample. Categories might not sum to survey total because of missing responses.

** Confidence interval.

†† Asian, Hawaiian or other Pacific Islander, American Indian/Alaska Native, or multiracial.

§§ Homemaker or student.

¶¶ General Educational Development certificate.

more likely than non-Hispanic whites (11.2%) to report 30 days of insufficient rest or sleep. Females were more likely to report 30 days of insufficient rest or sleep than males (12.4% versus 9.9%, respectively). Persons who reported being unable to work (25.8%) and unemployed respondents (13.9%) were significantly more likely to report 30 days of insufficient rest or sleep than respondents who were employed (9.9%), retired (9.5%; $p=0.011$), or a student or homemaker (11.1%). In comparison with persons with some college education or a college degree (9.6%), insufficient rest or sleep was significantly more likely to be reported by persons with less than a

high school education (14.3%) and among those with a high school diploma or GED (13.2%). Compared with married respondents (11.1%), those who were divorced, widowed, or separated were more likely to report insufficient sleep (16.0%). Percentages for never married persons (10.6%) and members of an unmarried couple (12.1%) were similar to those for married adults (11.1%; $p=0.139$).

The distribution of reported days of insufficient rest or sleep varied among states and territories (Table 2). The lowest age-standardized prevalences of 30 days of insufficient rest or sleep in the preceding 30 days were observed in North Dakota

TABLE 2. Age-adjusted* percentage of adults who reported insufficient rest or sleep† during the preceding 30 days, by number of days and state or area — Behavioral Risk Factor Surveillance System, United States,§ 2008

State/Area	No.	0 days		1–13 days		14–29 days		30 days	
		%	(95% CI [¶])	%	(95% CI)	%	(95% CI)	%	(95% CI)
Alabama	6,282	30.1	(28.4–31.9)	39.3	(37.3–41.2)	17.4	(15.7–19.0)	13.2	(11.9–14.5)
Alaska	2,557	32.2	(29.7–34.6)	41.1	(38.1–44.1)	17.3	(15.0–19.7)	9.4	(7.4–11.4)
Arizona	5,999	32.9	(30.2–35.7)	41.3	(38.4–44.2)	14.3	(12.2–16.3)	11.5	(9.3–13.6)
Arkansas	5,494	29.1	(27.4–30.7)	40.8	(38.8–42.7)	17.8	(16.3–19.3)	12.3	(10.9–13.8)
California	11,545	32.9	(31.8–34.1)	42.6	(41.3–43.8)	16.5	(15.6–17.4)	8.0	(7.3–8.7)
Colorado	11,465	31.2	(30.1–32.4)	43.0	(41.7–44.2)	16.6	(15.6–17.5)	9.2	(8.5–10.0)
Connecticut	5,957	28.5	(26.7–30.2)	45.4	(43.4–47.5)	15.7	(14.1–17.3)	10.4	(9.2–11.6)
Delaware	3,951	28.7	(26.8–30.6)	41.6	(39.2–44.0)	17.8	(15.9–19.7)	11.9	(10.4–13.5)
District of Columbia	4,095	31.4	(29.3–33.5)	44.3	(42.1–46.5)	15.8	(14.3–17.4)	8.5	(7.3–9.6)
Florida	10,542	33.5	(31.6–35.5)	38.0	(36.0–40.1)	14.9	(13.3–16.5)	13.5	(12.1–14.9)
Georgia	5,576	28.9	(27.2–30.5)	41.3	(39.3–43.2)	16.4	(14.9–18.0)	13.4	(11.9–14.9)
Hawaii	6,343	35.6	(34.0–37.2)	40.0	(38.3–41.8)	14.5	(13.2–15.8)	9.8	(8.8–10.9)
Idaho	4,975	29.5	(27.9–31.1)	43.3	(41.3–45.3)	18.3	(16.7–19.9)	8.9	(7.9–9.9)
Illinois	5,106	26.7	(25.2–28.3)	45.1	(43.2–46.9)	18.4	(16.9–19.9)	9.8	(8.6–10.9)
Indiana	4,731	28.9	(27.0–30.7)	41.7	(39.5–43.8)	18.0	(16.4–19.7)	11.4	(10.0–12.8)
Iowa	5,846	30.2	(28.8–31.6)	41.8	(40.1–43.6)	16.9	(15.5–18.3)	11.1	(9.9–12.2)
Kansas	8,414	30.4	(29.2–31.7)	41.5	(40.0–42.9)	17.3	(16.1–18.5)	10.8	(9.9–11.7)
Kentucky	7,947	26.0	(24.6–27.5)	38.2	(36.4–40.1)	21.3	(19.6–23.0)	14.4	(13.1–15.7)
Louisiana	5,991	35.0	(33.4–36.7)	37.3	(35.6–38.9)	14.7	(13.4–15.9)	13.0	(11.9–14.1)
Maine	6,653	29.3	(27.9–30.6)	42.4	(40.7–44.1)	17.3	(15.9–18.6)	11.1	(10.0–12.3)
Maryland	9,299	28.6	(27.2–30.0)	42.8	(41.2–44.3)	18.5	(17.2–19.7)	10.1	(9.2–11.0)
Massachusetts	19,940	30.2	(29.2–31.2)	41.1	(39.9–42.3)	17.0	(16.1–17.9)	11.8	(11.0–12.6)
Michigan	9,198	28.6	(27.3–29.8)	43.3	(41.8–44.7)	17.4	(16.2–18.5)	10.8	(9.9–11.7)
Minnesota	4,271	29.4	(27.7–31.1)	44.7	(42.7–46.7)	15.9	(14.4–17.5)	10.0	(8.8–11.3)
Mississippi	7,715	32.4	(30.9–33.9)	37.2	(35.6–38.8)	17.3	(16.0–18.6)	13.1	(12.0–14.2)
Missouri	5,060	27.6	(25.9–29.3)	42.2	(40.1–44.3)	16.7	(15.2–18.3)	13.4	(12.0–14.9)
Montana	6,675	28.4	(26.8–30.0)	42.3	(40.4–44.2)	19.4	(17.8–20.9)	9.9	(8.7–11.1)
Nebraska	15,879	29.2	(27.8–30.5)	45.5	(43.9–47.2)	16.3	(15.2–17.5)	9.0	(7.9–10.0)
Nevada	4,670	30.8	(28.7–33.0)	40.5	(38.2–42.8)	17.5	(15.7–19.4)	11.1	(9.6–12.6)
New Hampshire	6,729	27.6	(26.2–29.0)	44.8	(43.1–46.6)	17.7	(16.3–19.2)	9.9	(8.8–10.9)
New Jersey	11,333	32.2	(30.9–33.6)	39.8	(38.4–41.3)	15.1	(14.0–16.2)	12.8	(11.8–13.8)
New Mexico	6,139	33.2	(31.4–34.9)	40.5	(38.6–42.4)	15.7	(14.3–17.2)	10.6	(9.5–11.7)
New York	7,614	28.7	(27.2–30.1)	42.8	(41.2–44.4)	17.8	(16.6–19.1)	10.8	(9.8–11.7)
North Carolina	15,426	31.9	(30.8–33.0)	39.0	(37.8–40.3)	16.0	(15.1–16.9)	13.0	(12.2–13.9)
North Dakota	4,879	29.4	(27.9–31.0)	47.1	(45.3–49.0)	16.0	(14.7–17.4)	7.4	(6.5–8.4)
Ohio	12,651	27.1	(25.9–28.2)	42.7	(41.3–44.1)	18.7	(17.6–19.9)	11.4	(10.5–12.4)
Oklahoma	7,658	30.8	(29.4–32.2)	37.5	(35.9–39.0)	17.4	(16.3–18.6)	14.3	(13.2–15.3)
Oregon	4,691	28.4	(26.7–30.1)	48.7	(46.7–50.8)	14.1	(12.6–15.5)	8.8	(7.6–9.9)
Pennsylvania	12,770	29.8	(28.4–31.1)	40.3	(38.7–41.8)	18.6	(17.3–19.9)	11.3	(10.4–12.3)
Rhode Island	4,676	29.6	(27.9–31.3)	42.7	(40.7–44.8)	16.8	(15.2–18.3)	10.9	(9.7–12.1)
South Carolina	9,799	32.7	(31.0–34.3)	40.8	(39.0–42.6)	14.5	(13.3–15.8)	12.0	(10.8–13.2)
South Dakota	6,796	32.2	(30.7–33.8)	41.8	(40.0–43.6)	14.5	(13.3–15.8)	11.5	(10.2–12.7)
Tennessee	4,882	32.0	(29.7–34.2)	36.8	(34.4–39.2)	16.4	(14.6–18.3)	14.8	(13.2–16.3)
Texas	10,432	32.7	(31.2–34.1)	39.8	(38.2–41.4)	15.8	(14.6–17.0)	11.8	(10.7–12.8)
Utah	5,187	25.6	(24.2–27.0)	46.7	(44.9–48.5)	18.5	(17.2–19.9)	9.2	(8.1–10.2)
Vermont	6,586	27.3	(26.1–28.6)	45.2	(43.6–46.8)	17.8	(16.4–19.1)	9.7	(8.7–10.7)
Virginia	5,150	29.5	(27.0–32.0)	41.9	(39.4–44.5)	18.7	(16.5–20.9)	9.9	(8.7–11.0)
Washington	22,096	29.0	(28.1–29.9)	42.9	(42.0–43.9)	18.2	(17.4–19.0)	9.9	(9.2–10.5)
West Virginia	4,073	27.6	(25.9–29.3)	33.8	(31.9–35.8)	19.3	(17.7–20.8)	19.3	(17.6–21.0)
Wisconsin	6,989	28.0	(26.3–29.6)	44.5	(42.4–46.5)	18.9	(17.2–20.7)	8.6	(7.5–9.7)
Wyoming	7,814	28.6	(27.4–29.7)	44.1	(42.6–45.5)	17.3	(16.2–18.4)	10.1	(9.2–11.0)
Guam	766	46.1	(42.1–50.1)	34.8	(31.0–38.5)	7.7	(5.9–9.6)	11.4	(8.8–14.0)
Puerto Rico	4,353	50.7	(48.8–52.7)	24.9	(23.2–26.6)	10.3	(9.1–11.5)	14.0	(12.7–15.4)
U.S. Virgin Islands	2,316	35.5	(33.1–37.9)	41.8	(39.2–44.4)	13.1	(11.3–14.9)	9.6	(8.0–11.2)
Total	403,981	30.7	(30.4–31.0)	41.3	(41.0–41.6)	16.8	(16.6–17.1)	11.1	(10.9–11.4)

* Age adjusted to 2000 projected U.S. population.

† Determined by response to the question, "During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?"

