CDC

MMWR

Morbidity and Mortality Weekly Report

www.cdc.gov/mmwr

Weekly August 21, 2009 / Vol. 58 / No. 32

Alcohol Use Among High School Students — Georgia, 2007

Excessive alcohol consumption contributes to an average of approximately 4,700 deaths among underage youths in the United States each year (e.g., from homicides, motor-vehicle crashes, and suicides) and an average of 60 years of life lost per death (*1*). Although drinking by underaged persons (<21 years) is illegal in every state, youths aged 12–20 years drink nearly 20% of all the alcohol consumed in the United States (*2*). To characterize alcohol consumption by high school students in Georgia, the Georgia Division of Public Health analyzed data from the 2007 Georgia Youth Risk Behavior Survey (YRBS). This report summarizes the results of that survey, which indicated that 38% of Georgia high school students reported current alcohol use, and 19% reported binge drinking in the past 30 days. Among students who reported current alcohol use, 44% reported that the usual type of alcohol they consumed was liquor (e.g., bourbon, rum, scotch, vodka, or whiskey), 58% reported that their usual location of alcohol consumption was at another person's home, and 37% reported that their usual source of alcohol was someone giving it to them. These results underscore the need for further research in Georgia and other states on underage drinking behavior, motives, and access to alcohol, which could facilitate development of additional effective intervention strategies. Evidence-based interventions should be sustained and strengthened; these include enforcing the age 21 minimum legal drinking age; increasing alcohol excise taxes; limiting alcohol outlet density; and maintaining existing limits on the days when alcohol can be sold.

The Georgia YRBS is conducted in the spring of every odd-numbered year using a two-stage cluster sample design to produce data representative of the state's public school students in grades 9–12. Data from 2007 are the most recent data available. A total of 2,465 students from 46 Georgia high schools completed anonymous, self-administered questionnaires that included questions on health-risk behaviors, including alcohol consumption. Local parental permission procedures were followed before survey administration. The school response rate was 92%, the student response rate was 89%, and the overall response rate was 81%.* Data were weighted to produce estimates representative of the state's public school students in grades 9–12. Subgroup analyses were conducted only among subgroups with more than 50 students. Current alcohol use was defined as having had at least one drink of alcohol on at least 1 day during the 30 days before the survey. Binge drinking was defined as having had five or more drinks of alcohol in a row (i.e., within a couple of hours) on at least 1 day during the 30 days before the survey. Among students who reported current alcohol use, prevalence estimates for type of alcohol usually consumed,† source of alcohol usually consumed,§ and

* Overall response rate = (number of participating schools / number of eligible sampled schools) × (number of useable questionnaires / number of eligible students sampled).

† Determined by response to the question, "During the past 30 days, what type of alcohol did you usually drink?" The mutually exclusive response options were "liquor, such as vodka, rum, scotch, bourbon, or whiskey," "beer," "malt beverages, such as Smirnoff Ice®, Bacardi Silver®, or hard lemonade," "wine coolers, such as Bartles & Jaymes® or Seagrams®," "wine," "some other type," or "I do not have a usual type."

§ Determined by response to the question, "During the past 30 days, how did you usually get the alcohol you drank?" The mutually exclusive response options were "I bought it in a store such as a liquor store, convenience store, supermarket, discount store, or gas station," "I bought it at a restaurant, bar, or club," "I bought it at a public event such as a concert or sporting event," "I gave someone else money to buy it for me," "someone gave it to me," "I took it from a store or family member," or "I got it some other way."

INSIDE

usual location of alcohol consumption[¶] were calculated overall and by sex, grade, race/ethnicity and binge drinking status. Statistical testing for significant differences was performed via t-test using the SUDAAN diffvar statement. Not all statistically significant results are presented in this report.

Among all Georgia high school students, 37.7% reported current alcohol use (Table 1), and 19.0% reported binge drinking in the past 30 days. Liquor was the most prevalent type of alcohol usually consumed overall (43.7%) and across all subgroups (Table 2). Among those who reported current alcohol use, significantly more binge drinkers (54.0%) reported liquor as the type of alcohol usually consumed than did non-binge drinkers (31.9%) ($p<0.001$). Beer was the second most prevalent type of alcohol usually consumed by male students (24.3%), and malt beverages were the second most prevalent type of alcohol usually consumed by female students (24.1%). The prevalence of reporting malt beverage as the type of alcohol usually consumed was higher among non-Hispanic black students (29.3%) than non-Hispanic white students (13.8%) ($p=0.001$) or Hispanic students (13.5%) ($p=0.020$), and higher among non-binge drinking students (26.4%) than binge drinking students (11.8%) ($p<0.001$).

¶ Determined by response to the question, "During the past 30 days, where did you usually drink alcohol?" The mutually exclusive response options were "at my home," "at another person's home," "while riding in or driving a car," "at a restaurant, bar, or club," "at a public place such as a park, beach, or parking lot," "at a public event such as a concert or sporting event," or "on school property."

TABLE 1. Percentage of students in grades 9–12 who reported current alcohol use,* by sex, grade, and race/ethnicity — Youth Risk Behavior Survey, Georgia, 2007†

Characteristic	%	(95% CI§)
Total	**37.7**	**(34.7–40.9)**
Sex		
Male	38.5	(34.4–42.8)
Female	37.0	(33.6–40.5)
Grade		
9	32.3	(28.8–36.1)
10	35.4	(29.0–42.4)
11	38.8	(35.0–42.4)
12	47.7	(40.1–55.3)
Race/Ethnicity¶		
Black, non-Hispanic	29.2	(24.1–34.9)
Hispanic	37.1	(29.6–45.4)
White, non-Hispanic	44.6	(40.4–48.8)

* Determined by response to the question, "During the past 30 days, on how many days did you have at least one drink of alcohol?" Current alcohol use was defined as having had at least one drink of alcohol on at least 1 day during the 30 days before the survey.
† Based on a survey of 2,465 students.
§ Confidence interval.
¶ Race/ethnicity data are presented only for non-Hispanic black, Hispanic, and non-Hispanic white students; the numbers of students from other racial/ethnic groups were too small for meaningful analysis.

TABLE 2. Type of alcohol usually consumed* among students in grades 9–12 who reported current alcohol use,† by sex, grade, race/ethnicity, and binge drinking status — Youth Risk Behavior Survey, Georgia, 2007§

	Liquor		Beer		Malt beverages		Wine coolers		Wine		Some other type		No usual type	
Characteristic	%	(95% CI¶)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Total	**43.7**	**(39.9–47.7)**	**17.4**	**(14.6–20.6)**	**18.5**	**(15.4–22.0)**	**3.4**	**(2.3–5.2)**	**3.9**	**(2.6–5.8)**	**3.3**	**(2.4–4.7)**	**9.7**	**(7.7–12.2)**
Sex														
Male	45.0	(39.5–50.7)	24.3	(19.0–30.5)	13.0	(9.7–17.4)	1.7	(0.7–3.8)	3.7	(2.0–6.8)	1.9	(1.1–3.4)	10.3	(7.7–13.8)
Female	42.6	(36.9–48.4)	10.2	(7.2–14.2)	24.1	(19.9–28.9)	5.1	(3.1–8.2)	4.1	(2.3–7.1)	4.8	(2.9–7.9)	9.1	(6.5–12.6)
Grade														
9	40.9	(35.7–46.4)	14.7	(10.7–20.0)	22.3	(16.9–28.9)	6.2	(3.6–10.3)	3.1	(1.4–6.8)	3.9	(2.5–6.1)	8.9	(6.3–12.4)
10	43.3	(31.8–55.6)	14.4	(9.2–21.9)	18.0	(12.8–24.7)	3.1	(1.6–6.2)	4.5	(2.4–8.4)	5.5	(3.2–9.1)	11.2	(7.8–15.8)
11	43.1	(35.9–50.5)	18.2	(12.1–26.4)	16.5	(11.2–23.7)	3.4	(1.3–8.6)	5.1	(2.9–8.9)	2.3	(0.7–6.7)	11.5	(8.8–14.8)
12	46.4	(40.6–52.2)	22.8	(17.9–28.7)	17.3	(12.8–22.9)	0.9	(0.2–4.2)	3.0	(1.1–8.2)	1.8	(0.8–4.3)	7.8	(3.5–16.4)
Race/Ethnicity**														
Black, non-Hispanic	36.8	(29.9–44.2)	7.0	(4.2–11.6)	29.3	(22.9–36.7)	6.5	(3.6–11.5)	4.6	(2.8–7.6)	5.5	(3.5–8.7)	10.3	(7.1–14.6)
Hispanic	42.9	(34.6–51.7)	14.9	(7.1–28.5)	13.5	(5.3–30.2)	3.4	(0.9–11.6)	5.0	(1.1–19.0)	6.9	(2.2–20.0)	13.4	(6.1–26.7)
White, non-Hispanic	47.5	(42.4–52.6)	22.9	(19.1–27.2)	13.8	(10.3–18.1)	1.9	(1.1–3.4)	3.5	(1.9–6.2)	1.8	(0.6–4.8)	8.7	(6.2–12.0)
Binge drinking††														
Yes	54.0	(49.0–58.8)	19.6	(15.8–24.1)	11.8	(8.5–16.2)	1.5	(0.6–3.7)	1.6	(0.7–3.6)	2.7	(1.6–4.5)	8.9	(6.5–11.9)
No	31.9	(26.6–37.8)	14.7	(11.3–18.8)	26.4	(22.2–31.1)	5.7	(3.4–9.2)	6.6	(4.3–10.2)	4.1	(2.3–7.2)	10.5	(7.2–15.2)

* Determined by response to the question, "During the past 30 days, what type of alcohol did you usually drink?" The mutually exclusive response options were "liquor, such as vodka, rum, scotch, bourbon, or whiskey," "beer," "malt beverages, such as Smirnoff Ice®, Bacardi Silver®, or hard lemonade," "wine coolers, such as Bartles & Jaymes® or Seagrams®," "wine," "some other type," or "I do not have a usual type."

† Determined by response to the question, "During the past 30 days, on how many days did you have at least one drink of alcohol?" Current alcohol use was defined as having had at least one drink of alcohol on at least 1 day during the 30 days before the survey.

§ Based on a survey of 2,465 students.

¶ Confidence interval.

** Race/ethnicity data are presented only for non-Hispanic black, Hispanic, and non-Hispanic white students; the numbers of students from other racial/ethnic groups were too small for meaningful analysis.

†† Determined by response to the question, "During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?" Binge drinking was defined as having had five or more drinks of alcohol in a row on at least 1 day during the 30 days before the survey.

Among students who reported current alcohol use, the most prevalent usual location of alcohol consumption was at another person's home overall (57.6%) and across all subgroups (Table 3). The prevalence of reporting "at another person's home" as the usual location of alcohol consumption was higher among 12th-grade students (68.3%) than 9th-grade students (49.2%) ($p=0.006$), higher among non-Hispanic white students (62.7%) and Hispanic (61.1%) students than non-Hispanic black students (46.3%) ($p<0.001$ and $p=0.047$, respectively), and higher among binge drinking students (64.7%) than non-binge drinking students (49.5%) ($p<0.001$). The second most prevalent usual location of alcohol consumption was "at my home" (29.9%). The prevalence of reporting "at my home" as the usual location of alcohol consumption was higher among 9th-grade students (38.7%) than 12th-grade students (19.6%) ($p<0.001$), higher among non-Hispanic black students (38.6%) than non-Hispanic white students (26.5%) ($p=0.008$), and higher among non-binge drinking students (40.7%) than binge drinking students (20.6%) ($p<0.001$).

Among current drinkers, the most commonly reported source of alcohol was "someone gave it to me" (37.0%) followed by "I gave someone else money to buy it for me" (25.4%) and "I got it some other way" (19.9%) (Table 4). The prevalence of reporting "I someone gave it to me" was higher among female students (44.8%) than male students (29.1%) ($p<0.001$), and higher among non-binge drinking students (42.0%) than binge drinking students (32.5%) ($p=0.021$). The prevalence of reporting "I gave someone else money to buy it for me" was higher among 12th-grade students (34.0%) than 9th-grade students (16.5%) ($p<0.001$), higher among non-Hispanic white students (32.2%) than non-Hispanic black students (14.3%) ($p<0.001$), and higher among binge drinking students (35.5%) than non-binge drinking students (14.0%) ($p<0.001$).