§ Includes the 50 states, District of Columbia, Guam, Puerto Rico, and U.S. Virgin Islands.

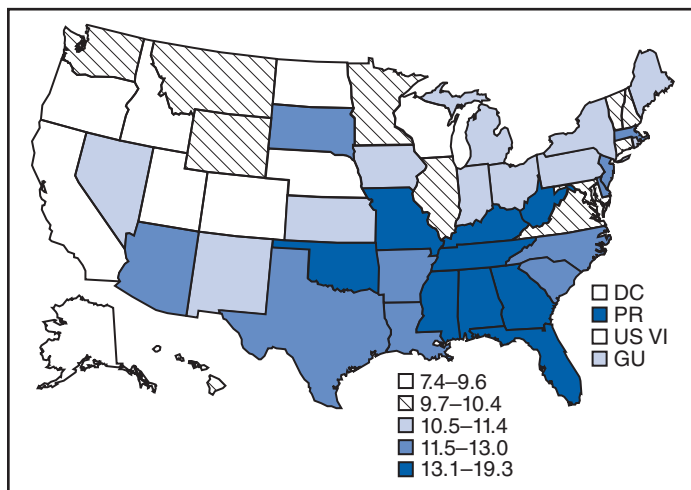
¶ Confidence interval.

(7.4%), California (8.0%), DC (8.5%), Wisconsin (8.6%), and Oregon (8.8%); the highest were observed in Puerto Rico (14.0%), Oklahoma (14.3%), Kentucky (14.4%), Tennessee (14.8%), and West Virginia (19.3%) (Figure).

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Editorial Note: This is the first published report to present state-based estimates of perceived insufficient sleep or rest by adults for the 50 states, DC, and three U.S. territories. The insufficient rest or sleep question was included on the 2008 BRFSS core questionnaire in response to an Institute of Medicine recommendation that CDC expand surveillance of population sleep patterns (1). The analysis presented in this report found that an estimated 11.1% of respondents reported experiencing insufficient rest or sleep every day for the preceding 30 days and 30.7% of respondents reported no days of insufficient sleep or rest, similar to the 10.1% and 29.6%, respectively, reported by adults from four states in 2006 (4). Racial/ethnic and sex differences observed in this 2008 study were not seen in the 2006 data and likely are the result of increased geographic representation in the sample population and a much larger sample size in 2008. However, the 2008 findings are consistent with previous research indicating a higher prevalence of self-reported frequent insufficient rest or sleep by women in comparison with men (6) and disparities in

FIGURE. Age-adjusted* percentage of adults who reported 30 days of insufficient rest or sleep† during the preceding 30 days — Behavioral Risk Factor Surveillance System, United States,§ 2008.



* Age adjusted to 2000 projected U.S. population.

† Determined by response to the question, "During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?"

§ Includes the 50 states, District of Columbia, Guam, Puerto Rico, and U.S. Virgin Islands.

What is already known on this topic?

A 2008 MMWR report of perceived insufficient rest or sleep by adults from four states using 2006 Behavioral Risk Factor Surveillance System (BRFSS) data found that 1 in 10 adults reported insufficient rest or sleep every day in the preceding 30 days and 29.6% reported no days of insufficient rest or sleep.

What is added by this report?

Insufficient rest or sleep prevalence estimates from adults in the 50 United States, the District of Columbia, and three U.S. territories (Guam, Puerto Rico, and U.S. Virgin Islands) from the 2008 BRFSS substantiate previous findings, add support for sex and race/ethnicity differences, and characterize geographic variations in the state-based reports of rest or sleep insufficiency.

What are the implications for public health practice?

Health-care providers should consider adding an assessment of chronic rest or sleep insufficiency to routine office visits so they can make needed interventions or referrals to sleep specialists.

sleep duration reported by non-Hispanic blacks in comparison with whites (7,8).

The high prevalence of insufficient rest or sleep was concentrated in the southeastern United States. The causes of the geographic variations found cannot be determined by this study. However, geographic variations in occupational factors (e.g., shift work opportunities and extended work schedules) and lifestyle choices (e.g., use of technology), and the distribution of related common chronic diseases (e.g., obesity [9], depression, hypertension, heart disease, and stroke), many of which also are concentrated in the Southeast, might play a role and should be examined further (10).

The major causes of sleep loss are overlapping and include lifestyle and occupational factors that reflect broad societal factors (e.g., work hours and access to technology), and specific sleep disorders (1). Further studies are needed to explain the sex and racial/ethnic differences apparent in these results. Women are underrepresented in studies of sleep and sleep disorders (7). Further research also is needed to examine the relationship between sleep during pregnancy and postpartum and sleep-related diseases, such as depression, which are more prevalent in women (7). Racial and ethnic minorities disproportionately report sleep durations that are associated with increased mortality and might contribute to health disparities, and they are overrepresented in low socioeconomic environments that might compromise sleep quality (7). In this analysis, persons unable to work expressed the greatest prevalence of perceived rest or sleep insufficiency, which might be the result of mental distress or medical problems, disabilities, or other conditions that prevent them from being employed.

The findings in this report are subject to at least three limitations. First, the definitions of “enough (sufficient)” sleep and “rest” and responses to the survey question were subjective and were not accompanied by reports of hours of sleep per night; therefore, this analysis cannot be compared directly with studies of sleep duration. Because the survey question also did not distinguish between “rest” and “sleep,” respondents might vary in their interpretation of the questions and the terms. Finally, institutionalized persons and persons residing in households without landline telephones are not included in the survey. Therefore, the findings of this report are not generalizable to those populations.

According to the National Sleep Foundation, adults need 7–9 hours of sleep each night. Health-care professionals should evaluate patients who report chronic insufficient rest or sleep and advise them of effective behavioral strategies including keeping a regular sleep schedule; avoiding stimulating activities within 2 hours of bedtime; avoiding caffeine, nicotine, and alcohol in the evening; sleeping in a dark, quiet, well-ventilated space; and avoiding going to bed hungry.[‡] Pharmacologic intervention also might be warranted. Although few formal clinical practice guidelines are available for assessing and treating sleep insufficiency and sleeping disorders, a multidisciplinary team, including a sleep specialist, might be required for proper treatment (1).

Acknowledgment

The findings in this report are based, in part, on data provided by BRFSS state coordinators from the 50 United States, DC, Guam, Puerto Rico, and U.S. Virgin Islands.

[‡] Additional guidance on good sleep practices from the National Sleep Foundation is available at <http://www.sleepfoundation.org/article/ask-the-expert/sleep-hygiene>.

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Cronobacter Species Isolation in Two Infants – New Mexico, 2008

Cronobacter spp. (formerly *Enterobacter sakazakii*) are rare causes of infant septicemia and meningitis, resulting in death in approximately 40% of cases (1). Since 1958, 120 cases of *Cronobacter* infection in infants have been reported, an average of fewer than three cases per year worldwide. Powdered infant formula (PIF), which is not sterile, has been implicated repeatedly as a vehicle of *Cronobacter* infection; consequently, the World Health Organization (WHO) has issued guidelines for safer preparation, handling, and storage of PIF (2,3). This report describes isolation of *Cronobacter* spp. in two nonhospitalized, unrelated infants (one male and one female) in New Mexico in 2008; one infant developed severe brain injury and hydrocephalus, and the other infant died. An investigation by the New Mexico Department of Health (NMDOH) determined that PIF consumption was the only known risk factor in the two cases, although the sources of the *Cronobacter* spp. could not be determined. *Cronobacter* spp. were not isolated from sealed canisters of formula associated with the two infants, and clinical isolates from the infants differed by pulsed-field gel electrophoresis (PFGE). However, a *Cronobacter* organism was isolated from an opened canister of formula consumed by the male infant and was indistinguishable from an isolate from his postmortem blood culture. Education of formula preparers regarding potential PIF contamination, universal adoption of WHO PIF preparation guidelines, and continued improvement of PIF manufacturing processes might help prevent *Cronobacter* infection among infants (3).

On November 18, 2008, NMDOH received notification from a hospital laboratory that *Cronobacter* spp. (formerly *Enterobacter sakazakii**) had been isolated from the cerebrospinal fluid of a female infant aged 7 weeks. The isolate was

* In 2008, the taxonomy of *Enterobacter sakazakii* was updated, resulting in creation of five novel species belonging to a new genus, *Cronobacter*, which is contaxic with *E. sakazakii* (4). Most laboratories do not yet have the capability to differentiate between the new *Cronobacter* species.

sent to the NMDOH Scientific Laboratory Division for confirmation, a team of investigators from NMDOH and CDC visited the infant's home, and officials from the Food and Drug Administration (FDA) collected PIF samples. Two days later, the Scientific Laboratory Division reported isolation of a second *Cronobacter* organism from the postmortem blood culture of a male infant aged 7 months. The two infants lived approximately 200 miles apart in different counties of mostly rural southeastern New Mexico.

Case Reports

Case 1. The female infant was born in September 2008 at full term by vaginal delivery without complications. Her mother had received prenatal care. The infant had been fed PIF exclusively since birth. The infant was well until approximately age 3.5 weeks, when a family member noted that she had an axillary temperature of 100.9°F (38.3°C) and took her to a hospital emergency department. Records for this visit noted a normal rectal temperature, normal fontanel, and overall healthy appearance. The infant was discharged without further testing or treatment. However, during the following week, the infant became notably fussier and began vomiting. Her illness progressed during early November, when at age 6.5 weeks she exhibited seizure-like activity. She was admitted to a hospital on November 14. On physical examination the infant was found to have a bulging anterior fontanelle, horizontal nystagmus, a positive Brudzinski sign with neck rigidity, and dehydration. Cerebrospinal fluid cultures collected during this admission yielded a *Cronobacter* organism; blood cultures were negative for *Cronobacter*. The infant was placed on intravenous antibiotic therapy, including ampicillin and cefotaxime. She was transferred to a second hospital within 24 hours of this admission for further evaluation and diagnostic testing.