Reported by: *D Kanny, PhD, J Horan, MD, Georgia Div of Public Health. PC Melstrom, PhD, EIS Officer, CDC.*

Editorial Note: The findings in this report indicate that, in 2007, a high proportion of the 38% of high school students in Georgia who were current drinkers usually consumed liquor rather than other alcoholic beverages, drank in their own or another person's home, and were provided alcohol by someone who gave it to them or purchased it for them. These

TABLE 3. Location where alcohol is usually consumed* among students in grades 9–12 who reported current alcohol use,† by sex, grade, race/ethnicity, and binge drinking status — Youth Risk Behavior Survey, Georgia, 2007§

	At another person's home		At my home		At a restaurant, bar, or club		At a public place, such as a park, beach, or parking lot		While riding in or driving a car		At a public event, such as a concert or sporting event		On school property	
Characteristic	**%**	**(95% CI¶)**	**%**	**(95% CI)**	**%**	**(95% CI)**	**%**	**(95% CI)**	**%**	**(95% CI)**	**%**	**(95% CI)**	**%**	**(95% CI)**
Total	**57.6**	**(52.9–62.2)**	**29.9**	**(26.5–33.6)**	**4.4**	**(3.0–6.4)**	**4.2**	**(2.7–6.6)**	**1.4**	**(0.6–3.2)**	**1.4**	**(0.8–2.7)**	**0.9**	**(0.4–2.2)**
Sex														
Male	56.2	(48.7–63.4)	30.3	(25.2–35.9)	3.7	(2.1–6.3)	5.0	(2.8–8.7)	2.4	(1.0–5.5)	1.4	(0.7–2.6)	1.0	(0.3–3.0)
Female	59.0	(53.4–64.3)	29.6	(25.4–34.3)	5.1	(3.0–8.4)	3.5	(1.8–6.5)	0.4	(0.1–2.0)	1.5	(0.5–4.3)	0.9	(0.3–2.5)
Grade														
9	49.2	(41.0–57.4)	38.7	(32.4–45.4)	3.8	(2.0–7.1)	3.4	(1.8–6.4)	2.2	(0.8–5.9)	1.0	(0.2–4.4)	1.8	(0.6–4.9)
10	56.9	(47.1–66.2)	34.2	(26.2–43.2)	2.5	(0.8–7.1)	4.7	(1.1–17.6)	0.9	(0.1–5.9)	0.8	(0.1–6.7)	0.0	
11	56.9	(47.8–65.6)	27.2	(20.3–35.4)	6.9	(3.6–13.0)	5.1	(2.7–9.1)	1.1	(0.2–7.3)	1.6	(0.4–5.4)	1.2	(0.3–4.3)
12	68.3	(57.5–77.4)	19.6	(13.3–27.7)	4.6	(1.7–11.4)	3.5	(1.3–8.9)	1.4	(0.3–5.7)	2.0	(0.8–5.4)	0.7	(0.1–5.8)
Race/Ethnicity**														
Black, non-Hispanic	46.3	(40.1–52.6)	38.6	(31.6–46.1)	6.0	(3.5–10.0)	2.8	(1.4–5.6)	2.0	(0.6–6.6)	3.3	(1.6–6.6)	0.9	(0.2–3.6)
Hispanic	61.1	(49.5–71.6)	25.2	(15.2–38.7)	5.7	(0.9–29.3)	6.5	(2.4–16.5)	1.5	(0.2–9.2)	0.0		0.0	
White, non-Hispanic	62.7	(56.3–68.6)	26.5	(22.3–31.1)	3.7	(2.0–6.7)	4.7	(2.4–8.8)	1.3	(0.5–3.4)	0.4	(0.1–1.7)	0.8	(0.2–2.6)
Binge drinking††														
Yes	64.7	(57.6–71.1)	20.6	(17.3–24.3)	4.8	(2.5–8.9)	5.6	(3.0–10.3)	2.1	(0.8–5.3)	1.2	(0.4–3.2)	1.1	(0.4–3.3)
No	49.5	(45.3–53.8)	40.7	(37.0–44.6)	3.9	(2.3–6.6)	2.6	(1.7–4.2)	0.7	(0.1–3.3)	1.7	(0.9–3.2)	0.7	(0.3–1.7)

* Determined by response to the question, "During the past 30 days, where did you usually drink alcohol?" The mutually exclusive response options were "at my home," "at another person's home," "while riding in or driving a car," "at a restaurant, bar, or club," "at a public place such as a park, beach, or parking lot," "at a public event such as a concert or sporting event," or "on school property."

† Determined by response to the question, "During the past 30 days, on how many days did you have at least one drink of alcohol?" Current alcohol use was defined as having had at least one drink of alcohol on at least 1 day during the 30 days before the survey.

§ Based on a survey of 2,465 students.

¶ Confidence interval.

** Race/ethnicity data are presented only for non-Hispanic black, Hispanic, and non-Hispanic white students; the numbers of students from other racial/ethnic groups were too small for meaningful analysis.

†† Determined by response to the question, "During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?" Binge drinking was defined as having had five or more drinks of alcohol in a row on at least 1 day during the 30 days before the survey.

results are generally consistent with other recent nationwide or state-specific studies. For example, the finding that liquor was the most prevalent type of alcohol usually consumed by Georgia students is comparable to findings from four other state YRBSs (*3*) and from the Monitoring the Future study (*4*). In 2005, Arkansas (44.7%), Nebraska (34.1%), New Mexico (35.6%), and Wyoming (40.2%) each reported liquor as the most prevalent type of alcohol usually consumed (*3*). Likewise, the results of this report pertaining to drinking in homes are similar to results from the 2002–2006 National Surveys on Drug Use and Health, which indicated that 53% of persons aged 12–20 years who drank during the past 30 days were at someone else's home, and 30% were in their own home (*5*). The results in this report concerning how students got their alcohol also are consistent with that study, which estimated that approximately 40% of the nation's underage current drinkers are provided free alcohol by adults aged ≥21 years (*5*).

This analysis did not assess the characteristics of persons who provided alcohol to students, including the age difference between the drinker and the person who supplied the alcohol. Other research has highlighted how underage drinkers obtain alcohol from peers by using false identification or by approaching strangers (i.e., "shoulder tapping") (*6*), emphasizing the importance of enforcing laws prohibiting alcohol sales to underage youth or the purchasing of alcohol for underage youths.

Additional studies are needed to better understand the drinking behaviors of Georgia high school students and the underlying motives. For example, future studies in Georgia and other states should examine the reasons why liquor is the type of alcohol usually consumed among youths. Previous research has determined that liquor is attractive to high school students because it is more potent, more portable, more easily concealed, and potentially more palatable (i.e., it can be flavored) (*7*). Future research also should examine underage drinking in homes and the effectiveness of social host liability laws in reducing youth access to alcohol and underage drinking. In all states, persons aged <21 years may not possess alcohol legally. Georgia law prohibits furnishing alcohol to a person aged <21 years, but allows an exception in the person's home

TABLE 4. Usual source of alcoholic beverages* among students in grades 9–12 who reported current alcohol use,† by sex, grade, race/ethnicity, and binge drinking status — Youth Risk Behavior Survey, Georgia, 2007§

	Someone gave it to me		I gave someone else money to buy it for me		I took it from a store or family member		I bought it in a store, such as a liquor store, convenience store, supermarket, discount store, or gas station		I bought it at a restaurant, bar, or club		I bought it at a public event, such as a concert or sporting event		I got it some other way	
Characteristic	**%**	**(95% CI¶)**	**%**	**(95% CI)**	**%**	**(95% CI)**	**%**	**(95% CI)**	**%**	**(95% CI)**	**%**	**(95% CI)**	**%**	**(95% CI)**
Total	**37.0**	**(33.6–40.5)**	**25.4**	**(21.1–30.4)**	**11.1**	**(9.1–13.7)**	**4.3**	**(2.9–6.3)**	**1.7**	**(1.1–2.8)**	**0.5**	**(0.2–1.2)**	**19.9**	**(17.2–22.9)**
Sex														
Male	29.1	(24.9–33.7)	28.4	(22.9–34.8)	13.5	(10.4–17.2)	6.4	(4.2–9.6)	1.7	(0.9–3.3)	0.6	(0.1–2.5)	20.3	(16.9–24.2)
Female	44.8	(39.0–50.8)	22.5	(17.5–28.5)	8.9	(6.1–12.8)	2.3	(0.9–5.9)	1.8	(0.7–4.3)	0.5	(0.2–1.7)	19.2	(15.7–23.3)
Grade														
9	42.1	(36.2–48.1)	16.5	(12.1–22.1)	15.3	(11.0–20.8)	1.2	(0.4–3.9)	1.6	(0.6–4.2)	1.6	(0.6–4.2)	21.7	(16.1–28.6)
10	32.0	(24.4–40.7)	24.4	(16.9–33.8)	13.5	(9.3–19.1)	5.1	(2.5–10.4)	1.7	(0.4–6.5)	0.0		23.3	(18.0–29.6)
11	36.6	(31.6–41.9)	28.5	(20.6–37.8)	7.7	(4.4–13.1)	4.5	(2.6–7.9)	3.1	(1.8–5.5)	0.0		19.6	(14.6–25.7)
12	36.2	(28.3–44.9)	34.0	(26.9–41.9)	7.6	(4.2–13.4)	6.8	(3.7–12.3)	0.6	(0.1–4.6)	0.0		14.8	(11.0–19.7)
Race/Ethnicity**														
Black, non-Hispanic	36.8	(32.6–41.1)	14.3	(9.8–20.3)	17.5	(12.5–23.9)	5.0	(2.8–8.6)	2.4	(1.1–5.3)	1.2	(0.4–3.3)	22.9	(17.8–29.0)
Hispanic	32.0	(18.8–49.0)	23.4	(10.3–44.9)	16.4	(9.1–27.9)	3.7	(1.1–11.6)	1.6	(0.2–13.9)	0.0		22.9	(13.1–36.7)
White, non-Hispanic	37.2	(32.2–42.5)	32.2	(26.3–38.6)	7.7	(5.1–11.4)	4.0	(2.3–7.0)	1.5	(0.7–3.5)	0.0		17.4	(13.6–21.9)
Binge drinking††														
Yes	32.5	(27.4–38.1)	35.5	(28.7–42.9)	7.3	(5.6–9.4)	6.1	(3.7–10.0)	1.2	(0.5–2.8)	1.0	(0.4–2.4)	16.4	(12.5–21.2)
No	42.0	(37.3–46.9)	14.0	(11.1–17.5)	15.5	(12.0–19.8)	2.2	(1.1–4.5)	2.4	(1.1–4.9)	0.0		23.9	(18.8–29.8)

* Determined by response to the question, "During the past 30 days, how did you usually get the alcohol you drank?" The mutually exclusive response options were "I bought it in a store such as a liquor store, convenience store, supermarket, discount store, or gas station," "I bought it at a restaurant, bar, or club," "I bought it at a public event such as a concert or sporting event," "I gave someone else money to buy it for me," "someone gave it to me," "I took it from a store or family member," or "I got it some other way."

† Determined by response to the question, "During the past 30 days, on how many days did you have at least one drink of alcohol?" Current alcohol use was defined as having had at least one drink of alcohol on at least 1 day during the 30 days before the survey.

§ Based on a survey of 2,465 students.

¶ Confidence interval.

** Race/ethnicity data are presented only for non-Hispanic black, Hispanic, and non-Hispanic white students; the numbers of students from other racial/ethnic groups were too small for meaningful analysis.

†† Determined by response to the question, "During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?" Binge drinking was defined as having had five or more drinks of alcohol in a row on at least 1 day during the 30 days before the survey.

if the person's parent or guardian provides the alcohol and is present (*8*).

The findings in this report are subject to at least four limitations. First, these data are from students who attend public schools and therefore might not be representative of all youths in these grades, including those who attend private, military, or home-based schools, or youths who do not attend school. In Georgia, approximately 8% of the total student enrollment (1,735,684) was enrolled in nonpublic schools during the 2005–06 school year (*9*). Second, the extent of underreporting or overreporting of behaviors cannot be determined. Third, the YRBS questionnaire does not quantify what constitutes a drink. Finally, YRBS does not collect data pertaining to student socio-economic status, which might have been a confounder in subgroup analysis, particularly for race.

A better understanding of youth drinking behavior and motives in Georgia and other states could aid development of effective intervention strategies to prevent underage and binge drinking, including maintaining and enforcing the age 21 minimum legal drinking age (e.g., enforcing ID checks at retail alcohol outlets); increasing alcohol excise taxes; limiting alcohol outlet density; and maintaining existing limits on the days when alcohol can be sold (*10*).

References

1. CDC. Alcohol-related disease impact (ARDI). Available at http://apps.nccd.cdc.gov/ardi/homepage.aspx.
2. Foster SE, Vaughan RD, Foster WH, Califano JA Jr. Alcohol consumption and expenditure for underage drinking and adult excessive drinking. JAMA 2003;289:989–95.
3. CDC. Types of alcoholic beverages usually consumed by students in 9th–12th grades—four states, 2005. MMWR 2007;56:737–40.
4. Johnston LD, O'Malley PM, Bachman JG, Schulenberg JE. Monitoring the Future national survey results on drug use, 1975–2005. Vol I. Secondary school students, 2005. Bethesda, MD: National Institute on Drug Abuse; 2006. Available at http://www.monitoringthefuture.org/pubs/monographs/vol1_2005.pdf.

5. Pemberton MR, Colliver JD, Robbins TM, Froerer JC. Underage alcohol use: findings from the 2002–2006 National Surveys on Drug Use and Health. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies; 2008. Available at http://oas.samhsa.gov/underage2k8/toc.htm.
6. Toomey TL, Fabian LE, Erickson DJ, Lenk KM. Propensity for obtaining alcohol through shoulder tapping. Alcohol Clin Exp Res 2007;31:1218–23.
7. Kuntsche E, Knibbe R, Gmel G, Engels R. 'I drink spirits to get drunk and block out my problems…' beverage preference, drinking motives, and alcohol use in adolescence. Alcohol Alcohol 2006;41:566–73.
8. Official code of Georgia annotated § 3-3-23.
9. Georgia Department of Education. Georgia public and nonpublic school enrollment. Available at http://public.doe.k12.ga.us/dmgetdocument.aspx/public%20and%20non-public%20enrollment%202005-06.xls?p=6cc6799f8c1371f6d5d2145395e6a540dc0f3885188f2e189406d24c5b791368&type=d.
10. CDC. Guide to community preventive services. Preventing excessive alcohol use. Available at http://www.thecommunityguide.org/alcohol/index.html.10.

Childhood Lead Poisoning Associated with Lead Dust Contamination of Family Vehicles and Child Safety Seats — Maine, 2008

Persons employed in high-risk lead-related occupations can transport lead dust home from a worksite through clothing, shoes, tools, or vehicles (*1–4*). During 2008, the Maine Childhood Lead Poisoning Prevention Program (MCLPPP) identified 55 new cases of elevated (≥15 μg/dL) venous blood lead levels (BLLs) among children aged <6 years through mandated routine screening (*5,6*). Although 90% of childhood lead poisoning cases in Maine during 2003–2007 had been linked to lead hazards in the child's home, no lead-based paint or dust or water with elevated lead levels were found inside the homes associated with six of the 2008 cases (i.e., five families, including one family with two affected siblings). An expanded environmental investigation determined that these six children were exposed to lead dust in the family vehicles and in child safety seats. The sources of the lead dust were likely household contacts who worked in high-risk lead exposure occupations. Current recommendations for identifying and reducing risk from take-home lead poisoning include 1) ensuring that children with elevated BLLs are identified through targeted blood lead testing, 2) directing prevention activities to at-risk workers and employers, and 3) improving employer safety protocols. State and federal prevention programs also should consider, when appropriate, expanded environmental lead dust testing to include vehicles and child safety seats.

Lead poisoning has decreased among children in the United States because of federal, state, and community efforts to reduce exposure (*7*). Federal bans on leaded gasoline and lead-based paint, and improvements in occupational safety and health standards* have helped mitigate exposure to lead, especially among children. MCLPPP responds to all reported elevated blood lead levels ≥10 μg/dL. Children with venous BLLs ≥15μg/dL automatically trigger an environmental investigation to determine the lead sources, and children are monitored until their venous BLLs are <10μg/dL.

For this study, a case of lead poisoning was defined by a confirmed venous BLL ≥15 μg/dL in a child aged <6 years living in Maine. All cases were identified through mandated blood lead testing for children at ages 1 year and 2 years following CDC targeted lead testing recommendations (*5,6*).† A case of take-home lead poisoning was defined by 1) a confirmed venous BLL ≥15 μg/dL among children aged <6 years living in Maine, 2) a household contact in a high-risk lead-related occupation, and 3) environmental lead dust sampling of vehicle and child safety seat ≥40 μg/ft^2, with no detectable lead-based paint hazards present in the home.

When these investigations began, MCLPPP contacted each child's family and offered general lead education, nursing case management, and environmental lead investigations by licensed lead risk assessors to determine the likely sources of the poisoning. Families were interviewed using a MCLPPP risk-assessment questionnaire to determine other possible exposures. Radiograph fluorescence analysis was used to determine whether lead-based paint was in the homes. Lead dust wipe samples were taken using the Environmental Protection Agency (EPA) standard lead dust loading methodology in the homes.§ For the cases described in this report, MCLPPP also directed investigators to perform additional dust sampling in the family vehicles and child safety seats because household members had occupations at high risk for lead exposure. The EPA acceptable lead dust standard is <40 μg/ft^2 for floors inside the home,¶ but no lead standards have been set for vehicles or child safety seats.

The six children with take-home lead poisoning, including two siblings in one family, ranged in age from 4 to 28

* Occupational Safety and Health Administration (OSHA). Lead standard 1910.1025. Lead standard in construction 1926.62.

† Lead Poisoning Control Act. 2002 Maine Revised Statutes, Title 22. Available at http://www.mainelegislature.org/legis/statutes/22/title22sec1317-D.html. Requirement for testing of all children 1 and 2 year old on Medicaid Section 1905(r)(5) of the Social Security Act and the federal Omnibus Budget Reconciliation Act of 1989.

§ EPA. Guidance for the sampling and analysis of lead in indoor residential dust for use in the integrated exposure uptake biokinetic (IEUBK) model, December 2008, OSWER 9285.7-81.

¶ EPA. Identifying lead hazards in residences, April 2001. EPA 747-F-01-002. Available at http://www.epa.gov/lead.

months, and had a median venous BLL of 21 μg/dL (range: 15–32 μg/dL). Among the five families, contacts included four persons who currently or recently worked in painting and paint removal, and one who was a self-employed metals recycler. The workers reported no lead-related occupational safety measures provided by their employers at work sites.

Four of the five homes were built after 1978, the year lead-based paint was banned. No lead-based paint was detected by radiograph fluorescence analysis inside the five homes. In two of five homes, lead dust was detected in exterior areas where family members removed and kept work clothes, including an entryway/deck (110 μg/ft^2), another entryway (1,200 μg/ft^2), and a laundry room (40 μg/ft^2). Five family vehicles (one family did not own a vehicle and one family had two) tested positive for lead dust with a median of 550 μg/ft^2 for driver/passenger seats (range: 49–2,100 μg/ft^2) and a median of 1,570 μg/ft^2 for driver/passenger floors (range: 240–2,900 μg/ft^2). All child safety seats (n = 6) tested positive for lead dust with a median of 98 μg/ft^2 (range: 43–420 μg/ft^2). Three safety seats were stored in the vehicle (median lead dust: 120 μg/ft^2 [range: 43–420 μg/ft^2]); the other three were removed and kept in the home when not in use (median lead dust: 95 μg/ft^2 [range: 50–100 μg/ft^2]).

MCLPPP determined that the primary source of lead exposure was lead dust in the family vehicles and on the child safety seats (Table), and provided recommendations to prevent continued exposure. Persons who are exposed to lead at work or through hobbies are advised upon finishing the workday to 1) place lead-contaminated clothes, including shoes and personal protective equipment, in a closed container for laundering or cleaning; 2) take a shower and wash hands, face, and hair when exposed above the permissible exposure limits; 3) change into street clothes; and 4) wash work clothes separately from all other clothes.** However, parents and household contacts reported a lack of facilities available for washing, showering, and changing clothes before entering their personal vehicles. MCLPPP also recommended thorough vacuuming and wet cleaning of the vehicle interiors and replacement of any child safety seat that tested positive for lead dust. Families were referred to the Maine Injury Prevention Program for replacement safety seats, if needed.

Reported by: *T Bernier, S Lee, A May, MPH, E Frohmberg, A Smith, ScD, Maine Center for Disease Control and Prevention; C Kennedy, DrPH, MJ Brown, ScD, National Center for Environmental Health, JE Tongren, PhD, EIS Officer, CDC.*

** OSHA response to the question, "What procedures should workers who are exposed to lead follow at the end of the day?" Available at http://www.dol.gov/elaws/osha/lead/freqd.asp. Maine Center for Disease Control and Prevention. Don't take lead home from your job! Available at http://www.maine.gov/DHHS/eohp/lead/documents/TakeHomeLead.pdf.

Editorial Note: These are the first reported cases of lead poisoning caused by elevated lead dust associated with child safety seats. These reports highlight the need to consider expanding lead dust testing to include vehicles and child safety seats when occupational exposure is suspected, and to reinforce lead safety work practices. During 2003–2004, 95% of reported elevated BLLs in adults were related to occupational exposures, particularly in the industry subsector of painting, which had the highest numbers of lead-exposed workers (*8*). Persons exposed to lead at work can transport lead dust home, inadvertently posing an exposure risk to household contacts, especially children who are most susceptible to poisoning.

Take-home lead exposures are known to present health risks to children (*1,2*) and previous studies have made recommendations to monitor lead levels among children exposed to take-home lead and to prevent contamination of the vehicle and home (*1–4,6*). However, scientific data are lacking regarding lead dust contamination of vehicles and child safety seats, and no standards exist for acceptable levels of lead contamination in personal vehicles. Surface swabs and wipes are available for use as screening tools to detect the presence of lead contamination on surfaces and verify the effectiveness of cleaning and other preventive measures,†† although, their use on soft surfaces (i.e., child safety seats) has not been evaluated (*9*). Take-home lead exposures from the workplace can be reduced by implementing lead safety measures, including provisions for use of personal protective equipment (respirators, clothing, shoes, and gloves), correct hygiene (taking showers, washing hair, and changing clothes and shoes before going home), lead-safe work practices, and medical surveillance (*10*).

These incidents underscore the importance of early identification of children at risk for take-home lead poisoning. The Maine mandate for blood lead testing led to identification of these cases, and environmental investigations targeting the vehicle and child safety seats were critical in identifying and removing the exposure source. However, the children in this study might not have been tested had they not been on Medicaid, particularly because clinical signs and symptoms of lead poisoning are not seen at these venous BLLs and the occupational exposure might have gone unrecognized by the provider. Two parents had already stopped working as painters, thus had no current occupational exposure, yet lead dust remained in their vehicles and on child safety seats. Targeted blood testing for early identification of child lead poisoning and subsequent investigations to remove the source of exposure are critical (*5*).

†† National Institute of Occupational Safety and Health method 9105, available at http://www.cdc.gov/niosh/nmam/pdfs/9105.pdf.

TABLE. Test results and case descriptions of lead poisoning associated with child safety seats and family vehicles among six children — Maine, 2008

	BLL* (μg/dL)		Lead dust detected† (μg/ft²)			
	Initial	Follow-up	Safety seat	Vehicle	Outside home	Description
Case 1	15	<5	43	550	None	In January 2008, a female aged 13 months with a BLL of 15 μg/dL was reported to the Maine Childhood Lead Poisoning Prevention Program (MCLPPP); her father's previous occupation involved sanding and grinding paint from pre-1950s residential buildings. According to the father, the employer only required workers to wear dust masks and therefore did not adhere to the Occupational Safety and Health Administration's lead-removal safety standards. No lead paint or lead dust was identified in the child's home (a 1990s mobile home). Lead dust wipes of the family's only vehicle, which was used to drive to job sites, identified lead dust on the driver's seat (550 μg/ft²) and on the infant child safety seat (43 μg/ft²) that had been kept continuously (from birth to age 13 months) in the vehicle. A sibling aged 3 years who used a booster seat that was kept inside the home when not in use, had a BLL of <5 μg/dL. Both child safety seats were replaced and the vehicle was vacuumed and wet cleaned; upon retesting 7 months later, the affected child (at age 20 months) had a BLL of <5 μg/dL.
Case 2	22	11	95	240	None	In April 2008, a male aged 18 months with a BLL of 22 μg/dL was reported to MCLPPP; his father had worked for 10 months for the same contractor as the father described in Case 1. The boy's father routinely picked his child up from a state-licensed child care facility in his work clothes during his employment. No lead paint or lead dust was identified in the 1978 public housing complex in which the family had resided since March 2008. Lead dust wipes of the family vehicle detected lead levels of 240 μg/ft² on the truck floor and 95 μg/ft² on the child's safety seat. The child safety seat was replaced. The vehicle was vacuumed and wet cleaned. Follow-up BLLs were 13 μg/dL in December 2008 and 11 μg/dL in March 2009.
Case 3	22	<5	100	—§	40–1,200	In April 2008, a female aged 28 months with a BLL of 12 μg/dL was reported to MCLPPP; upon retesting in May, her BLL had increased to 22 μg/dL. Her father was employed in paint removal (by sanding and grinding) in an 1860s building. The paint tested positive for lead when the father tested it with a home lead test kit. The father's BLL was 71 μg/dL. The family did not own a vehicle and resided in a 1920s building that had been renovated in 1984. No lead paint was found inside the home; lead dust levels of 1,200 μg/ft² were detected in the entryway to the exterior laundry room where work clothes and shoes were typically removed. The child's safety seat, kept in the same hallway, had a lead dust level of 100 μg/ft². The family discarded the seat; when the child was retested in June, her BLL had decreased to <5 μg/dL.
Case 4	20	<5	420	49–2,900	110	In July 2008, a male aged 24 months with a BLL of 20 μg/dL was reported to MCLPPP; the father was a self-employed metals recycler. The family resided in a 1990s mobile home; no interior lead paint or lead dust was identified inside the home, although lead dust was detected on the entryway deck (110 μg/ft²) where work shoes usually were removed. The work vehicle had a lead dust level of 2,900 μg/ft² on the driver's floor, 49 μg/ft² on the driver's seat, and 420 μg/ft² on the child safety seat. A second infant safety seat from the family van had a lead dust level of 55 μg/ft² after being washed the night before sampling. A female sibling aged 4 months (case 5), who had been breastfed since birth, was tested in August, 5 weeks after the environmental investigation, and had a BLL of 32 μg/dL. She reportedly had never ridden in the work vehicle. The male's seats had been kept in the family van and truck, but the female's seat was not kept in the vehicle. All child safety seats were replaced and the family van was replaced with another vehicle. In March 2009, the male's BLL had decreased to <5 μg/dL, and the female's BLL had decreased to 14 μg/dL.
Case 5	32	14	55	49–2,900	110	
Case 6	18	7	120	2,100	None	In September 2008, a male aged 12 months with a BLL of 18 μg/dL was reported to MCLPPP; the boyfriend of the child's mother worked for a painting and paint-removal contractor (same employer as cases 1 and 2). The mother's boyfriend was transported to and from work in her vehicle with the child in the car. No lead paint or lead dust was detected in the family home in a 1980s public housing complex. The mother's vehicle had a lead dust level of 2,100 μg/ft² on the passenger seat, and the child's toddler safety seat had a lead dust level of 120 μg/ft². The car was cleaned commercially and the mother reported vacuuming and wet cleaning the interior. The mother replaced the vehicle when follow-up testing in November indicated lead dust on the passenger seat (1,000 μg/ft²) The child safety seat was replaced and upon retesting in May 2009, the child's BLL decreased to 7 μg/dL.