At the second hospital, a computed tomography scan of the head revealed thick-walled hypodense lesions that were identified as abscesses. Within 24 hours of admission to the second hospital the infant was transferred to a third hospital where pediatric specialists in infectious disease and neurosurgery were available. On November 16, at the third hospital, a ToRCH workup (testing for toxoplasmosis, other infections, rubella, cytomegalovirus, and herpes simplex virus) was conducted and was negative. Serial magnetic resonance imaging conducted during November 17, 2008–February 4, 2009, revealed multiple brain abscesses, diffuse brain injury, and hydrocephalus with lateral third and fourth ventricle dilation. Fluid obtained through percutaneous aspiration of an abscess in the right frontal region of the brain yielded a *Cronobacter* organism that was resistant to cefazolin but susceptible to ceftriaxone, ciprofloxacin, gentamicin, and trimethoprim-sulfa. Treatments

administered during hospitalization at the third hospital included intravenous meropenem, vancomycin, gentamicin, acyclovir, baclofen, and phenobarbital and multiple percutaneous aspirates of the left and right ventricles of the brain; placement of a ventriculoperitoneal shunt was not required. An electroencephalogram performed on January 12, 2009, was interpreted as abnormal because of a diffusely slow background. In addition, frequent multifocal epileptiform discharges for multiple areas of cortical hyperexcitability were noted that could have led to localization-related seizures. After 11.5 weeks in the hospital, the infant was discharged on February 6, 2009, with severe brain injury, hypertonicity resulting from central nervous system damage, and hydrocephalus.

Case 2. The male infant was born in April 2008 at 40 weeks' gestation by vaginal delivery without complications. His mother had received prenatal care. The infant was breastfed exclusively until age 6 months and then began transitioning to PIF and age-appropriate foods. Other than a history of mild-moderate eczema that was being treated with oral antihistamines, moderate-dose topical steroids, and topical antibiotics, the infant was healthy, as confirmed by medical records and a visit by a trained new-parent support worker on November 10, 2008. The following day, at age 7 months, he died unexpectedly while taking his usual nap at home. A *Cronobacter* organism was found in the blood culture obtained during autopsy. However, aside from mild eczema, no congenital or histopathologic abnormalities were noted during postmortem examination. Therefore, the *Cronobacter* isolate was attributed to postmortem bacterial overgrowth, and the autopsy report listed sudden infant death syndrome (SIDS) as the cause of death.

Epidemiologic and Environmental Investigations

Initial review of the two cases by CDC and FDA investigators determined that the female infant had been infected with *Cronobacter* spp. and the male infant had been colonized with *Cronobacter* spp. without clear evidence of infection. Ingestion of PIF was the only identified risk factor for *Cronobacter* exposure for the two infants. The two infants had consumed the same brand of PIF but had no other common exposures. PIF preparers reported washing their hands before preparing formula and washing bottle components by hand between feedings for the female infant and in the dishwasher for the male infant. Additionally, they reported following the manufacturer's instructions for preparing and handling PIF. In the female infant's household, water used for PIF reconstitution had been boiled, cooled, and then stored in the kitchen in a plastic container. Reconstituted PIF was not reheated, and

new bottles were prepared for every feeding (approximately every 3 hours). In the male infant's household, PIF had been reconstituted by using refrigerated bottled water or tap water. The water was not boiled or heated before use.

Investigations were conducted at both infants' homes, which included collecting environmental samples and samples of PIF and other infant food. However, neither the container used to store water for formula preparation nor canisters of formula fed to the female infant before illness onset were available for testing; therefore, the lot numbers of PIF fed to the female infant before illness could not be determined. The PIF collected from the female infant's home had been fed to her after her symptoms began. In addition, NMDOH and FDA collected 30 unopened canisters of the same brand of PIF from retail stores where the parents of the two infants reported obtaining formula. These canisters had the same lot numbers and expiration dates as the formula collected from the infants' homes. Samples from the store canisters were submitted to the NMDOH Scientific Laboratory Division and FDA for testing; no *Cronobacter* spp. were isolated.

Environmental surface swabs and food and nonfood samples were cultured using standard methods. Opened and unopened

canisters of PIF were tested by following the enrichment and isolation methodology for *Cronobacter* organisms outlined by FDA.[†] Suspected environmental and clinical isolates were confirmed as *Cronobacter* spp. through the use of conventional biochemical testing and DNA sequencing. Pulsed-field gel electrophoresis (PFGE) was performed on all *Cronobacter* isolates by using the standard PFGE methodology CDC employs for *Escherichia coli* O157:H7.

Although the two infants had consumed the same brand of formula, their clinical *Cronobacter* isolates had different PFGE patterns (Table). None of the samples obtained from the home of the female infant yielded *Cronobacter* spp. However, PIF from an opened canister and the vacuum cleaner filter from the home of the male infant yielded *Cronobacter* spp. The clinical *Cronobacter* isolate from the male infant and the *Cronobacter* isolate from the PIF canister sample from his home had indistinguishable PFGE patterns; however, the vacuum cleaner *Cronobacter* isolate from the same home had a different PFGE pattern (Table). *Cronobacter* spp. were not isolated from any of the unopened canisters of PIF in either home.

[†] Available at <http://www.fda.gov/food/scienceresearch/laboratorymethods/ucm114665.htm>.

TABLE. Clinical specimens from two infants and associated product and environmental samples tested for *Cronobacter*, by culture and pulsed-field gel electrophoresis (PFGE) results — New Mexico, 2008

Specimens/Samples	<i>Cronobacter</i> sp. isolated	PFGE pattern
Associated with female infant		
Cerebrospinal fluid	Yes	Pattern A
Brain abscess aspirate	Yes	Unavailable for typing
Kitchen surfaces: faucet handles, sink basin, top of refrigerator, cabinet where formula was stored, counter where formula was prepared	No	
Infant feeding equipment: bottle nipples, bottles	No	
Powdered infant formula: two opened and one unopened canister	No	
Water sources: cold and hot tap water	No	
Household vacuum equipment: canisters from two vacuums, vacuum filter	No	
Associated with male infant		
Postmortem blood specimen	Yes	Pattern B
Kitchen surfaces: faucet handle, sink basin, faucet aerator, cabinet where formula was stored, counter where formula was prepared, dishwasher door, refrigerator shelf	No	
Infant feeding equipment: two empty bottles, bottle nipples	No	
Powdered infant formula		
One opened canister	Yes	Pattern B
One empty single-serving package	No	
One leftover bottle of reconstituted formula	No	
Other infant foods and drinks: pear juice, rice cereal, powdered mashed potatoes	No	
Water sources: refrigerated bottled water; cold and hot tap water	No	
Household vacuum equipment		
Filter	Yes	Pattern C
Outer surface	No	
From retail outlets*		
30 unopened powdered infant formula canisters	No	

* Four retail outlets (two for each infant) where the parents reported purchasing canisters of powdered infant formula. These canisters had the same lot numbers and expiration dates as the formula collected from the infants' homes.

In response to the isolation of *Cronobacter* organisms from these infants, NMDOH issued recommendations regarding infant feeding practices, including breastfeeding when possible and using proper formula preparation procedures. NMDOH also requested notification from the three largest commercial laboratories in New Mexico of any results indicating *Cronobacter* spp. isolation from infants aged <1 year. In addition, a Health Alert Network message was sent to all laboratories across the state alerting them to these increased surveillance activities. No additional cases were identified.

Reported by: J Baumbach, MD, K Rooney, MPH, C Smelser, MD, P Torres, New Mexico Dept of Health. A Bowen, MD, Div of Foodborne, Bacterial, and Mycotic Diseases, National Center for Zoonotic, Vector-Borne and Enteric Diseases; M Nichols, DVM, EIS Officer, CDC.

Editorial Note: This report describes the isolation of *Cronobacter* spp. from two nonhospitalized, unrelated infants in 2008 in New Mexico. Isolation of this organism from human specimens is rare and makes these cases notable. The female infant had documented *Cronobacter* infection that led to severe brain injury and hydrocephalus. Although a *Cronobacter* organism was isolated from the male infant at autopsy, the role of that organism in the infant's apparent death from SIDS is unknown. Isolation of *Cronobacter* spp. in association with SIDS has not been reported previously.

Previous investigations have found *Cronobacter* spp. cultured from prepared formula, unopened PIF containers, and the environment where PIF was reconstituted, clearly implicating PIF as the source of outbreaks. Other than an improperly prepared intravenous nutrition solution implicated in one outbreak (5), no other clear source of *Cronobacter* infection has been identified. *Cronobacter* spp. rarely are isolated from human intestines (6), and mother-to-child transmission has not been documented. The isolation of a *Cronobacter* organism from the vacuum cleaner filter in the male infant's household indicated the organism's presence in the home environment. However, the vacuum isolate differed by PFGE pattern from the clinical isolate, demonstrating that at least two distinct strains of *Cronobacter* spp. were present concurrently in the household. Although *Cronobacter* spp. have been isolated from household vacuum cleaners previously (7), the source of the *Cronobacter* organisms in such situations and the implications for human health are unknown. Isolation of *Cronobacter* organisms with indistinguishable PFGE patterns from the male infant's clinical specimen and an opened PIF canister in his home suggest contaminated PIF as a source of *Cronobacter* spp. for this infant. Because *Cronobacter* spp. were not isolated from unopened canisters of the PIF associated with the two cases in New Mexico, the PIF associated with the male infant might have been contaminated extrinsically. Canisters of PIF

What is already known on this topic?

Cronobacter spp. are a rare cause of infant septicemia and meningitis with 40% mortality and often are associated with powdered infant formula (PIF).

What is added by this report?

This report describes two unrelated cases of isolation of *Cronobacter* spp. from infants in New Mexico, at least one likely caused by contamination of PIF.

What are the implications for public health practice?

Promotion by public health agencies of universal adoption of World Health Organization PIF preparation guidelines and continued improvement of PIF manufacturing processes might help reduce *Cronobacter* illness among infants.

consumed by the female infant before her illness began were not available for testing, and the source of her infection could not be determined.

Although isolation is rare, the extent of *Cronobacter* infection has not been well enumerated in the United States; formal surveillance and reporting systems exist only in Minnesota, where a single infant case has been identified since 2005. A national FoodNet[§] survey in 2002 estimated the annual incidence of invasive *Cronobacter* infection at one per 100,000 infants aged <1 year and at 8.7 per 100,000 low birthweight infants (<2,500 g [5.5 lbs]).[¶] Despite limited surveillance for this infection in the United States and elsewhere, at least 12 outbreaks of severe *Cronobacter* infection have been observed worldwide since 1958, generally among infants hospitalized in intensive-care units (2). Although sporadic cases of community-acquired *Cronobacter* infection have been reported, outbreaks of community-acquired disease have not. However, enhanced surveillance might produce a more accurate estimate of the *Cronobacter* disease burden and insight into risk factors; accordingly, FoodNet is expected to soon begin piloting surveillance for *Cronobacter* infections in the United States.

Infants throughout the world consume PIF, some exclusively. PIF preparers should be aware that PIF is not sterile and can contain pathogenic organisms (e.g., *Cronobacter* spp.). Preparers also should be aware that PIF can be contaminated extrinsically (although mechanisms for such contamination are not well defined) and that bacteria can multiply rapidly in reconstituted PIF. Consequently, WHO has developed guidelines for preparation of PIF, including reconstitution with water

[§] The Foodborne Diseases Active Surveillance Network (FoodNet) of CDC's Emerging Infections Program collects data from 10 U.S. states on diseases caused by enteric pathogens transmitted commonly through food.