* Venous blood lead level.
† No lead dust was detected inside homes.
§ Data unavailable.

The findings in this report are subject to at least two limitations. First, families were reluctant to name employers and seek assistance from state or federal occupational programs, therefore no occupational investigations were conducted. Second, neither standardized testing methods nor thresholds are available for lead dust in vehicles and child safety seats. Maine's sampling technique for dust testing in child safety seats and vehicles developed over time as information from these cases became available. MCLPPP also used the current EPA standard for lead dust inside the home, which might not be a sufficiently safe level in the closed environment of a vehicle or child safety seat.

As a result of this case series, MCLPPP has reformulated its lead risk assessment and investigation protocol to include testing of vehicles and child safety seats. To reduce the number of take-home lead cases among children, further study is required to 1) document the extent of child safety seat lead contamination, 2) develop effective vehicle and child safety seat testing methods, and 3) determine effective vehicle/child safety seat decontamination methods.

References

1. Whelan E, Piacitelli G, Gerwel B, et al. Elevated blood lead levels in children of construction workers. Am J Public Health 1997;87:1352–5.
2. Roscoe RJ, Gittleman JL, Deddens JA, Petersen MR., Halperin WE. Blood levels among children of lead-exposed workers: a meta-analysis. Am J Ind Med 1999;36:475–81.
3. Piacitelli G, Whelan E, Sieber K, Gerwel B. Elevated lead contamination in homes of construction workers. Am Ind Hyg Assoc J 1997;58:447–54.
4. Piacitelli GM, Whelan EA, Ewers LM, Sieber WK. Lead contamination in automobiles of lead-exposed bridgeworkers. Appl Occup Environ Hyg 1995;10:849–55.
5. CDC. Recommendations for blood lead screening of Medicaid-eligible children aged 1–5 years: an updated approach to targeting a group at high risk. MMWR 2009;58(No. RR-9).
6. American Academy of Pediatrics. Screening for elevated blood lead levels. Pediatrics 1998;101:1072–8.
7. CDC. US total blood lead surveillance report, 1997–2006. Atlanta, GA: US Department of Health and Human Services, CDC; 2009. Available at http://www.cdc.gov/nceh/lead/data/state_confirmed_byyear_1997_2006total.pdf.
8. CDC. Adult blood lead epidemiology and surveillance — United States, 2005–2007. MMWR 2009;58;365–69.
9. Esswein EJ, Boeniger MF, Ashley K, inventors; US Department of Health and Human Services, assignee. Handwipe disclosing method for the presence of lead. United States patent US 6248593. June 19, 2001.
10. Virji MA, Woskie SR, Pepper LD. Skin and surface lead contamination, hygiene programs, and work practices of bridge surface preparation and painting contractors. J Occup Environ Hyg 2009;6:131–42.

Oseltamivir-Resistant Novel Influenza A (H1N1) Virus Infection in Two Immunosuppressed Patients — Seattle, Washington, 2009

On August 14, 2009, this report was posted as an MMWR Dispatch *on the* MMWR *website* (http://www.cdc.gov/mmwr).

Novel influenza A (H1N1) virus infection continues to cause illness and death among persons worldwide. Immunosuppressed patients with influenza virus infection can shed virus for prolonged periods, increasing the chances for development of drug resistance (*1–3*). On August 6, 2009, CDC detected evidence of resistance to the antiviral medication oseltamivir in two severely immunosuppressed patients with novel influenza A (H1N1) virus infection in Seattle, Washington. The two patients were treated in two different hospitals, and their cases were not epidemiologically linked. Both were being treated with oseltamivir for novel influenza A (H1N1) virus infection and had prolonged viral shedding. In both patients, the virus was documented as initially susceptible to oseltamivir, and resistance developed subsequently during treatment with the drug. Testing of viral RNA from both patients by pyrosequencing detected a mutation that results in a histidine-to-tyrosine substitution at position 275 (H275Y) in the neuraminidase, known to be associated with oseltamivir resistance (*4,5*). The results were confirmed by pyrosequencing, sequencing of the neuraminidase gene, and neuraminidase inhibition testing of virus isolates on August 11. One patient's symptoms resolved after treatment with oseltamivir, and the other patient was receiving treatment with zanamivir and ribavirin as of August 13. An investigation of health-care personnel (HCP) contacts and other close contacts revealed no evidence of virus transmission. This report summarizes the case histories and resulting investigations and highlights the importance of 1) close monitoring for antiviral drug resistance among immunosuppressed patients receiving treatment for novel influenza A (H1N1) virus infection and 2) the implications for infection control.

Case Reports

Case 1. A teen-aged male was diagnosed with leukemia in November 2008 and subsequently received outpatient immunosuppressive chemotherapy. On April 29, 2009, he was hospitalized for a hematopoietic stem cell transplant, which he received on May 7. He received immunosuppressive treatment prior to his transplantation and remained hospitalized in a single-patient room after the transplantation. On May 31, he developed fever, mild cough, and rhinorrhea, was placed on droplet and contact precautions, and HCP began using respirators (fit-tested N95 or higher-level protection) for his care. A nasal wash specimen collected on May 31 tested positive for novel influenza A (H1N1) virus by real-time reverse transcription–polymerase chain reaction (rRT-PCR) at the University of Washington Virology Laboratory. On June 1, the patient was enrolled in an influenza antiviral treatment study and he began a 10-day course of oseltamivir. However, on June 4, novel influenza A (H1N1) virus was detected again by rRT-PCR and viral culture in nasal wash specimens, and oseltamivir treatment was extended to a 20-day course, to June 20. The patient improved and was discharged to a nearby apartment on June 7. Virus again was detected in nasal wash specimens on June 11. On July 7, a nasal wash specimen collected for routine follow-up on an outpatient basis was positive for novel influenza A (H1N1) virus by rRT-PCR; oseltamivir therapy was resumed on July 8.

The patient remained well until July 14, when he was hospitalized with fever and treated for coagulase-negative staphylococcal infection of an indwelling central venous catheter. A nasal wash specimen collected on July 14 tested positive for novel influenza A (H1N1) virus by rRT-PCR, and his oseltamivir was increased to a high dose, 150 mg orally, twice a day. Increased rhinorrhea and mild cough were noted on July 16. The patient was discharged on oseltamivir on July 18.

Because of prolonged shedding of novel influenza A (H1N1) virus and suspected oseltamivir resistance, nasal wash specimens previously collected from the patient were sent to CDC for antiviral resistance testing and arrived on August 5. On August 6, pyrosequencing at CDC of viral RNA from a specimen collected on June 4 revealed susceptibility to oseltamivir. However, pyrosequencing of a follow-up specimen collected on July 30 indicated oseltamivir resistance, based on detection of the H275Y mutation (*4,5*). Treatment of the patient with oseltamivir was stopped on August 6, when CDC pyrosequencing results from the specimens became available. Because the patient was asymptomatic, no further treatment was indicated.

On August 10, CDC received previously collected virus isolates from the patient for pyrosequencing on August 11, which confirmed the previous results. A novel influenza A (H1N1) virus isolate from a specimen collected on May 31 was identified as susceptible to oseltamivir by pyrosequencing at CDC, but viruses isolated from specimens collected on June 11 and July 14 had the H275Y mutation, indicating oseltamivir resistance.

Seattle-King County health department investigators interviewed hospital infection-control staff and the patient's family members and visitors. Surveillance for influenza-like illness (ILI) among staff members is standard policy at the hospital where the patient was treated. No cases of ILI were reported among approximately 100 HCP contacts of the patient. Active surveillance, involving personal interviews of HCP contacts during the 2 weeks before diagnosis of oseltamivir resistance did not identify any HCP with ILI.

After each hospital discharge, the patient lived under voluntary home isolation according to standard protocol for patients in the post-hematopoietic stem cell transplant (HSCT) period; he did not attend any school. When traveling in public, the patient reported wearing a surgical mask per protocol for immunosuppressed HCST recipients and avoiding close contact with other persons and crowds. None of the 12 family member contacts or other persons who had visited the patient while he was in isolation reported symptoms of ILI.

Case 2: A female patient in her 40s who had a hematopoietic stem cell transplant for leukemia had a recurrence of leukemia in December 2008. She underwent two cycles of immunosuppressive chemotherapy during March–April 2009. On June 21, she was admitted to the hospital for further chemotherapy; she also had developed a fever and symptoms of an upper respiratory infection. She was placed in a single-patient room with droplet and contact precautions, and a nasal wash specimen was obtained for direct fluorescent antibody staining (DFA) and viral culture. The DFA result was indeterminate because of an inadequate cellular specimen; however, on June 26, the University of Washington Virology Laboratory reported isolation of influenza A virus from the specimen. Antiviral treatment with high-dose oseltamivir (150 mg orally, twice a day) and rimantadine (100 mg orally, twice a day) was administered during June 26–July 1. On July 3, the viral isolate was identified as novel influenza A (H1N1), and high-dose oseltamivir and rimantadine were restarted. The patient's respiratory status worsened, and she required supplemental oxygen for hypoxia. Novel influenza A (H1N1) virus was isolated from additional nasal wash specimens collected on July 6 and July 14, and from bronchoalveolar lavage specimens obtained on July 16 and 28. Because of prolonged viral shedding, specimens were sent to CDC on August 4 for antiviral susceptibility testing. Treatment with inhaled zanamivir was attempted, but was poorly tolerated, and oseltamivir was continued.

On August 6, CDC determined that pyrosequencing of viral RNA from the first clinical specimen collected on June 21 did not detect the H275Y mutation. However, the mutation was detected by pyrosequencing of viral RNA from a nasal wash specimen collected on July 28. Treatment of the patient with oseltamivir was discontinued when results became available.

Treatment with inhaled zanamivir after identification of oseltamivir resistance again was attempted but poorly tolerated. On August 7, intravenous zanamivir, acquired through an emergency investigational new drug application for compassionate use, and aerosolized ribavirin therapy were initiated. As of August 13, the patient remained symptomatic and hospitalized on intravenous zanamivir and had been switched to oral ribavirin because of intolerance of aerosolized ribavirin. The patient's hospital course was complicated by prolonged neutropenia and protracted bone marrow recovery, neutropenic fever, coagulase-negative *Staphylococcus* bacteremia, and *Pneumocystis jirovecii* pneumonia. On August 10, CDC received other previously collected virus isolates from this patient for testing, and pyrosequencing of a virus isolated from a specimen collected on July 14 had the H275Y mutation, confirming oseltamivir resistance.

The patient was hospitalized in a single-patient room upon admission on June 21. She was initially placed on droplet and contact precautions. Immediately after confirmation of novel influenza A (H1N1) virus infection, use of N95 repirators by HCP also was implemented. Active surveillance for respiratory illness among staff members is routine at the hospital where the patient was treated, and no cases of ILI or other acute respiratory illness were reported among the approximately 200 HCP contacts who cared for the patient. No breaches of personal protective equipment recommendations (including use of fit-tested N-95 respirators) were reported among HCP contacts caring for this patient.

Testing of Clinical Specimens for Oseltamivir Resistance

CDC has tested virus isolates or clinical specimens collected from 37 additional Washington residents with confirmed novel influenza A (H1N1) virus infection during April 26–July 30. None of these viruses had evidence of the H275Y mutation. As of August 11, of the 670 novel influenza A (H1N1) viruses collected since April 2009 in the United States and tested at CDC, 318 had been tested for oseltamivir and zanamivir resistance by neuraminidase inhibition assay, and 352 clinical specimens had been screened for oseltamivir resistance for the H275Y mutation by pyrosequencing. No other oseltamivir-resistant viruses had been identified. Oseltamivir-resistant viruses isolated from both patients described in this report were determined to be susceptible to zanamivir by neuraminidase inhibition assay at CDC. Sequence analysis of the neuraminidase gene of these oseltamivir-resistant viruses showed that oseltamivir resistance was not the result of gene reassortment with seasonal influenza A (H1N1) virus.

Reported by: *J Englund, MD, D Zerr, MD, J Heath, Seattle Children's Hospital, Univ of Washington, and Fred Hutchinson Cancer Research Center; S Pergam, MD, J Kuypers, PhD, J Yager, MD, M Boeckh, MD, D Mattson, N Whittington, E Whimbey, MD, Univ of Washington Medical Center and Fred Hutchinson Cancer Research Center; J Duchin, MD, Public Health — Seattle & King County, Washington. T Uyeki, MD, V Deyde, PhD, M Okomo-Adhiambo, PhD, T Sheu, A Trujillo, A Klimov, PhD, ScD, L Gubareva, MD, PhD, Influenza Div, National Center for Immunization and Respiratory Diseases; M Kay, DVM, EIS Officer, CDC.*

Editorial Note: This report describes oseltamivir-resistant novel influenza A (H1N1) virus infection in two severely immunosuppressed patients who were treated with oseltamivir for acute illness symptoms of laboratory-confirmed influenza. Initially, both patients were infected with oseltamivir-susceptible viruses; oseltamivir resistance developed later during antiviral treatment. The two patients were not epidemiologically linked and were treated at different hospitals. No evidence was found that HCP or other patient contacts developed ILI caused by oseltamivir-resistant novel influenza A (H1N1) virus infection.

Immunosuppressed patients are at increased risk for complications of influenza and are recommended for annual influenza vaccination, although the immune response to vaccination can be decreased in some persons (*6,7*). In otherwise healthy adults with seasonal influenza virus infection, viral shedding generally resolves within 7 days, compared with immunosuppressed patients, who can experience prolonged viral shedding for weeks to months. Antiviral resistance can develop during treatment of influenza in these patients, and prolonged viral shedding (*1,2*) of up to 18 months has been reported, including shedding of oseltamivir-resistant seasonal influenza A virus for more than 1 year (*3*). Clinicians caring for immunosuppressed patients with novel influenza A (H1N1) virus infection should be aware of the potential for development of antiviral drug resistance during therapy and prolonged viral shedding. Recommendations for prevention and control of seasonal influenza among hematopoietic stem cell transplant recipients, their family members, and HCP have been published (*8*). Strict adherence to recommended personal protective equipment and infection-control measures is advised until an immunosuppressed patient with influenza virus infection has serial respiratory specimens that remain negative when tested by both rRT-PCR and viral culture. Interim infection-control guidance for novel influenza A (H1N1) is available on the CDC website.*

Only sporadic cases of oseltamivir resistance associated with the H275Y mutation in the neuraminidase have been detected in immunocompetent persons exposed to oseltamivir (*9*). As of

* Available at http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm.

August 11, no evidence had been found of ongoing transmission of oseltamivir-resistant novel influenza A (H1N1) virus in the United States or elsewhere in the world. The public health risk of virus transmission from these two immunosuppressed cases with oseltamivir-resistant novel influenza A (H1N1) virus infection appears to be low. Currently, enhanced surveillance for oseltamivir resistance among novel influenza A (H1N1) virus strains isolated from outpatients and hospitalized patients is being conducted in Washington in collaboration with CDC. The two cases in immunosuppressed patients described in this report and sporadic cases of oseltamivir resistance in persons with oseltamivir exposure, highlight the need for ongoing global virologic surveillance and monitoring of antiviral resistance (*10*).

All circulating novel influenza A (H1N1) virus strains worldwide remain susceptible to oseltamivir and zanamivir but resistant to amantadine and rimantadine. CDC continues to recommend oseltamivir or zanamivir for treatment of all hospitalized patients with suspected or confirmed novel influenza A (H1N1) virus infection and for outpatients at increased risk for influenza-related complications (e.g., young children, pregnant women, and persons with certain chronic medical conditions) with suspected or confirmed novel influenza A (H1N1) virus infection. Novel influenza A (H1N1) virus strains with the H275Y mutation are susceptible to zanamivir. Therefore, in immunosuppressed patients with oseltamivir-resistant novel A (H1N1) virus infection, zanamivir should be considered the antiviral treatment of choice; however, zanamivir is not recommended for persons with underlying airway disease.† Additional interim guidance on the use of antiviral medications for the treatment and prevention of novel influenza A (H1N1) virus infection is available on the CDC website.§

† Available at http://us.gsk.com/products/assets/us_relenza.pdf.
§ Available at http://www.cdc.gov/h1n1flu/recommendations.htm.

References

1. Klimov AI, Rocha E, Hayden FG, Shult PA, Roumillat LF, Cox NJ. Prolonged shedding of amantadine-resistant influenzae A viruses by immunodeficient patients: detection by polymerase chain reaction-restriction analysis. J Infect Dis 1995;172:1352–5.
2. Ison MG, Gubareva LV, Atmar RL, Treanor J, Hayden FG. Recovery of drug-resistant influenza virus from immunocompromised patients: a case series. J Infect Dis 2006;193:760–4.
3. Weinstock DM, Gubareva LV, Zuccotti G. Prolonged shedding of multidrug-resistant influenza A virus in an immunocompromised patient. N Engl J Med 2003;27;348:867–8.
4. Deyde VM, Gubareva LV. Influenza genome analysis using pyrosequencing method: current applications for a moving target. Expert Rev Mol Diagn 2009;9:493–509.
5. World Health Organization. CDC pyrosequencing assay to detect H275Y mutation in the neuraminidase of novel A (H1N1) viruses. Available at http://www.who.int/csr/resources/publications/swineflu/NA_DetailedPyrosequencing_20090513.pdf.
6. CDC. Prevention and control of seasonal influenza with vaccines: recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009. MMWR 2009;58(No. RR-8).
7. Kunisaki KM, Janoff EN. Influenza in immunosuppressed populations: a review of infection frequency, morbidity, mortality, and vaccine responses. Lancet Infect Dis 2009;9:493–504.
8. CDC. Guidelines for preventing opportunistic infections among hematopoietic stem cell transplant recipients: recommendations of CDC, the Infectious Disease Society of America, and the American Society of Blood and Marrow Transplantation. MMWR 2000(No. RR-10).
9. World Health Organization. Pandemic (H1N1) 2009. Update 60. Laboratory-confirmed cases of pandemic (H1N1) 2009 as officially reported to WHO by states parties to the IHR (2005) as 31 July 2009. Available at http://www.who.int/csr/don/2009_08_04/en/index.html.
10. Sheu TG, Deyde VM, Okomo-Adhiambo M, et al. Surveillance for neuraminidase inhibitor resistance among human influenza A and B viruses circulating worldwide in 2004–2008. Antimicrob Agents Chemother 2008;52:3284–92.

Errata: Vol. 58, No. RR-8

In the report, "Prevention and Control of Seasonal Influenza with Vaccines — Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009," errors occurred on page 13 in Table 2. The corrected table is printed on the following page.

TABLE 2. Approved influenza vaccines for different age groups — United States, 2009–10 season

Vaccine	Trade name	Manufacturer	Presentation	Mercury content (mcg Hg/0.5 mL dose)	Age group	No. of doses	Route
TIV*	Fluzone	Sanofi Pasteur	0.25mL prefilled syringe	0	6–35 mos	1 or 2†	Intramuscular§
			0.5 mL prefilled syringe	0	≥36 mos	1 or 2	Intramuscular
			0.5 mL vial	0	≥36 mos	1 or 2	Intramuscular
			5.0 mL multidose vial	25	≥6 mos	1 or 2	Intramuscular
TIV	Fluvirin	Novartis Vaccine	5.0 mL multidose vial	**25**	≥4 yrs	1 or 2	Intramuscular
			0.5 mL prefilled syringe	**<1.0**			
TIV	Fluarix	GlaxoSmithKline	0.5 mL prefilled syringe	**0**	≥18 yrs	1	Intramuscular
TIV	FluLaval	GlaxoSmithKline	5.0 mL multidose vial	25	≥18 yrs	1	Intramuscular
TIV	Afluria	CSL Biotherapies	0.5 mL prefilled syringe	0	≥18 yrs	1	Intramuscular
			5.0 mL multidose vial	25			
LAIV¶	FluMist**	MedImmune	0.2 mL sprayer	0	2–49 yrs	1 or 2††	Intranasal

* Trivalent inactivated vaccine. A 0.5-mL dose contains 15 mcg each of A/Brisbane/59/2007 (H1N1)-like, A/Brisbane/10/2007 (H3N2)-like, and B/Brisbane/60/2008-like antigens.

† Two doses administered at least 1 month apart are recommended for children aged 6 months–8 years who are receiving TIV for the first time and those who only received 1 dose in their first year of vaccination should receive 2 doses in the following year.

§ For adults and older children, the recommended site of vaccination is the deltoid muscle. The preferred site for infants and young children is the anterolateral aspect of the thigh.

¶ Live attenuated influenza vaccine. A 0.2-mL dose contains $10^{6.5-7.5}$ fluorescent focal units of live attenuated influenza virus reassortants of each of the three strains for the 2008–09 influenza season: A/Brisbane/59/2007(H1N1), A/Brisbane/10/2007(H3N2), and B/Brisbane/60/2008.

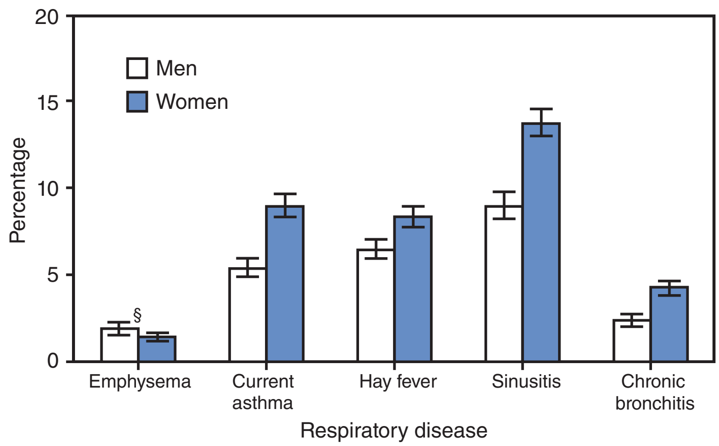
** FluMist is shipped refrigerated and stored in the refrigerator at 2°C–8°C (36°F to 46°F) after arrival in the immunization clinic. The dose is 0.2 mL divided equally between each nostril. FluMist should not be administered to persons with asthma. Health-care providers should consult the medical record, when available, to identify children aged 2–4 years with asthma or recurrent wheezing that might indicate asthma. In addition, to identify children who might be at greater risk for asthma and possibly at increased risk for wheezing after receiving FluMist, parents or caregivers of children aged 2–4 years should be asked: “In the past 12 months, has a health-care provider ever told you that your child had wheezing or asthma?” Children whose parents or caregivers answer “yes” to this question and children who have asthma or who had a wheezing episode noted in the medical record during the preceding 12 months should not receive FluMist.

†† Two doses administered at least 4 weeks apart are recommended for children aged 2–8 years who are receiving LAIV for the first time, and those who only received 1 dose in their first year of vaccination should receive 2 doses in the following year.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Adults with Selected Respiratory Diseases,* by Sex — National Health Interview Survey, United States, 2007†



* In separate questions, respondents were asked if they had ever been told by a doctor or other health professional that they had emphysema or asthma, respectively. Respondents who had been told they had asthma were asked if they still had asthma. Respondents were asked if they had ever been told by a doctor or other health professional in the past 12 months that they had hay fever, sinusitis, or chronic bronchitis, respectively. A given person might have been counted as having more than one disease.

† Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. population and are derived from the National Health Interview Survey sample adult component. Estimates were age adjusted based on the 2000 U.S. standard population and the following age groups: 18–44 years, 45–64 years, 65–74 years, and ≥75 years.

§ 95% confidence interval.

Among U.S. adults in 2007, larger percentages of women than men had current asthma (9.0% versus 5.4%), hay fever (8.4% versus 6.5%), sinusitis (13.8% versus 9.0%), or chronic bronchitis (4.2% versus 2.4%). However, a greater percentage of men than women had emphysema (1.9% versus 1.4%).