[¶] Available at <http://www.who.int/foodsafety/publications/micro/es.pdf>.

hot enough to inactivate *Cronobacter* organisms (3). Universal adoption of these guidelines can aid in implementation of safer PIF preparation, storage, and handling. In the United States and elsewhere, recommendations are to breastfeed infants when possible, use sterile liquid infant formula in high-risk settings (e.g., neonatal intensive-care units and hospital nurseries), and adhere to the safest available PIF preparation procedures (8,9). Manufacturing sterile powdered infant formula, perhaps by using irradiation in combination with other techniques, could prevent infant disease (10). Additionally, further precautions to prevent extrinsic contamination of PIF are needed. Engineering of PIF packaging to prevent introduction of contaminated hands, scoops, or other items might help prevent additional infant disease.

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Announcement

National Epilepsy Awareness Month — November 2009

November is National Epilepsy Awareness Month. Epilepsy, which affects nearly 2.5 million persons in the United States, is characterized by recurrent, unprovoked seizures (1). Delayed recognition of these seizures and subsequent inadequate

treatment increases the risk for additional seizures, disability, decreased health-related quality of life, and, in rare instances, death (2–4).

In their day-to-day work, most law enforcement and emergency response personnel are able to recognize citizens who are experiencing seizures and provide the appropriate intervention steps for responding to a person during a seizure. On any given shift, however, some law enforcement officers unknowingly might encounter persons having seizures who appear to be confused, are unable to communicate, or exhibit behaviors inappropriate to time and place. Such persons having a seizure might not obey an officer's directives and unknowingly might become combative, resulting in inappropriate arrest, possible injury, and in some cases, death.

This year, the Epilepsy Foundation, in partnership with CDC, is conducting a national education and outreach program to educate and train law enforcement officers, police cadets, and emergency response personnel across the country to increase their recognition of seizures and promote safe and appropriate intervention practices for persons with epilepsy. The centerpiece of this effort is the First Responders Training Program, consisting of two modules. The first, the recently released Law Enforcement Training Curriculum, includes a brief presentation and a DVD outlining the vital steps in seizure recognition and first aid for law enforcement personnel. Approximately 30,000 officers have participated in the law enforcement training program to date. The second, a module designed specifically for emergency response personnel, will instruct first responders in seizure recognition and response.

Additional information about the First Responders Training Program is available online (<http://www.epilepsyfoundation.org/about/professionals/emergency/index.cfm>). Additional information about epilepsy and the national campaign is available from the Epilepsy Foundation by telephone (800-332-1000) or online (<http://www.epilepsyfoundation.org>). Information in Spanish is available by telephone (866-748-8008) or online (<http://www.fundacionparalaepilepsia.org>).

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Announcement**Drowsy Driving Prevention Week –
November 2–8, 2009**

November 2–8 is Drowsy Driving Prevention Week. Driving while drowsy is a major contributor to an estimated 100,000 motor vehicle crashes per year and results in more than 1,500 deaths nationwide (1). Sleepiness demonstrably impairs safe driving by reducing alertness and slowing reaction time.

Several factors can contribute to drowsy driving (1). Although insufficient sleep duration and fragmented sleep are significant causes of drowsiness, circadian rhythms cause increased sleepiness during the afternoon, even with adequate sleep. Sedating medications and consumption of alcohol also cause drowsiness, which is amplified with sleep deprivation. Untreated sleep disorders also can contribute to excessive sleepiness.

Groups at higher risk for sleep-related crashes include bus, truck, and other commercial drivers; shift workers and persons with more than one job or irregular work hours; persons with untreated sleep disorders such as sleep apnea and narcolepsy; and drivers aged <26 years, especially males (2). In addition, adolescents are more likely than older drivers to be sleep-deprived because of school schedules, social activities, and shifting circadian rhythms (3).

Good sleep practices (<http://www.cdc.gov/sleep/hygiene.htm>) include establishing a regular sleep schedule, avoiding intense physical activity or large meals before bedtime, and ensuring an environment conducive to sleep. For short-term improvement of alertness, drivers can park and take a 15–20 minute nap or consume caffeine. High-intensity lighting, nap breaks during shifts, and breaks from repetitive work can reduce the risk for drowsy driving among shift workers. Diagnosis and treatment of sleep disorders also are important in reducing the risk for drowsy driving. Additional information is available from the National Sleep Foundation (<http://drowsydriving.org>) and CDC (<http://www.cdc.gov/sleep>).

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Announcement**World Pneumonia Day –
November 2, 2009**

Pneumonia kills more children than any other illness; of the approximately 10 million children aged <5 years who die each year worldwide, 2 million die from pneumonia (1). *Streptococcus pneumoniae* (pneumococcus) and *Haemophilus influenzae* type b (Hib) account for approximately half of pneumonia deaths globally in children aged 1 month–5 years (2,3). Much of this disease burden is vaccine-preventable. In the United States, seven-valent pneumococcal conjugate and Hib vaccines are recommended for infants and children aged <2 years as part of the routine infant immunization schedule and have reduced morbidity and mortality from pneumococcal and Hib disease (4,5). Collaborative international efforts are expanding use of these vaccines in developing countries (6,7).

Viruses such as respiratory syncytial virus, parainfluenza virus, measles, and influenza also are a major cause of pneumonia. Access to vaccines, antivirals and supportive health-care measures reduces the burden of infections from these viruses.

To raise awareness of the effects of pneumonia globally, the first World Pneumonia Day, November 2, 2009, is being promoted by a coalition of 40 major health, humanitarian relief, advocacy, faith-based, government, and other organizations; CDC and UNICEF are providing technical assistance. Events are scheduled at CDC and elsewhere in the United States, and in other countries. Additional information is available at <http://worldpneumoniaday.org>.

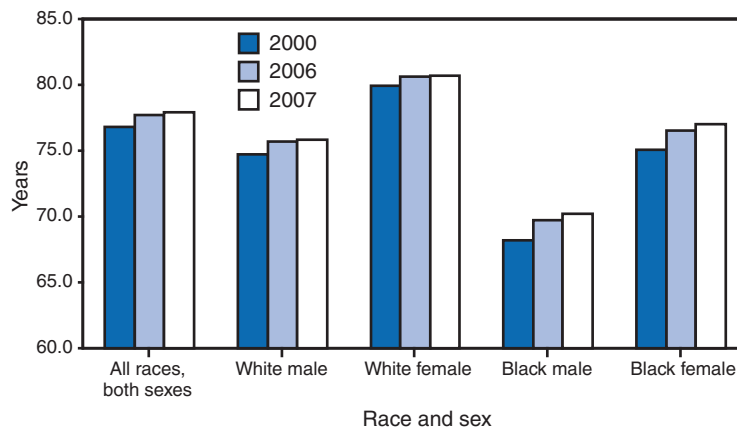
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QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Average Life Expectancy at Birth, by Race and Sex — United States, 2000, 2006, and 2007*



* Data for 2007 are preliminary.

In 2007, the average life expectancy at birth for persons born in the United States was 77.9 years, an increase of 1.1 years from 2000 and an increase of 0.2 years from 2006. For black males and females, life expectancy increased by approximately 2 years from 2000 to 2007 and 0.5 years from 2006 to 2007. For white males and females, increases in life expectancy were smaller. Although the gap in life expectancy between white and black populations is narrowing, life expectancy for white males in 2007 (75.8 years) was 5.6 years greater than for black males (70.2) and 3.7 years greater for white females (80.7) than black females (77.0).

SOURCE: Xu JQ, Kochanek KD, Tejada-Vera B. Deaths: preliminary data for 2007. Natl Vital Stat Rep 2009;58(1). Hyattsville, MD: US Department of Health and Human Services, CDC; 2009. Available at http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_01.pdf.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending October 24, 2009 (42nd week)*