SOURCE: Pleis JR, Lucas JW. Summary health statistics for U.S. adults: National Health Interview Survey, 2007. Vital Health Stat 2009;10(240). Available at http://www.cdc.gov/nchs/data/series/sr_10/sr10_240.pdf.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending August 15, 2009 (32nd week)*

Disease	Current week	Cum 2009	5-year weekly average[†]	Total cases reported for previous years 2008	2007	2006	2005	2004	States reporting cases during current week (No.)
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	—	11	1	17	32	20	19	16	
infant	—	29	2	109	85	97	85	87	
other (wound and unspecified)	—	14	1	19	27	48	31	30	
Brucellosis	1	60	3	80	131	121	120	114	CA (1)
Chancroid	—	23	0	25	23	33	17	30	
Cholera	—	2	0	5	7	9	8	6	
Cyclosporiasis[§]	6	88	5	139	93	137	543	160	NY (2), FL (3), TX (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases[§,¶]:									
California serogroup	—	3	5	62	55	67	80	112	
eastern equine	—	1	1	4	4	8	21	6	
Powassan	—	—	0	2	7	1	1	1	
St. Louis	—	6	1	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis[§,**]:									
Ehrlichia chaffeensis	13	379	27	1,137	828	578	506	338	NY (2), MO (2), MD (1), VA (4), KY (1), TN (2), AL (1)
Ehrlichia ewingii	—	2	0	9	—	—	—	—	
Anaplasma phagocytophilum	3	281	23	1,026	834	646	786	537	NY (1), MN (2)
undetermined	3	74	6	180	337	231	112	59	MN (1), MO (1), TN (1)
Haemophilus influenzae,[††]									
invasive disease (age <5 yrs):									
serotype b	—	13	0	30	22	29	9	19	
nonserotype b	—	126	3	244	199	175	135	135	
unknown serotype	—	137	3	163	180	179	217	177	
Hansen disease[§]	5	41	1	80	101	66	87	105	CA (1), HI (4)
Hantavirus pulmonary syndrome[§]	—	6	0	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal[§]	4	117	8	330	292	288	221	200	NY (2), NC (1), OK (1)
Hepatitis C viral, acute	7	979	16	878	845	766	652	720	ME (1), PA (2), MI (1), FL (1), OK (1), CA (1)
HIV infection, pediatric (age <13 years)[§§]	—	—	3	—	—	—	380	436	
Influenza-associated pediatric mortality[§,¶¶]	4	106	0	90	77	43	45	—	FL (1), AZ (1), WA (1), WI (1)
Listeriosis	15	375	22	759	808	884	896	753	NY (2), MI (1), MD (1), NC (1), OK (2), WA (1), CA (7)
Measles***	1	48	1	140	43	55	66	37	NV (1)
Meningococcal disease, invasive[†††]:									
A, C, Y, and W-135	1	175	4	330	325	318	297	—	TX (1)
serogroup B	—	93	2	188	167	193	156	—	
other serogroup	—	18	1	38	35	32	27	—	
unknown serogroup	12	304	8	616	550	651	765	—	MO (2), FL (2), AZ (1), OR (1), CA (6)
Mumps	3	208	14	454	800	6,584	314	258	AZ (1), CA (2)
Novel influenza A virus infections	—	[§§§]	0	2	4	N	N	N	
Plague	—	6	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[§,¶¶¶]:	1	46	3	124	171	169	136	70	
acute	1	39	1	110	—	—	—	—	OH (1)
chronic	—	7	0	14	—	—	—	—	
Rabies, human	—	1	0	2	1	3	2	7	
Rubella****	—	3	0	16	12	11	11	10	
Rubella, congenital syndrome	—	1	—	—	—	1	1	—	
SARS-CoV[§,††††]	—	—	—	—	—	—	—	—	
Smallpox[§]	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome[§]	1	94	1	157	132	125	129	132	CT (1)
Syphilis, congenital (age <1 yr)	—	108	8	434	430	349	329	353	
Tetanus	—	6	0	19	28	41	27	34	
Toxic-shock syndrome (staphylococcal)[§]	—	48	2	71	92	101	90	95	
Trichinellosis	—	12	0	39	5	15	16	5	
Tularemia	1	41	5	123	137	95	154	134	CO (1)
Typhoid fever	4	204	9	449	434	353	324	322	FL (1), CA (3)
Vancomycin-intermediate *Staphylococcus aureus*[§]	1	45	0	63	37	6	2	—	OH (1)
Vancomycin-resistant *Staphylococcus aureus*[§]	—	—	—	—	2	1	3	1	
Vibriosis (noncholera *Vibrio* species infections)[§]	15	233	13	492	549	N	N	N	MD (1), VA (1), FL (3), OK (1), CO (1), WA (2), CA (5), HI (1)
Yellow fever	—	—	—	—	—	—	—	—	

See Table I footnotes on next page.

TABLE I. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending August 15, 2009 (32nd week)*

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

* Incidence data for reporting year 2008 and 2009 are provisional, whereas data for 2004, 2005, 2006, and 2007 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. One hundred and five influenza-associated pediatric deaths occurring during the 2008–09 influenza season have been reported.

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

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

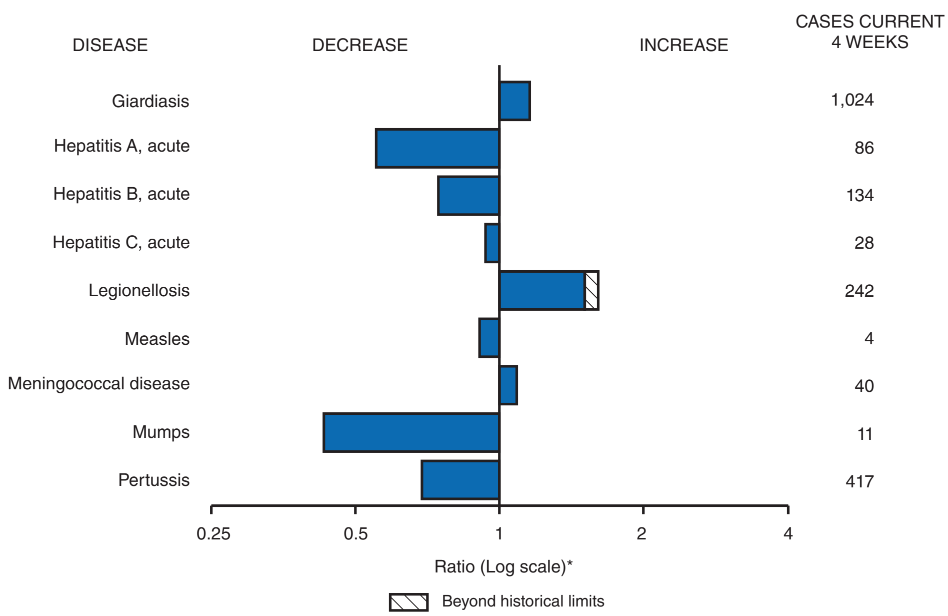
§§§ CDC discontinued reporting of individual confirmed and probable cases of novel influenza A (H1N1) viruses infections on July 24, 2009. CDC will report the total number of novel influenza A (H1N1) hospitalizations and deaths weekly on the CDC H1N1 influenza website (http://www.cdc.gov/h1n1flu).

¶¶¶ 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 August 15, 2009, with historical data



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

Notifiable Disease Data Team and 122 Cities Mortality Data Team

Patsy A. Hall

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

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending August 15, 2009, and August 9, 2008 (32nd week)*