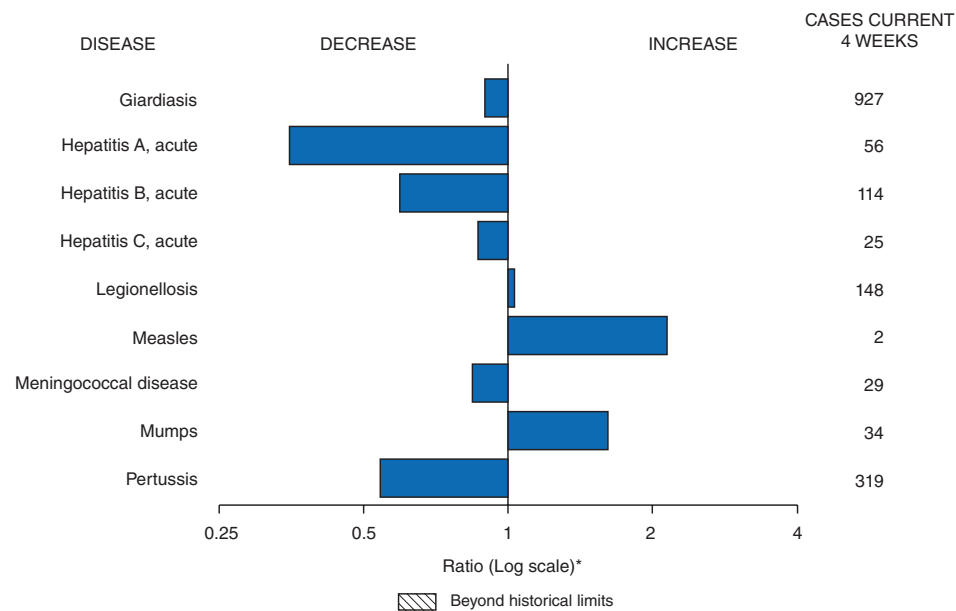
Disease	Current week	Cum 2009	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2008	2007	2006	2005	2004	
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	—	12	1	17	32	20	19	16	
infant	—	41	2	109	85	97	85	87	
other (wound and unspecified)	1	18	1	19	27	48	31	30	CA (1)
Brucellosis	—	80	2	80	131	121	120	114	
Chancroid	1	21	1	25	23	33	17	30	VA (1)
Cholera	—	8	0	5	7	9	8	6	
Cyclosporiasis§	—	112	1	139	93	137	543	160	
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup	—	29	2	62	55	67	80	112	
eastern equine	—	4	0	4	4	8	21	6	
Powassan	—	1	0	2	7	1	1	1	
St. Louis	—	8	0	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
<i>Ehrlichia chaffeensis</i>	1	643	13	1,137	828	578	506	338	GA (1)
<i>Ehrlichia ewingii</i>	—	6	0	9	—	—	—	—	
<i>Anaplasma phagocytophilum</i>	4	515	16	1,026	834	646	786	537	NY (3), OH (1)
undetermined	—	102	3	180	337	231	112	59	
<i>Haemophilus influenzae</i> ††									
invasive disease (age <5 yrs):									
serotype b	—	22	1	30	22	29	9	19	
nonserotype b	1	154	3	244	199	175	135	135	FL (1)
unknown serotype	1	183	2	163	180	179	217	177	NY (1)
Hansen disease§	1	50	2	80	101	66	87	105	FL (1)
Hantavirus pulmonary syndrome§	—	10	0	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal§	4	164	6	330	292	288	221	200	CT (1), NY (1), MN (2)
Hepatitis C viral, acute	8	1,588	15	878	845	766	652	720	ME (1), NY (2), MI (1), OR (1), CA (3)
HIV infection, pediatric (age <13 years)§§	—	—	3	—	—	—	380	436	
Influenza-associated pediatric mortality§,¶¶	22	192	0	90	77	43	45	—	WI (1), SD (1), GA (1), FL (1), TN (2), TX (9), MT (1), AZ (3), WA (1), OH (1), GU (1)
Listeriosis	7	597	20	759	808	884	896	753	NY (4), PA (1), WV (1), GA (1)
Measles***	—	59	0	140	43	55	66	37	
Meningococcal disease, invasive†††:									
A, C, Y, and W-135	1	205	4	330	325	318	297	—	OK (1)
serogroup B	—	110	2	188	167	193	156	—	
other serogroup	—	23	1	38	35	32	27	—	
unknown serogroup	6	357	10	616	550	651	765	—	AR (2), ID (1), OR (1), CA (2)
Mumps	13	358	13	454	800	6,584	314	258	NY (12), MI (1)
Novel influenza A virus infections	—	§§§	—	2	4	N	N	N	
Plague	—	7	0	3	7	17	8	3	
Poliomyelitis, paralytic	—	—	—	—	—	—	1	—	
Polio virus infection, nonparalytic§	—	—	—	—	—	N	N	N	
Psittacosis§	—	7	0	8	12	21	16	12	
Q fever total§,¶¶¶:									
acute	2	69	2	124	171	169	136	70	
chronic	—	58	1	110	—	—	—	—	MD (1), CA (1)
Rabies, human	—	11	0	14	—	—	—	—	
Rubella, human	—	1	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§	—	113	2	157	132	125	129	132	
Syphilis, congenital (age <1 yr)	—	176	8	434	430	349	329	353	
Tetanus	1	9	1	19	28	41	27	34	PA (1)
Toxic-shock syndrome (staphylococcal)§	—	64	2	71	92	101	90	95	
Trichinellosis	—	13	0	39	5	15	16	5	
Tularemia	—	67	2	123	137	95	154	134	
Typhoid fever	3	287	7	449	434	353	324	322	NC (1), CA (2)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	—	61	1	63	37	6	2	—	
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	0	—	2	1	3	1	
Vibriosis (noncholera <i>Vibrio</i> species infections)§	14	478	8	492	549	N	N	N	MD (3), VA (1), GA (1), FL (2), WA (2), CA (5)
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 October 24, 2009 (42nd 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. Seventy four influenza-associated pediatric deaths occurring during the 2009–10 influenza season beginning August 30, 2009 have been reported. One hundred and seventeen influenza-associated pediatric death occurring during the 2008–09 influenza season have been reported.
 *** No measles cases were reported for the current week.
 ††† Data for meningococcal disease (all serogroups) are available in Table II.
 §§§ CDC discontinued reporting of individual confirmed and probable cases of 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 October 24, 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.

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TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 24, 2009, and October 18, 2008 (42nd week)*