Reporting area	Chlamydia†					Coccidiodomycosis					Cryptosporidiosis				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	11,928	22,692	25,713	676,398	719,351	286	150	474	6,569	4,009	106	123	482	3,495	3,399
New England	932	759	1,655	24,818	22,268	—	0	1	1	1	1	5	25	182	227
Connecticut	249	226	1,306	7,123	6,278	N	0	0	N	N	—	0	18	18	41
Maine§	75	48	68	1,515	1,535	N	0	0	N	N	1	0	5	20	22
Massachusetts	549	326	945	12,191	10,778	N	0	0	N	N	—	2	13	73	86
New Hampshire	3	40	63	1,094	1,234	—	0	1	1	1	—	1	4	33	39
Rhode Island§	56	61	244	2,203	1,700	—	0	0	—	—	—	0	3	4	4
Vermont§	—	21	53	692	743	N	0	0	N	N	—	1	7	34	35
Mid. Atlantic	2,493	2,909	6,734	94,389	89,695	—	0	0	—	—	17	13	35	420	390
New Jersey	213	424	845	13,300	13,652	N	0	0	N	N	—	0	4	8	22
New York (Upstate)	551	576	4,563	18,013	16,471	N	0	0	N	N	10	4	17	109	119
New York City	1,214	1,142	3,130	37,018	34,251	N	0	0	N	N	1	1	8	44	59
Pennsylvania	515	816	1,072	26,058	25,321	N	0	0	N	N	6	7	18	259	190
E.N. Central	1,573	3,508	4,382	102,097	117,789	—	0	4	22	33	13	29	126	788	881
Illinois	439	1,082	1,356	31,478	35,737	N	0	0	N	N	—	2	13	72	97
Indiana	308	413	713	13,841	13,230	N	0	0	N	N	2	4	17	116	99
Michigan	673	864	1,332	28,092	27,657	—	0	3	11	25	1	5	13	143	137
Ohio	32	785	1,300	18,217	27,998	—	0	2	11	8	10	9	59	247	181
Wisconsin	121	355	494	10,469	13,167	N	0	0	N	N	—	8	46	210	367
W.N. Central	75	1,324	1,586	38,262	40,771	—	0	1	5	1	10	18	68	530	475
Iowa	—	192	256	5,746	5,374	N	0	0	N	N	7	4	30	129	131
Kansas	5	162	549	5,206	5,629	N	0	0	N	N	—	1	8	47	40
Minnesota	—	265	338	7,191	8,819	—	0	0	—	—	—	4	19	145	102
Missouri	—	497	633	14,723	14,874	—	0	1	5	1	3	3	13	99	100
Nebraska§	41	98	219	2,940	3,293	N	0	0	N	N	—	2	8	49	63
North Dakota	29	22	60	681	1,100	N	0	0	N	N	—	0	10	7	2
South Dakota	—	58	85	1,775	1,682	N	0	0	N	N	—	2	9	54	37
S. Atlantic	2,000	4,309	5,670	118,361	145,443	—	0	1	5	3	26	21	49	583	487
Delaware	91	81	180	2,912	2,244	—	0	1	1	1	1	0	1	3	9
District of Columbia	—	128	227	3,849	4,287	—	0	0	—	—	—	0	2	—	9
Florida	622	1,404	1,597	44,607	43,898	N	0	0	N	N	16	8	35	201	206
Georgia	7	756	1,909	17,407	25,592	N	0	0	N	N	4	6	20	228	138
Maryland§	377	431	772	13,171	14,069	—	0	1	4	2	1	1	5	23	21
North Carolina	—	0	1,309	—	18,873	N	0	0	N	N	—	1	16	58	17
South Carolina§	519	557	1,424	15,022	15,605	N	0	0	N	N	2	1	6	28	29
Virginia§	330	616	926	19,126	18,944	N	0	0	N	N	2	1	4	33	44
West Virginia	54	69	101	2,267	1,931	N	0	0	N	N	—	0	3	9	14
E.S. Central	1,080	1,742	2,200	55,813	50,875	—	0	0	—	—	6	3	10	111	85
Alabama§	—	476	624	14,639	15,601	N	0	0	N	N	—	1	6	35	37
Kentucky	443	256	458	7,919	6,885	N	0	0	N	N	4	1	4	34	18
Mississippi	—	454	841	14,543	11,822	N	0	0	N	N	1	0	2	6	8
Tennessee§	637	572	809	18,712	16,567	N	0	0	N	N	1	1	5	36	22
W.S. Central	1,007	2,913	5,307	92,295	91,566	—	0	1	1	3	10	10	271	218	304
Arkansas§	373	275	418	8,833	8,753	N	0	0	N	N	3	1	10	24	25
Louisiana	427	422	1,134	13,599	13,227	—	0	1	1	3	—	1	5	18	35
Oklahoma	207	178	2,736	8,681	8,003	N	0	0	N	N	4	2	16	57	28
Texas§	—	1,965	2,527	61,182	61,583	N	0	0	N	N	3	7	258	119	216
Mountain	856	1,268	2,145	36,049	45,028	207	100	368	4,982	2,692	5	9	36	281	311
Arizona	220	390	627	7,432	14,982	205	99	364	4,917	2,621	—	1	5	23	48
Colorado	—	355	728	9,668	10,790	N	0	0	N	N	5	2	12	84	52
Idaho§	—	67	314	1,999	2,263	N	0	0	N	N	—	1	7	46	39
Montana§	11	55	88	1,782	1,906	N	0	0	N	N	—	0	4	27	35
Nevada§	455	173	366	6,186	5,984	2	1	3	37	38	—	0	4	11	9
New Mexico§	120	171	540	5,089	4,596	—	0	2	8	22	—	2	18	62	92
Utah	50	106	251	2,679	3,626	—	0	2	20	9	—	0	6	13	22
Wyoming§	—	34	97	1,214	881	—	0	1	—	2	—	0	2	15	14
Pacific	1,912	3,652	4,763	114,314	115,916	79	40	172	1,553	1,276	18	11	19	382	239
Alaska	—	111	233	4,953	2,899	N	0	0	N	N	—	0	2	5	2
California	1,284	2,800	3,599	89,125	90,152	79	40	172	1,553	1,276	12	6	15	214	138
Hawaii	—	118	247	3,601	3,566	N	0	0	N	N	—	0	1	1	1
Oregon§	279	198	631	5,991	6,161	N	0	0	N	N	4	2	9	116	49
Washington	349	377	557	10,644	13,138	N	0	0	N	N	2	1	7	46	49
American Samoa	—	0	0	—	73	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	3	8	—	103	—	0	0	—	—	—	0	0	—	—
Puerto Rico	112	133	332	4,797	4,470	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	9	17	271	431	—	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 2008 and 2009 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Chlamydia refers to genital infections caused by *Chlamydia trachomatis*.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 15, 2009, and August 9, 2008 (32nd week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive All ages, all serotypes†				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	290	325	641	9,727	10,101	3,093	5,503	7,164	160,471	203,246	22	55	124	1,781	1,868
New England	10	27	64	771	878	107	96	301	2,997	3,096	—	3	16	131	106
Connecticut	—	5	14	149	199	48	46	275	1,366	1,413	—	0	12	40	22
Maine§	9	4	12	120	86	3	2	9	82	55	—	0	2	14	9
Massachusetts	—	11	27	318	370	45	39	112	1,244	1,327	—	2	5	64	53
New Hampshire	1	3	10	83	85	3	2	6	66	69	—	0	2	7	8
Rhode Island§	—	1	8	35	54	8	6	19	212	209	—	0	7	3	6
Vermont§	—	3	15	66	84	—	1	4	27	23	—	0	1	3	8
Mid. Atlantic	34	60	116	1,750	1,876	604	586	1,138	18,730	19,992	5	11	25	397	349
New Jersey	—	6	21	108	301	59	90	127	2,748	3,294	—	2	7	78	56
New York (Upstate)	22	24	81	722	629	142	102	664	3,200	3,711	2	3	20	91	98
New York City	4	16	30	463	504	262	210	577	6,916	6,201	—	2	11	82	63
Pennsylvania	8	16	46	457	442	141	184	267	5,866	6,786	3	4	10	146	132
E.N. Central	28	44	90	1,286	1,545	545	1,104	1,627	31,668	42,036	3	8	27	230	302
Illinois	—	9	25	236	431	172	341	494	9,613	12,378	—	3	9	96	92
Indiana	N	0	11	N	N	96	149	252	4,606	5,384	—	1	22	40	52
Michigan	3	12	22	347	331	230	290	493	9,129	10,219	—	0	3	15	17
Ohio	24	16	31	477	498	9	251	482	5,633	10,129	3	1	6	70	96
Wisconsin	1	8	19	226	285	38	94	137	2,687	3,926	—	0	4	9	45
W.N. Central	17	25	143	901	1,109	24	288	393	8,071	10,367	1	3	15	101	136
Iowa	11	6	18	186	179	—	32	53	951	942	—	0	0	—	2
Kansas	—	2	8	67	87	14	35	83	1,216	1,375	—	0	2	11	17
Minnesota	—	0	106	250	342	—	42	65	1,171	1,983	—	0	10	32	39
Missouri	6	7	22	250	296	—	133	184	3,715	4,936	1	1	4	35	52
Nebraska§	—	3	10	97	120	10	22	52	760	884	—	0	4	18	18
North Dakota	—	0	16	8	10	—	2	7	37	68	—	0	4	5	8
South Dakota	—	2	7	43	75	—	7	20	221	179	—	0	0	—	—
S. Atlantic	91	68	108	2,260	1,651	673	1,194	2,042	33,667	51,102	4	13	30	482	478
Delaware	—	0	3	18	26	29	16	37	571	695	—	0	1	3	6
District of Columbia	—	0	5	—	40	—	50	88	1,524	1,589	—	0	2	—	5
Florida	50	36	59	1,184	698	223	415	507	12,913	14,764	2	4	10	165	120
Georgia	34	13	67	595	413	1	253	876	5,891	9,430	—	3	9	103	97
Maryland§	6	5	10	153	157	118	121	212	3,523	3,792	1	1	6	57	72
North Carolina	N	0	0	N	N	—	0	542	—	8,364	—	1	17	57	49
South Carolina§	—	2	8	53	72	177	169	414	4,692	5,746	—	1	5	32	44
Virginia§	1	8	31	229	206	116	150	308	4,234	6,253	—	1	6	42	67
West Virginia	—	1	5	28	39	9	11	26	319	469	1	0	3	23	18
E.S. Central	4	8	20	210	271	316	519	714	16,095	18,475	3	3	9	107	96
Alabama§	—	4	12	98	154	—	149	216	4,115	6,166	—	0	4	25	16
Kentucky	N	0	0	N	N	135	84	153	2,313	2,698	—	0	5	15	6
Mississippi	N	0	0	N	N	—	145	253	4,569	4,348	—	0	1	—	11
Tennessee§	4	4	13	112	117	181	160	273	5,098	5,263	3	2	6	67	63
W.S. Central	14	9	22	246	224	338	880	1,382	26,854	31,581	3	2	22	78	88
Arkansas§	4	2	8	78	72	127	83	134	2,713	2,872	—	0	2	13	11
Louisiana	—	2	8	75	87	126	155	420	4,396	5,841	1	0	1	12	8
Oklahoma	10	4	18	93	65	85	70	613	3,049	2,940	2	1	20	52	62
Texas§	N	0	0	N	N	—	562	725	16,696	19,928	—	0	1	1	7
Mountain	31	27	62	788	847	145	170	313	4,353	7,159	2	5	11	162	210
Arizona	2	3	10	111	71	25	46	82	871	2,137	—	1	7	54	87
Colorado	26	9	27	281	306	—	57	152	1,453	2,153	—	1	6	51	39
Idaho§	3	3	14	92	98	—	2	13	53	100	1	0	1	4	12
Montana§	—	2	10	71	49	—	1	6	47	72	—	0	1	1	2
Nevada§	—	2	8	57	67	91	31	86	1,098	1,445	1	0	2	13	11
New Mexico§	—	1	8	54	59	27	23	52	657	862	—	0	3	16	31
Utah	—	5	18	91	173	2	5	15	126	314	—	1	2	20	27
Wyoming§	—	1	4	31	24	—	2	7	48	76	—	0	2	3	1
Pacific	61	52	130	1,515	1,700	341	558	775	18,036	19,438	1	2	8	93	103
Alaska	—	2	10	85	48	—	18	40	803	322	—	0	4	20	14
California	41	34	59	1,018	1,146	273	472	658	15,065	16,004	—	0	3	20	38
Hawaii	—	0	2	9	27	—	12	19	381	377	—	0	3	18	13
Oregon§	8	7	17	196	275	37	21	48	633	734	1	1	3	32	36
Washington	12	7	74	207	204	31	44	81	1,154	2,001	—	0	2	3	2
American Samoa	—	0	0	—	—	—	0	0	—	3	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	1	15	—	45	—	0	0	—	—
Puerto Rico	—	2	15	49	114	1	4	24	162	180	—	0	1	1	—
U.S. Virgin Islands	—	0	0	—	—	—	2	7	78	81	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 2008 and 2009 are provisional.
† Data for *H. influenzae* (age <5 yrs for serotype b, nonserotype b, and unknown serotype) are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 15, 2009, and August 9, 2008 (32nd week)*

	Hepatitis (viral, acute), by type†										Legionellosis				
	A					B									
	Current	Previous 52 weeks		Cum	Cum	Current	Previous 52 weeks		Cum	Cum	Current	Previous 52 weeks		Cum	Cum
Reporting area	week	Med	Max	2009	2008	week	Med	Max	2009	2008	week	Med	Max	2009	2008
United States	26	36	89	1,127	1,640	38	66	197	1,893	2,308	96	50	110	1,561	1,681
New England	—	2	8	52	80	—	1	4	21	50	4	3	18	75	106
Connecticut	—	0	4	14	16	—	0	3	8	20	2	1	5	33	18
Maine§	—	0	5	1	4	—	0	2	7	9	2	0	2	4	4
Massachusetts	—	1	3	29	42	—	0	2	3	14	—	1	5	25	47
New Hampshire	—	0	2	3	6	—	0	2	3	3	—	0	4	7	18
Rhode Island§	—	0	2	3	10	—	0	1	—	3	—	0	14	4	14
Vermont§	—	0	1	2	2	—	0	1	—	1	—	0	1	2	5
Mid. Atlantic	1	5	13	139	185	1	7	17	199	286	43	15	59	599	523
New Jersey	—	1	5	21	44	—	1	5	44	83	—	3	14	90	65
New York (Upstate)	—	1	4	29	38	—	1	11	38	40	29	5	24	192	148
New York City	1	2	6	48	63	—	1	4	39	63	1	2	20	115	64
Pennsylvania	—	1	4	41	40	1	2	8	78	100	13	6	25	202	246
E.N. Central	—	5	17	153	227	1	9	21	239	303	19	9	29	269	392
Illinois	—	1	12	71	86	—	1	7	29	114	—	1	13	26	48
Indiana	—	0	3	11	12	—	1	18	40	23	—	1	5	22	33
Michigan	—	1	5	40	79	—	3	8	87	86	2	2	10	57	114
Ohio	—	1	4	26	27	1	2	13	61	66	17	4	17	159	178
Wisconsin	—	0	3	5	23	—	0	4	22	14	—	0	6	5	19
W.N. Central	—	2	16	79	193	—	2	16	94	48	—	2	8	48	76
Iowa	—	1	3	23	91	—	0	3	17	13	—	0	2	13	10
Kansas	—	0	1	7	12	—	0	2	4	6	—	0	1	2	1
Minnesota	—	0	12	13	26	—	0	11	17	4	—	0	3	6	8
Missouri	—	0	3	18	23	—	1	5	44	19	—	1	5	19	41
Nebraska§	—	0	3	16	39	—	0	2	11	5	—	0	1	7	15
North Dakota	—	0	2	—	—	—	0	1	—	1	—	0	3	1	—
South Dakota	—	0	1	2	2	—	0	1	1	—	—	0	1	—	1
S. Atlantic	4	7	15	252	226	10	18	32	579	574	12	9	22	280	276
Delaware	—	0	1	3	6	U	0	1	U	U	2	0	5	10	6
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	—	9
Florida	1	4	8	116	84	5	6	11	189	199	4	3	7	95	85
Georgia	1	1	4	42	30	2	3	9	93	109	—	1	5	32	24
Maryland§	—	0	4	27	30	—	1	5	45	53	4	2	10	64	81
North Carolina	—	1	4	24	42	2	1	19	130	51	—	0	7	39	14
South Carolina§	—	0	3	23	7	—	1	4	27	45	—	0	1	5	6
Virginia§	2	0	6	17	23	1	1	10	49	70	1	1	5	31	33
West Virginia	—	0	1	—	4	—	1	19	46	47	1	0	3	4	18
E.S. Central	—	1	5	28	48	1	7	11	186	234	9	2	5	69	78
Alabama§	—	0	2	7	8	—	2	7	56	62	—	0	1	6	11
Kentucky	—	0	2	5	17	—	2	7	47	59	1	1	3	29	39
Mississippi	—	0	1	7	4	—	1	3	16	26	—	0	1	1	1
Tennessee§	—	0	4	9	19	1	2	6	67	87	8	1	4	33	27
W.S. Central	3	3	43	102	157	8	11	99	284	461	—	1	21	42	46
Arkansas§	—	0	1	4	5	—	1	5	26	33	—	0	2	3	7
Louisiana	—	0	2	3	8	—	1	4	28	59	—	0	1	2	8
Oklahoma	2	0	6	3	7	4	2	17	60	64	—	0	6	3	3
Texas§	1	3	37	92	137	4	6	76	170	305	—	1	19	34	28
Mountain	1	3	8	96	145	2	3	7	81	130	—	2	8	64	49
Arizona	—	2	6	43	75	—	1	4	30	52	—	0	3	27	14
Colorado	1	0	5	31	26	—	0	2	15	21	—	0	2	6	3
Idaho§	—	0	1	2	14	—	0	2	4	5	—	0	1	1	2
Montana§	—	0	1	5	—	—	0	0	—	2	—	0	2	4	4
Nevada§	—	0	3	6	5	2	0	3	19	29	—	0	2	9	6
New Mexico§	—	0	1	5	15	—	0	2	5	7	—	0	2	1	5
Utah	—	0	2	4	7	—	0	3	5	9	—	0	4	15	15
Wyoming§	—	0	0	—	3	—	0	2	3	5	—	0	1	1	—
Pacific	17	7	18	226	379	15	7	36	210	222	9	3	12	115	135
Alaska	—	0	1	6	3	—	0	2	5	7	—	0	1	3	1
California	16	5	17	173	309	11	5	28	150	151	9	3	9	90	103
Hawaii	—	0	2	4	10	—	0	1	3	6	—	0	1	1	5
Oregon§	—	0	2	13	22	1	1	4	26	29	—	0	2	7	12
Washington	1	1	4	30	35	3	1	8	26	29	—	0	4	14	14
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	15	18	—	0	5	10	34	—	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 2008 and 2009 are 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 August 15, 2009, and August 9, 2008 (32nd week)*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All groups				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	472	539	1,637	14,471	20,101	24	23	46	663	673	13	16	48	590	827
New England	58	107	394	2,275	7,774	1	1	5	26	34	—	0	4	20	23
Connecticut	—	0	105	—	2,770	1	0	4	5	9	—	0	1	2	1
Maine§	58	8	73	432	223	—	0	1	1	1	—	0	1	3	4
Massachusetts	—	28	175	1,041	3,347	—	0	4	16	15	—	0	3	11	15
New Hampshire	—	14	60	574	1,117	—	0	1	1	3	—	0	1	1	2
Rhode Island§	—	0	78	54	118	—	0	1	1	2	—	0	1	2	1
Vermont§	—	5	35	174	199	—	0	1	2	4	—	0	1	1	—
Mid. Atlantic	354	243	1,401	8,799	7,939	6	5	17	154	176	—	2	5	64	89
New Jersey	—	36	225	2,083	2,573	—	0	4	—	42	—	0	2	8	12
New York (Upstate)	199	87	1,368	2,376	2,394	4	1	10	32	18	—	0	2	16	23
New York City	—	3	34	57	474	2	3	11	91	90	—	0	2	11	18
Pennsylvania	155	53	500	4,283	2,498	—	1	4	31	26	—	1	4	29	36
E.N. Central	5	20	126	1,011	1,607	—	3	6	85	102	—	3	8	97	145
Illinois	—	0	8	51	88	—	1	4	35	53	—	1	6	25	51
Indiana	—	0	6	15	19	—	0	1	7	4	—	0	3	23	21
Michigan	—	1	8	43	41	—	0	3	17	12	—	0	5	17	23
Ohio	3	1	5	24	20	—	1	5	23	21	—	0	3	26	32
Wisconsin	2	16	116	878	1,439	—	0	2	3	12	—	0	1	6	18
W.N. Central	2	5	336	119	350	—	1	7	32	39	2	1	9	48	74
Iowa	—	1	11	53	85	—	0	3	5	3	—	0	1	6	14
Kansas	—	0	4	13	6	—	0	2	3	4	—	0	2	8	4
Minnesota	2	1	326	41	249	—	0	7	13	18	—	0	4	9	21
Missouri	—	0	2	4	2	—	0	2	7	8	2	0	2	17	23
Nebraska§	—	0	3	7	5	—	0	1	3	6	—	0	1	5	10
North Dakota	—	0	10	—	—	—	0	0	—	—	—	0	3	1	1
South Dakota	—	0	1	1	3	—	0	1	1	—	—	0	1	2	1
S. Atlantic	45	65	200	2,085	2,248	5	6	15	207	173	2	2	9	109	116
Delaware	10	12	61	604	542	—	0	1	2	2	—	0	1	2	1
District of Columbia	—	0	5	—	42	—	0	2	—	2	—	0	0	—	—
Florida	10	1	6	36	31	2	1	7	61	27	2	1	4	41	40
Georgia	—	0	6	34	28	—	1	5	43	41	—	0	2	20	14
Maryland§	20	30	130	990	1,129	3	1	8	51	48	—	0	1	5	12
North Carolina	—	1	14	52	6	—	0	5	21	18	—	0	5	18	11
South Carolina§	—	0	3	17	15	—	0	1	2	7	—	0	1	9	18
Virginia§	5	13	61	288	357	—	1	4	25	27	—	0	2	9	16
West Virginia	—	0	17	64	98	—	0	1	2	1	—	0	2	5	4
E.S. Central	1	0	3	14	31	—	1	3	21	11	—	0	3	19	38
Alabama§	—	0	1	2	8	—	0	3	6	3	—	0	1	5	5
Kentucky	—	0	1	1	4	—	0	2	8	3	—	0	1	4	7
Mississippi	—	0	0	—	1	—	0	0	—	1	—	0	1	1	9
Tennessee§	1	0	3	11	18	—	0	3	7	4	—	0	1	9	17
W.S. Central	—	1	21	18	57	4	1	10	31	37	1	1	12	54	87
Arkansas§	—	0	0	—	—	—	0	1	2	—	—	0	2	5	13
Louisiana	—	0	1	—	1	—	0	1	1	2	—	0	3	10	19
Oklahoma	—	0	2	—	—	—	0	2	2	2	—	0	3	4	10
Texas§	—	1	21	18	56	4	1	10	26	33	1	1	9	35	45
Mountain	—	1	13	24	31	—	0	4	19	18	1	1	4	46	43
Arizona	—	0	2	3	5	—	0	2	4	7	1	0	2	12	5
Colorado	—	0	1	3	2	—	0	3	7	3	—	0	2	13	9
Idaho§	—	0	2	7	5	—	0	1	1	—	—	0	1	5	4
Montana§	—	0	13	2	3	—	0	3	4	—	—	0	2	4	4
Nevada§	—	0	2	8	6	—	0	1	—	4	—	0	2	4	7
New Mexico§	—	0	2	—	6	—	0	1	—	2	—	0	1	3	6
Utah	—	0	1	—	2	—	0	2	3	2	—	0	1	1	6
Wyoming§	—	0	1	1	2	—	0	0	—	—	—	0	2	4	2
Pacific	7	3	13	126	64	8	3	10	88	83	7	4	14	133	212
Alaska	—	0	2	3	3	—	0	1	3	3	—	0	2	2	5
California	6	2	11	110	38	5	2	8	63	61	6	2	8	88	157
Hawaii	N	0	0	N	N	—	0	1	1	2	—	0	1	3	4
Oregon§	—	0	3	9	19	1	0	2	9	4	1	0	7	27	25
Washington	1	0	12	4	4	2	0	3	12	13	—	0	6	13	21
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	—	1	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	1	2	—	0	1	—	2
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 2008 and 2009 are provisional.
† Data for meningococcal disease, invasive caused by serogroups A, C, Y, and W-135; serogroup B; other serogroup; and unknown serogroup are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 15, 2009, and August 9, 2008 (32nd week)*