Reporting area	Hepatitis (viral, acute), by type†										Legionellosis				
	A				B										
	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	14	35	89	1,489	2,154	34	64	197	2,474	3,067	47	51	148	2,468	2,556
New England	—	2	5	82	115	—	1	4	32	66	1	3	16	141	181
Connecticut	—	0	2	18	26	—	0	3	11	25	1	1	5	48	36
Maine§	—	0	2	1	11	—	0	2	10	10	—	0	3	7	9
Massachusetts	—	1	4	47	53	—	0	2	8	19	—	1	9	59	76
New Hampshire	—	0	1	7	11	—	0	2	3	6	—	0	2	9	24
Rhode Island§	—	0	1	7	12	—	0	0	—	4	—	0	12	11	31
Vermont§	—	0	1	2	2	—	0	1	—	2	—	0	1	7	5
Mid. Atlantic	2	5	11	206	265	2	5	17	247	355	13	15	68	933	868
New Jersey	—	1	5	44	68	—	1	6	61	98	—	2	13	141	123
New York (Upstate)	1	1	3	41	55	1	1	11	46	54	11	5	29	303	280
New York City	—	2	5	63	90	—	1	4	50	81	—	2	20	175	118
Pennsylvania	1	1	6	58	52	1	2	8	90	122	2	6	25	314	347
E.N. Central	1	5	18	208	289	1	7	21	301	422	9	9	34	476	564
Illinois	—	1	12	93	98	—	1	6	54	158	—	1	10	77	98
Indiana	—	0	4	13	19	—	1	18	50	34	—	1	5	29	44
Michigan	1	1	5	55	104	1	2	8	100	117	1	2	12	120	150
Ohio	—	1	3	34	39	—	1	13	71	99	8	4	17	245	238
Wisconsin	—	0	4	13	29	—	0	4	26	14	—	0	1	5	34
W.N. Central	1	2	16	102	227	—	3	16	136	67	—	2	7	79	119
Iowa	—	0	3	30	105	—	0	3	26	19	—	0	2	18	17
Kansas	—	0	1	7	14	—	0	2	5	6	—	0	1	3	2
Minnesota	—	0	12	15	36	—	0	11	23	8	—	0	3	8	16
Missouri	1	0	3	28	28	—	1	5	62	27	—	1	4	37	63
Nebraska§	—	0	3	19	40	—	0	2	18	6	—	0	2	11	19
North Dakota	—	0	2	—	—	—	0	1	—	1	—	0	3	1	—
South Dakota	—	0	1	3	4	—	0	1	2	—	—	0	1	1	2
S. Atlantic	7	7	14	339	335	14	16	32	733	761	17	10	18	426	401
Delaware	—	0	1	3	6	U	0	1	U	U	—	0	5	15	11
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	8	15
Florida	3	4	9	154	123	4	6	11	238	267	9	3	10	147	115
Georgia	—	1	3	47	48	1	3	9	119	147	2	1	5	43	33
Maryland§	3	0	4	36	38	1	1	5	59	68	4	2	10	110	116
North Carolina	—	0	3	25	58	4	1	19	148	71	—	0	6	39	29
South Carolina§	1	1	4	44	15	—	1	4	41	57	—	0	1	8	10
Virginia§	—	1	2	27	42	2	2	10	72	83	2	1	5	49	47
West Virginia	—	0	1	3	5	2	0	19	56	68	—	0	2	7	25
E.S. Central	—	1	4	36	69	1	7	11	256	320	3	2	12	109	98
Alabama§	—	0	2	9	11	—	2	7	72	88	—	0	2	12	14
Kentucky	—	0	1	8	26	—	2	7	66	76	1	1	3	43	46
Mississippi	—	0	2	11	4	—	1	2	24	39	—	0	1	3	1
Tennessee§	—	0	2	8	28	1	2	6	94	117	2	1	9	51	37
W.S. Central	1	3	43	107	199	4	10	99	391	588	—	1	21	52	72
Arkansas§	1	0	1	8	6	—	1	5	43	54	—	0	1	5	13
Louisiana	—	0	1	3	11	—	1	4	33	77	—	0	2	4	9
Oklahoma	—	0	6	3	7	1	2	17	80	87	—	0	6	3	3
Texas§	—	3	37	93	175	3	6	76	235	370	—	1	19	40	47
Mountain	2	3	8	135	183	—	3	6	108	172	—	2	8	99	73
Arizona	1	2	6	64	90	—	1	3	38	66	—	1	4	38	16
Colorado	1	0	5	41	34	—	0	2	20	28	—	0	2	11	11
Idaho§	—	0	1	3	17	—	0	2	9	7	—	0	1	4	3
Montana§	—	0	1	6	1	—	0	0	—	2	—	0	2	5	4
Nevada§	—	0	2	9	11	—	0	3	27	41	—	0	2	11	9
New Mexico§	—	0	1	6	15	—	0	2	5	10	—	0	2	7	9
Utah	—	0	1	4	12	—	0	1	5	13	—	0	4	19	21
Wyoming§	—	0	1	2	3	—	0	2	4	5	—	0	2	4	—
Pacific	—	7	17	274	472	12	6	36	270	316	4	3	12	153	180
Alaska	—	0	1	3	4	—	0	1	2	10	—	0	1	1	1
California	—	5	16	218	386	9	4	28	197	221	3	3	9	119	139
Hawaii	—	0	1	5	16	—	0	1	4	7	—	0	1	1	8
Oregon§	—	0	2	15	24	—	0	4	32	38	—	0	2	12	16
Washington	—	1	4	33	42	3	0	8	35	40	1	0	4	20	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	22	—	0	5	17	46	—	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 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 October 24, 2009, and October 18, 2008 (42nd week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All groups				
	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	218	448	1,816	24,789	28,172	9	23	44	953	1,001	7	16	48	695	961
New England	38	73	416	4,973	10,333	—	1	5	38	47	—	0	4	26	27
Connecticut	—	0	64	—	3,538	—	0	4	5	10	—	0	1	2	1
Maine§	36	10	76	775	649	—	0	1	2	1	—	0	1	4	5
Massachusetts	—	26	282	2,789	4,229	—	0	3	22	27	—	0	3	12	16
New Hampshire	—	11	82	898	1,453	—	0	1	3	3	—	0	1	3	4
Rhode Island§	—	1	78	187	120	—	0	1	4	2	—	0	1	4	1
Vermont§	2	4	38	324	344	—	0	1	2	4	—	0	1	1	—
Mid. Atlantic	152	249	1,401	14,342	11,210	1	6	13	237	277	—	2	6	74	105
New Jersey	—	36	322	3,536	3,139	—	0	1	1	62	—	0	2	8	14
New York (Upstate)	75	84	1,368	3,569	3,973	1	1	10	41	28	—	0	2	18	25
New York City	—	3	23	168	706	—	3	11	151	153	—	0	2	13	23
Pennsylvania	77	54	627	7,069	3,392	—	1	4	44	34	—	1	4	35	43
E.N. Central	1	17	203	1,940	2,141	—	3	10	126	131	—	3	9	117	170
Illinois	—	1	11	115	101	—	1	4	51	67	—	1	6	30	65
Indiana	—	1	6	53	38	—	0	3	15	5	—	0	3	28	23
Michigan	—	1	10	96	76	—	0	3	23	14	—	0	5	18	30
Ohio	1	0	5	48	41	—	1	6	31	27	—	1	3	34	33
Wisconsin	—	14	186	1,628	1,885	—	0	1	6	18	—	0	2	7	19
W.N. Central	3	4	336	198	723	—	1	8	55	62	—	1	9	57	83
Iowa	—	1	14	82	103	—	0	1	10	10	—	0	1	7	18
Kansas	—	0	2	14	15	—	0	1	4	9	—	0	2	8	5
Minnesota	3	0	326	75	586	—	0	8	23	22	—	0	4	11	22
Missouri	—	0	2	10	6	—	0	2	11	13	—	0	3	21	23
Nebraska§	—	0	3	16	10	—	0	1	6	8	—	0	1	7	11
North Dakota	—	0	10	—	—	—	0	0	—	—	—	0	3	1	2
South Dakota	—	0	1	1	3	—	0	1	1	—	—	0	1	2	2
S. Atlantic	24	63	220	3,077	3,479	3	6	17	281	245	—	2	9	126	138
Delaware	—	12	64	818	678	—	0	1	4	2	—	0	1	3	2
District of Columbia	—	0	5	19	62	—	0	2	5	3	—	0	0	—	—
Florida	3	1	9	85	68	2	2	7	82	48	—	1	4	46	46
Georgia	—	0	6	45	34	—	1	5	60	50	—	0	2	25	16
Maryland§	13	27	122	1,460	1,801	—	1	5	58	66	—	0	1	8	16
North Carolina	—	1	14	56	29	—	0	5	21	24	—	0	5	18	12
South Carolina§	—	0	3	28	23	—	0	1	3	9	—	0	1	11	20
Virginia§	7	11	61	432	668	1	1	5	46	41	—	0	1	10	21
West Virginia	1	0	33	134	116	—	0	1	2	2	—	0	2	5	5
E.S. Central	—	0	2	26	41	1	0	3	27	17	—	0	3	24	44
Alabama§	—	0	1	2	9	—	0	3	7	4	—	0	1	7	8
Kentucky	—	0	1	1	5	—	0	2	9	4	—	0	1	4	7
Mississippi	—	0	0	—	1	—	0	1	1	1	—	0	1	2	10
Tennessee§	—	0	2	23	26	1	0	3	10	8	—	0	1	11	19
W.S. Central	—	1	21	40	95	—	1	10	42	68	3	1	12	67	99
Arkansas§	—	0	0	—	—	—	0	1	4	—	2	0	2	8	13
Louisiana	—	0	0	—	3	—	0	1	3	3	—	0	3	11	21
Oklahoma	—	0	2	—	—	—	0	2	2	2	1	0	3	11	12
Texas§	—	1	21	40	92	—	1	9	33	63	—	1	9	37	53
Mountain	—	1	13	46	47	1	0	5	26	31	1	1	4	54	53
Arizona	—	0	2	4	8	1	0	2	8	14	—	0	2	13	8
Colorado	—	0	1	6	3	—	0	3	8	4	—	0	2	18	11
Idaho§	—	0	2	11	9	—	0	1	1	2	1	0	1	7	5
Montana§	—	0	13	3	4	—	0	3	5	—	—	0	2	4	4
Nevada§	—	0	2	12	11	—	0	1	—	4	—	0	2	4	7
New Mexico§	—	0	1	4	8	—	0	0	—	3	—	0	1	3	8
Utah	—	0	1	4	2	—	0	2	4	4	—	0	1	1	8
Wyoming§	—	0	1	2	2	—	0	0	—	—	—	0	2	4	2
Pacific	—	3	13	147	103	3	3	10	121	123	3	3	14	150	242
Alaska	—	0	1	2	6	—	0	1	2	5	—	0	2	6	6
California	—	2	10	120	59	2	2	8	89	89	2	2	8	100	177
Hawaii	N	0	0	N	N	—	0	1	1	3	—	0	1	4	5
Oregon§	—	0	3	15	29	—	0	2	11	4	1	0	6	27	30
Washington	—	0	12	10	9	1	0	3	18	22	—	0	6	13	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	2	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 October 24, 2009, and October 18, 2008 (42nd 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	67	281	1,697	11,176	7,903	17	61	139	2,957	3,575	7	28	179	1,225	1,977
New England	—	13	27	511	829	4	6	24	287	345	—	0	2	9	4
Connecticut	—	0	4	31	47	—	2	22	126	169	—	0	0	—	—
Maine†	—	1	10	72	31	1	1	4	46	47	—	0	2	4	1
Massachusetts	—	8	19	307	646	—	0	0	—	—	—	0	1	4	1
New Hampshire	—	1	7	65	26	1	0	7	26	37	—	0	0	—	1
Rhode Island†	—	0	7	26	68	—	1	6	42	31	—	0	2	—	1
Vermont†	—	0	1	10	11	2	1	4	47	61	—	0	1	1	—
Mid. Atlantic	6	23	64	918	902	4	13	23	500	782	—	1	29	61	114
New Jersey	—	4	12	150	179	—	0	0	—	—	—	0	2	—	77
New York (Upstate)	3	5	41	185	350	4	8	22	380	425	—	0	29	12	14
New York City	—	0	21	73	58	—	0	2	2	16	—	0	4	27	11
Pennsylvania	3	13	33	510	315	—	2	17	118	341	—	0	2	22	12
E.N. Central	23	63	238	2,448	1,296	—	2	19	212	240	—	1	6	79	140
Illinois	—	14	45	504	297	—	1	9	84	99	—	1	6	46	103
Indiana	1	6	158	248	69	—	0	6	21	9	—	0	3	12	6
Michigan	4	11	36	648	220	—	1	6	62	73	—	0	2	5	3
Ohio	18	22	57	929	577	—	0	5	45	59	—	0	4	16	28
Wisconsin	—	3	12	119	133	N	0	0	N	N	—	0	0	—	—
W.N. Central	6	35	872	1,431	757	4	5	17	234	271	1	4	26	297	415
Iowa	—	5	14	161	143	—	0	3	24	25	—	0	2	5	8
Kansas	—	4	9	142	58	—	1	6	60	57	—	0	1	2	—
Minnesota	—	0	808	165	194	4	0	11	56	53	—	0	1	2	—
Missouri	4	20	51	791	232	—	1	5	63	59	1	3	25	276	386
Nebraska†	2	4	32	128	82	—	0	1	—	32	—	0	2	12	18
North Dakota	—	0	24	17	1	—	0	9	4	24	—	0	1	—	—
South Dakota	—	0	7	27	47	—	0	4	27	21	—	0	0	—	3
S. Atlantic	16	31	71	1,367	768	1	24	111	1,295	1,421	—	10	40	405	730
Delaware	—	0	2	12	15	—	0	0	—	—	—	0	3	16	31
District of Columbia	—	0	2	2	4	—	0	0	—	—	—	0	0	—	6
Florida	6	10	32	475	235	—	0	95	138	138	—	0	2	6	13
Georgia	—	3	11	163	79	—	0	72	334	329	—	0	7	42	76
Maryland†	2	2	8	98	121	—	7	15	328	365	—	1	3	30	74
North Carolina	3	0	65	223	79	N	2	4	N	N	—	5	36	240	343
South Carolina†	3	4	18	210	98	—	0	0	—	—	—	0	5	18	50
Virginia†	2	3	24	157	127	—	10	23	399	518	—	1	8	49	129
West Virginia	—	0	5	27	10	1	2	6	96	71	—	0	1	4	8
E.S. Central	—	15	33	637	278	—	1	7	77	162	1	4	16	230	300
Alabama†	—	4	19	252	39	—	0	0	—	—	—	1	7	56	79
Kentucky	—	6	15	190	79	—	1	4	43	41	—	0	1	1	1
Mississippi	—	1	4	47	86	—	0	1	—	6	—	0	1	7	10
Tennessee†	—	3	14	148	74	—	0	4	34	115	1	3	14	166	210
W.S. Central	15	61	389	2,415	1,269	—	0	13	64	82	5	1	161	122	232
Arkansas†	3	5	38	225	85	—	0	10	33	44	5	0	61	58	44
Louisiana	—	2	8	90	71	—	0	0	—	—	—	0	1	2	6
Oklahoma	—	0	45	42	32	—	0	13	30	36	—	0	98	49	142
Texas†	12	52	304	2,058	1,081	—	0	1	1	2	—	0	6	13	40
Mountain	—	18	32	733	703	—	2	6	80	95	—	0	3	21	39
Arizona	—	3	10	170	198	N	0	0	N	N	—	0	2	5	12
Colorado	—	5	12	207	127	—	0	0	—	—	—	0	1	1	1
Idaho†	—	1	5	65	26	—	0	0	—	11	—	0	1	1	1
Montana†	—	0	6	45	77	—	0	4	25	12	—	0	2	8	3
Nevada†	—	0	6	23	26	—	0	1	6	11	—	0	1	1	3
New Mexico†	—	1	10	49	51	—	0	2	19	26	—	0	1	1	4
Utah	—	4	19	154	181	—	0	1	9	14	—	0	1	1	5
Wyoming†	—	0	5	20	17	—	0	4	21	21	—	0	1	3	10
Pacific	1	20	67	716	1,101	4	5	12	208	177	—	0	1	1	3
Alaska	—	1	21	36	181	—	0	2	11	13	N	0	0	N	N
California	—	5	19	207	442	4	4	12	182	152	—	0	1	1	—
Hawaii	—	0	3	24	11	—	0	0	—	—	N	0	0	N	N
Oregon†	—	3	17	215	152	—	0	3	15	12	—	0	0	—	3
Washington	1	6	58	234	315	—	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	—	2	1	3	35	53	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 October 24, 2009, and October 18, 2008 (42nd week)*

Reporting area	Streptococcal diseases, invasive, group A				<i>Streptococcus pneumoniae</i> , invasive disease, nondrug resistant† Age <5 years					
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max		
United States	35	102	239	4,232	4,523	21	36	122	1,357	1,430
New England	1	5	28	248	322	—	1	12	50	72
Connecticut	—	0	21	63	91	—	0	11	—	—
Maine§	—	0	2	15	23	—	0	1	5	1
Massachusetts	—	2	10	107	150	—	1	4	30	50
New Hampshire	—	0	4	34	22	—	0	2	10	11
Rhode Island§	—	0	2	11	23	—	0	1	1	10
Vermont§	1	0	3	18	13	—	0	1	4	—
Mid. Atlantic	4	20	43	854	898	4	4	33	197	180
New Jersey	—	3	7	118	161	—	1	4	37	55
New York (Upstate)	2	7	25	279	283	4	2	17	94	82
New York City	—	4	12	162	164	—	0	31	66	43
Pennsylvania	2	6	18	295	290	N	0	2	N	N
E.N. Central	1	17	42	769	849	2	6	18	207	263
Illinois	—	5	12	213	223	—	0	5	23	77
Indiana	—	2	23	123	115	—	0	13	31	29
Michigan	—	3	11	123	155	—	1	5	52	62
Ohio	1	4	13	191	232	2	1	6	61	50
Wisconsin	—	2	11	119	124	—	1	3	40	45
W.N. Central	13	6	37	347	332	3	2	11	123	84
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	5	37	35	N	0	1	N	N
Minnesota	10	0	34	162	154	2	0	10	72	28
Missouri	—	1	8	73	80	—	0	4	30	33
Nebraska§	—	1	3	39	34	1	0	1	11	7
North Dakota	3	0	4	15	8	—	0	3	4	8
South Dakota	—	0	3	21	21	—	0	2	6	8
S. Atlantic	7	22	49	971	944	3	6	18	250	278
Delaware	—	0	1	10	7	—	0	0	—	—
District of Columbia	—	0	3	12	13	N	0	0	N	N
Florida	4	6	12	236	214	2	1	6	57	54
Georgia	2	5	13	235	212	—	2	6	63	77
Maryland§	1	3	12	163	162	—	1	7	63	48
North Carolina	—	1	12	84	125	N	0	0	N	N
South Carolina§	—	1	5	61	61	1	1	6	37	51
Virginia§	—	3	9	136	115	—	0	4	18	39
West Virginia	—	1	4	34	35	—	0	3	12	9
E.S. Central	—	3	10	159	160	—	2	7	77	72
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	5	32	34	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	16	9
Tennessee§	—	3	9	127	126	—	1	6	61	63
W.S. Central	4	9	79	373	410	8	5	46	240	224
Arkansas§	—	0	2	15	10	—	0	4	22	12
Louisiana	—	0	3	11	17	—	0	3	13	11
Oklahoma	2	3	20	120	91	2	1	7	52	57
Texas§	2	5	59	227	292	6	3	34	153	144
Mountain	5	10	22	373	476	1	4	16	184	214
Arizona	1	3	7	127	168	1	2	10	96	95
Colorado	3	3	7	117	120	—	1	4	36	50
Idaho§	—	0	2	8	14	—	0	2	7	4
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	5	11	—	0	1	—	3
New Mexico§	1	2	7	68	111	—	0	4	17	30
Utah	—	1	6	47	46	—	0	5	28	30
Wyoming§	—	0	1	1	6	—	0	0	—	2
Pacific	—	3	9	138	132	—	0	4	29	43
Alaska	—	1	4	30	31	—	0	3	22	26
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	3	8	108	101	—	0	2	7	17
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 (NNDS 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 October 24, 2009, and October 18, 2008 (42nd week)*

Reporting area	<i>Streptococcus pneumoniae</i> , invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages				Aged <5 years										
	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	36	60	276	2,223	2,455	6	8	21	347	393	83	264	452	10,458	10,414
New England	—	1	48	46	57	—	0	5	3	9	7	5	15	258	258
Connecticut	—	0	48	—	7	—	0	5	—	—	3	1	5	48	25
Maine§	—	0	2	14	15	—	0	1	1	1	—	0	1	2	10
Massachusetts	—	0	1	3	—	—	0	1	2	—	4	4	10	183	183
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	13	17
Rhode Island§	—	0	6	13	21	—	0	1	—	6	—	0	5	12	15
Vermont§	—	0	2	11	14	—	0	0	—	2	—	0	2	—	8
Mid. Atlantic	2	3	14	140	256	—	0	3	20	21	38	35	51	1,500	1,357
New Jersey	—	0	0	—	—	—	0	0	—	—	8	3	13	180	178
New York (Upstate)	2	1	10	64	55	—	0	2	10	6	2	2	8	97	109
New York City	—	0	4	4	105	—	0	2	—	1	21	22	40	928	856
Pennsylvania	—	1	8	72	96	—	0	2	10	14	7	7	13	295	214
E.N. Central	6	11	41	501	506	—	1	7	70	69	7	23	43	877	1,013
Illinois	N	0	0	N	N	N	0	0	N	N	—	7	29	275	419
Indiana	—	3	32	174	170	—	0	6	25	22	—	2	10	126	111
Michigan	—	0	2	22	18	—	0	1	2	2	5	3	18	200	157
Ohio	6	7	18	305	318	—	1	4	43	45	2	6	18	246	277
Wisconsin	—	0	0	—	—	—	0	0	—	—	—	1	4	30	49
W.N. Central	—	2	161	98	169	—	0	3	20	34	—	6	11	237	341
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	18	15
Kansas	—	1	5	38	62	—	0	2	13	4	—	0	3	26	25
Minnesota	—	0	156	—	25	—	0	3	—	25	—	1	6	40	90
Missouri	—	1	5	46	74	—	0	1	5	2	—	3	7	133	198
Nebraska§	—	0	1	2	—	—	0	0	—	—	—	0	3	16	13
North Dakota	—	0	3	10	2	—	0	0	—	—	—	0	1	3	—
South Dakota	—	0	2	2	6	—	0	2	2	3	—	0	1	1	—
S. Atlantic	23	26	53	1,063	1,022	4	4	14	168	184	17	64	262	2,623	2,279
Delaware	—	0	2	18	3	—	0	2	3	—	—	0	3	25	13
District of Columbia	N	0	0	N	N	N	0	0	N	N	1	3	8	144	113
Florida	16	15	36	629	573	2	2	13	103	112	3	19	32	799	841
Georgia	5	8	25	322	354	2	1	5	55	62	—	14	227	616	538
Maryland§	—	0	1	4	4	—	0	0	—	1	1	6	16	252	269
North Carolina	N	0	0	N	N	N	0	0	N	N	12	9	21	436	226
South Carolina§	—	0	0	—	—	—	0	0	—	—	—	2	6	92	68
Virginia§	N	0	0	N	N	N	0	0	N	N	—	7	15	255	202
West Virginia	2	2	13	90	88	—	0	3	7	9	—	0	2	4	9
E.S. Central	4	4	25	208	262	1	0	3	31	50	12	23	36	937	886
Alabama§	N	0	0	N	N	N	0	0	N	N	3	8	18	355	359
Kentucky	3	1	5	61	64	1	0	2	8	11	4	1	10	54	68
Mississippi	—	0	3	4	32	—	0	1	3	10	—	5	18	184	128
Tennessee§	1	2	23	143	166	—	0	3	20	29	5	8	15	344	331
W.S. Central	—	2	6	77	79	—	0	3	15	12	—	47	80	1,886	1,811
Arkansas§	—	1	5	45	13	—	0	3	10	3	—	5	35	201	135
Louisiana	—	1	5	32	66	—	0	1	5	9	—	7	40	304	531
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	7	53	58
Texas§	—	0	0	—	—	—	0	0	—	—	—	32	51	1,328	1,087
Mountain	1	2	7	87	102	1	0	3	18	12	2	9	18	343	504
Arizona	—	0	0	—	—	—	0	0	—	—	—	4	9	145	261
Colorado	—	0	0	—	—	—	0	0	—	—	1	1	4	68	119
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	2	3	4
Montana§	—	0	1	—	—	—	0	0	—	—	—	0	7	—	—
Nevada§	—	1	4	34	49	—	0	2	7	5	—	1	10	83	66
New Mexico§	—	0	0	—	—	—	0	0	—	—	1	1	5	41	33
Utah	—	1	6	43	52	—	0	3	9	7	—	0	2	—	18
Wyoming§	1	0	2	10	1	1	0	1	2	—	—	0	1	3	3
Pacific	—	0	1	3	2	—	0	1	2	2	—	45	68	1,797	1,965
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	1
California	N	0	0	N	N	N	0	0	N	N	—	40	61	1,626	1,778
Hawaii	—	0	1	3	2	—	0	1	2	2	—	1	3	25	17
Oregon§	N	0	0	N	N	N	0	0	N	N	—	0	4	32	17
Washington	N	0	0	N	N	N	0	0	N	N	—	2	7	114	152
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	—	—	11	3	17	184	123
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.

U: Unavailable. —: No reported cases. N: Not reportable. 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 October 24, 2009, and October 18, 2008 (42nd week)*

Reporting area	West Nile virus disease†														
	Varicella (chickenpox)					Neuroinvasive					Nonneuroinvasive§				
	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	119	440	1,035	14,279	23,796	—	1	41	314	671	—	0	39	257	660
New England	12	8	46	283	1,365	—	0	0	—	7	—	0	0	—	3
Connecticut	—	0	21	—	704	—	0	0	—	5	—	0	0	—	3
Maine¶	12	0	12	69	212	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	2	2	—	—	0	0	—	1	—	0	0	—	—
New Hampshire	—	4	11	165	210	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	1	4	—	—	0	0	—	1	—	0	0	—	—
Vermont¶	—	1	17	43	239	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	23	36	57	1,276	1,933	—	0	2	8	48	—	0	1	2	20
New Jersey	N	0	0	N	N	—	0	1	2	4	—	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	23	36	57	1,276	1,933	—	0	1	1	12	—	0	1	1	2
E.N. Central	47	155	254	5,136	5,950	—	0	3	6	43	—	0	3	3	20
Illinois	—	33	73	1,258	1,025	—	0	2	4	12	—	0	0	—	8
Indiana	—	5	30	341	—	—	0	1	2	2	—	0	1	1	1
Michigan	14	45	90	1,487	2,415	—	0	0	—	11	—	0	0	—	6
Ohio	33	40	91	1,626	1,830	—	0	0	—	14	—	0	2	2	1
Wisconsin	—	10	55	424	680	—	0	0	—	4	—	0	0	—	4
W.N. Central	4	15	114	747	1,020	—	0	4	22	51	—	0	8	58	131
Iowa	N	0	0	N	N	—	0	0	—	3	—	0	1	5	3
Kansas	—	4	22	183	367	—	0	1	3	14	—	0	2	6	15
Minnesota	—	0	0	—	—	—	0	1	1	2	—	0	1	2	8
Missouri	4	9	51	507	609	—	0	1	2	12	—	0	0	—	3
Nebraska¶	N	0	0	N	N	—	0	2	10	7	—	0	6	31	39
North Dakota	—	0	108	57	—	—	0	0	—	2	—	0	1	1	35
South Dakota	—	0	4	—	44	—	0	3	6	11	—	0	2	13	28
S. Atlantic	19	43	146	1,641	3,942	—	0	3	9	20	—	0	1	2	20
Delaware	—	0	4	8	39	—	0	0	—	—	—	0	0	—	1
District of Columbia	—	0	3	9	21	—	0	0	—	4	—	0	0	—	4
Florida	14	27	67	1,029	1,336	—	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	1	8
North Carolina	N	0	0	N	N	—	0	0	—	2	—	0	0	—	1
South Carolina¶	—	0	54	154	739	—	0	2	3	—	—	0	0	—	1
Virginia¶	—	0	119	28	1,233	—	0	0	—	—	—	0	0	—	1
West Virginia	5	9	32	413	574	—	0	0	—	1	—	0	0	—	—
E.S. Central	—	10	28	376	971	—	0	5	36	48	—	0	4	23	57
Alabama¶	—	10	28	372	959	—	0	0	—	11	—	0	0	—	7
Kentucky	N	0	0	N	N	—	0	1	3	3	—	0	0	—	—
Mississippi	—	0	1	4	12	—	0	5	30	22	—	0	4	19	43
Tennessee¶	N	0	0	N	N	—	0	1	3	12	—	0	1	4	7
W.S. Central	—	95	747	3,655	6,780	—	0	15	94	66	—	0	5	27	61
Arkansas¶	—	2	30	115	623	—	0	1	4	7	—	0	0	—	2
Louisiana	—	1	7	76	66	—	0	2	7	16	—	0	4	6	31
Oklahoma	N	0	0	N	N	—	0	2	6	3	—	0	2	2	5
Texas¶	—	88	721	3,464	6,091	—	0	12	77	40	—	0	3	19	23
Mountain	14	30	83	1,080	1,724	—	0	9	65	99	—	0	15	85	183
Arizona	—	0	0	—	—	—	0	4	12	59	—	0	2	4	51
Colorado	14	12	44	444	693	—	0	7	32	17	—	0	14	59	54
Idaho¶	N	0	0	N	N	—	0	1	2	4	—	0	2	6	35
Montana¶	—	2	20	105	259	—	0	1	2	—	—	0	1	2	5
Nevada¶	N	0	0	N	N	—	0	2	7	8	—	0	1	5	7
New Mexico¶	—	2	20	134	187	—	0	2	6	5	—	0	1	2	3
Utah	—	12	32	397	575	—	0	0	—	6	—	0	0	—	20
Wyoming¶	—	0	1	—	10	—	0	1	4	—	—	0	2	7	8
Pacific	—	2	7	85	111	—	0	11	74	289	—	0	11	57	165
Alaska	—	1	6	52	54	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	7	50	284	—	0	6	40	151
Hawaii	—	1	4	33	57	—	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	4	23	2	—	0	3	11	1
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	1	1	—	62	—	0	0	—	—	—	0	0	—	—
Puerto Rico	2	8	26	390	491	—	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 October 24, 2009 (42nd week)

Reporting area	All causes, by age (years)						P&† Total	Reporting area	All causes, by age (years)						P&† Total
	All Ages	≥65	45–64	25–44	1–24	<1			All Ages	≥65	45–64	25–44	1–24	<1	
New England	532	363	111	27	14	17	51	S. Atlantic	1,028	638	271	78	27	14	73
Boston, MA	154	95	32	8	10	9	13	Atlanta, GA	U	U	U	U	U	U	U
Bridgeport, CT	27	22	4	—	—	1	4	Baltimore, MD	166	88	55	18	3	2	16
Cambridge, MA	20	14	5	1	—	—	1	Charlotte, NC	125	79	30	9	6	1	16
Fall River, MA	28	22	4	2	—	—	4	Jacksonville, FL	117	69	38	7	3	—	4
Hartford, CT	51	37	9	2	3	—	2	Miami, FL	122	91	17	10	4	—	9
Lowell, MA	10	8	2	—	—	—	2	Norfolk, VA	47	28	11	3	1	4	4
Lynn, MA	8	7	1	—	—	—	1	Richmond, VA	62	39	19	3	—	1	2
New Bedford, MA	24	19	3	1	1	—	1	Savannah, GA	53	36	12	2	1	2	3
New Haven, CT	23	13	9	—	—	1	1	St. Petersburg, FL	55	31	17	5	1	1	6
Providence, RI	64	45	12	4	—	3	4	Tampa, FL	135	85	36	11	3	—	9
Somerville, MA	3	—	2	1	—	—	—	Washington, D.C.	134	84	32	10	5	3	2
Springfield, MA	28	17	5	5	—	1	5	Wilmington, DE	12	8	4	—	—	—	2
Waterbury, CT	35	24	10	1	—	—	2	E.S. Central	889	566	216	57	19	30	76
Worcester, MA	57	40	13	2	—	2	11	Birmingham, AL	197	136	43	11	1	6	17
Mid. Atlantic	2,249	1,542	513	120	29	43	111	Chattanooga, TN	111	75	27	3	2	4	5
Albany, NY	53	39	9	3	1	1	3	Knoxville, TN	83	50	25	5	2	1	6
Allentown, PA	27	24	3	—	—	—	2	Lexington, KY	60	42	10	6	1	1	5
Buffalo, NY	65	45	13	3	2	2	2	Memphis, TN	189	115	46	14	6	8	17
Camden, NJ	36	21	11	—	1	3	—	Mobile, AL	51	28	11	5	2	5	3
Elizabeth, NJ	16	12	2	2	—	—	—	Montgomery, AL	56	40	12	3	1	—	7
Erie, PA	50	36	12	1	—	1	5	Nashville, TN	142	80	42	10	4	5	16
Jersey City, NJ	13	9	3	—	—	1	1	W.S. Central	1,178	706	327	87	32	26	61
New York City, NY	1,007	714	223	47	10	13	37	Austin, TX	87	47	32	4	2	2	10
Newark, NJ	50	20	16	8	3	3	3	Baton Rouge, LA	U	U	U	U	U	U	U
Paterson, NJ	5	3	2	—	—	—	—	Corpus Christi, TX	U	U	U	U	U	U	U
Philadelphia, PA	508	299	142	40	10	15	24	Dallas, TX	186	103	45	21	10	7	9
Pittsburgh, PA§	25	16	7	1	—	1	3	El Paso, TX	59	42	9	4	2	2	—
Reading, PA	30	25	3	1	1	—	2	Fort Worth, TX	U	U	U	U	U	U	U
Rochester, NY	137	107	25	5	—	—	12	Houston, TX	336	190	101	31	7	7	9
Schenectady, NY	16	13	3	—	—	—	1	Little Rock, AR	75	48	18	6	2	1	1
Scranton, PA	34	28	4	2	—	—	3	New Orleans, LA	U	U	U	U	U	U	U
Syracuse, NY	115	88	22	4	—	1	12	San Antonio, TX	224	138	67	9	7	3	18
Trenton, NJ	31	20	6	2	1	2	1	Shreveport, LA	82	53	20	5	1	3	5
Utica, NY	11	10	1	—	—	—	—	Tulsa, OK	129	85	35	7	1	1	9
Yonkers, NY	20	13	6	1	—	—	—	Mountain	1,132	719	253	107	30	22	87
E.N. Central	1,662	1,107	380	98	41	36	111	Albuquerque, NM	142	98	32	9	2	1	16
Akron, OH	37	23	6	—	2	6	4	Boise, ID	46	33	10	1	—	2	4
Canton, OH	52	35	12	4	—	1	6	Colorado Springs, CO	103	69	24	6	2	2	1
Chicago, IL	U	U	U	U	U	U	U	Denver, CO	82	48	20	10	3	1	10
Cincinnati, OH	85	51	18	9	2	5	5	Las Vegas, NV	284	167	66	34	12	5	20
Cleveland, OH	224	150	50	12	7	5	8	Ogden, UT	29	23	3	3	—	—	3
Columbus, OH	237	151	59	18	5	4	23	Phoenix, AZ	155	88	37	18	5	6	13
Dayton, OH	95	65	23	5	2	—	6	Pueblo, CO	31	24	6	1	—	—	7
Detroit, MI	137	76	43	11	5	2	9	Salt Lake City, UT	110	66	25	12	4	3	8
Evansville, IN	51	35	13	3	—	—	3	Tucson, AZ	150	103	30	13	2	2	5
Fort Wayne, IN	72	57	12	3	—	—	4	Pacific	1,644	1,084	404	100	30	26	162
Gary, IN	17	7	4	4	—	2	—	Berkeley, CA	12	10	1	—	—	—	1
Grand Rapids, MI	67	49	15	2	1	—	3	Fresno, CA	111	69	32	8	2	—	17
Indianapolis, IN	161	96	46	10	5	4	15	Glendale, CA	36	28	7	1	—	—	10
Lansing, MI	38	30	4	2	2	—	1	Honolulu, HI	47	33	10	2	1	1	6
Milwaukee, WI	95	60	21	4	4	6	9	Long Beach, CA	64	42	13	6	—	3	8
Peoria, IL	41	30	9	2	—	—	6	Los Angeles, CA	252	151	71	20	8	2	27
Rockford, IL	56	38	15	3	—	—	1	Pasadena, CA	19	16	1	1	—	1	3
South Bend, IN	51	39	7	2	3	—	2	Portland, OR	105	63	32	8	1	1	3
Toledo, OH	89	64	18	4	3	—	3	Sacramento, CA	221	142	59	11	5	4	22
Youngstown, OH	57	51	5	—	—	1	3	San Diego, CA	160	105	41	11	—	3	14
W.N. Central	589	385	135	38	15	14	43	San Francisco, CA	98	67	23	5	2	1	13
Des Moines, IA	—	—	—	—	—	—	—	San Jose, CA	193	136	39	9	3	6	11
Duluth, MN	26	23	2	1	—	—	3	Santa Cruz, CA	27	20	5	1	1	—	3
Kansas City, KS	26	16	6	3	—	1	1	Seattle, WA	108	76	19	8	3	2	10
Kansas City, MO	79	48	22	7	2	—	6	Spokane, WA	66	44	19	1	1	1	10
Lincoln, NE	36	28	7	—	—	1	4	Tacoma, WA	125	82	32	8	3	—	4
Minneapolis, MN	55	26	19	6	3	1	1	Total¶	10,903	7,110	2,610	712	237	228	775
Omaha, NE	85	60	11	8	3	3	9								
St. Louis, MO	96	51	26	8	5	4	4								
St. Paul, MN	63	43	15	3	1	1	9								
Wichita, KS	123	90	27	2	1	3	6								

U: Unavailable. —:No reported cases.

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

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

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