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	103	267	1,697	7,800	5,196	53	67	138	2,140	2,551	14	33	179	852	1,232
New England	1	15	30	379	605	9	8	15	210	234	—	0	2	7	4
Connecticut	—	1	4	22	37	8	3	10	93	111	—	0	0	—	—
Maine†	—	1	10	64	22	1	1	5	34	31	—	0	2	4	1
Massachusetts	—	9	26	224	469	—	0	0	—	—	—	0	1	3	1
New Hampshire	1	1	7	50	20	—	1	7	23	25	—	0	0	—	1
Rhode Island†	—	0	5	11	49	—	0	3	27	21	—	0	2	—	1
Vermont†	—	0	2	8	8	—	1	4	33	46	—	0	0	—	—
Mid. Atlantic	15	24	64	676	611	11	15	27	370	560	2	1	29	39	88
New Jersey	—	4	12	117	128	—	0	0	—	—	—	0	4	—	61
New York (Upstate)	3	5	41	118	221	11	8	20	252	296	1	0	29	6	10
New York City	—	0	21	48	49	—	0	2	—	11	—	0	4	21	8
Pennsylvania	12	12	33	393	213	—	5	17	118	253	1	0	2	12	9
E.N. Central	26	50	238	1,582	870	15	2	28	133	125	—	1	15	44	90
Illinois	—	13	45	260	151	8	1	20	59	45	—	1	9	29	67
Indiana	—	4	158	142	28	—	0	6	7	3	—	0	3	1	2
Michigan	6	10	21	380	129	2	1	9	40	48	—	0	2	5	2
Ohio	18	19	57	719	488	5	0	7	27	29	—	0	3	9	19
Wisconsin	2	3	10	81	74	N	0	0	N	N	—	0	0	—	—
W.N. Central	6	33	872	1,119	438	5	5	17	163	175	5	4	17	148	299
Iowa	—	6	21	116	66	—	0	5	9	14	—	0	2	3	6
Kansas	—	4	12	118	35	—	1	6	55	44	—	0	1	1	—
Minnesota	—	0	808	165	130	1	0	11	33	33	1	0	0	1	—
Missouri	6	18	51	597	142	4	1	8	35	28	4	4	17	136	278
Nebraska†	—	4	32	93	45	—	0	2	—	25	—	0	2	7	12
North Dakota	—	0	24	16	1	—	0	9	4	17	—	0	1	—	—
South Dakota	—	0	10	14	19	—	0	4	27	14	—	0	0	—	3
S. Atlantic	20	28	71	986	498	4	25	111	956	1,106	2	14	54	341	370
Delaware	—	0	3	8	7	—	0	0	—	—	—	0	3	7	23
District of Columbia	—	0	2	—	2	—	0	0	—	—	—	0	0	—	6
Florida	13	8	32	339	145	—	0	95	109	138	1	0	2	5	8
Georgia	—	3	11	106	57	—	2	71	225	249	—	1	6	31	55
Maryland†	1	3	10	69	62	—	6	13	209	282	—	1	7	30	51
North Carolina	5	0	65	204	77	N	2	4	N	N	—	9	36	212	126
South Carolina†	1	4	17	145	68	—	0	0	—	—	—	0	9	14	18
Virginia†	—	4	24	99	74	—	11	24	338	376	1	2	9	39	77
West Virginia	—	0	5	16	6	4	2	6	75	61	—	0	1	3	6
E.S. Central	5	14	33	482	189	1	2	7	68	114	2	4	19	153	195
Alabama†	—	3	19	189	25	—	0	0	—	—	1	1	6	35	47
Kentucky	—	6	15	145	45	1	1	4	34	28	—	0	1	1	1
Mississippi	—	1	4	31	73	—	0	2	—	2	—	0	1	5	7
Tennessee†	5	3	14	117	46	—	1	6	34	84	1	3	15	112	140
W.S. Central	9	56	389	1,515	744	—	0	7	31	67	2	2	161	100	160
Arkansas†	1	4	38	139	51	—	0	5	23	40	—	0	61	44	30
Louisiana	—	2	7	71	50	—	0	0	—	—	—	0	2	2	3
Oklahoma	3	0	45	21	19	—	0	6	7	25	2	0	98	43	100
Texas†	5	43	304	1,284	624	—	0	1	1	2	—	0	6	11	27
Mountain	12	17	31	527	534	—	2	9	56	48	1	1	3	18	24
Arizona	5	3	8	121	145	N	0	0	N	N	1	0	2	4	8
Colorado	7	5	12	182	95	—	0	0	—	—	—	0	0	—	1
Idaho†	—	1	5	47	22	—	0	2	—	6	—	0	0	—	1
Montana†	—	0	4	12	67	—	0	4	16	5	—	0	2	8	3
Nevada†	—	0	3	8	21	—	0	5	3	3	—	0	2	1	—
New Mexico†	—	1	10	36	30	—	0	2	16	21	—	0	1	1	2
Utah	—	4	19	113	144	—	0	6	4	3	—	0	1	1	3
Wyoming†	—	0	5	8	10	—	0	4	17	10	—	0	2	3	6
Pacific	9	22	98	534	707	8	4	13	153	122	—	0	1	2	2
Alaska	—	4	21	56	80	—	0	4	19	12	N	0	0	N	N
California	—	6	19	128	330	8	4	12	131	104	—	0	1	2	—
Hawaii	—	0	3	19	7	—	0	0	—	—	N	0	0	N	N
Oregon†	2	4	14	156	106	—	0	2	3	6	—	0	1	—	2
Washington	7	6	76	175	184	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	1	—	—	1	3	24	39	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 2008 and 2009 are provisional.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 15, 2009, and August 9, 2008 (32nd week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	756	886	2,323	23,661	26,024	63	81	255	2,098	2,729	176	318	1,268	9,175	11,552
New England	—	32	270	1,266	1,486	2	3	46	132	162	—	3	29	145	143
Connecticut	—	0	244	244	491	—	0	46	46	47	—	0	24	24	40
Maine§	—	2	7	80	93	2	0	3	14	8	—	0	6	2	11
Massachusetts	—	22	41	631	701	—	1	6	41	75	—	3	15	101	78
New Hampshire	—	3	42	189	93	—	1	3	23	14	—	0	3	7	4
Rhode Island§	—	2	11	87	55	—	0	1	—	7	—	0	1	8	8
Vermont§	—	1	6	35	53	—	0	6	8	11	—	0	2	3	2
Mid. Atlantic	76	92	182	2,604	3,323	9	6	19	141	300	10	55	76	1,731	1,484
New Jersey	—	11	41	222	802	—	1	5	21	96	—	16	35	357	476
New York (Upstate)	44	24	66	735	764	9	3	12	75	88	4	5	23	135	404
New York City	4	20	49	663	740	—	1	5	39	33	1	9	23	252	492
Pennsylvania	28	29	66	984	1,017	—	0	4	6	83	5	23	58	987	112
E.N. Central	52	91	153	2,741	3,075	13	13	74	367	427	25	73	132	1,747	2,167
Illinois	—	25	50	683	904	—	1	10	65	80	—	13	34	344	622
Indiana	2	8	50	206	347	—	1	13	33	42	—	1	21	35	463
Michigan	7	18	33	563	578	2	3	43	83	81	1	5	24	141	70
Ohio	43	27	52	916	789	11	3	15	82	105	24	39	80	907	781
Wisconsin	—	12	30	373	457	—	3	16	104	119	—	11	42	320	231
W.N. Central	26	52	109	1,596	1,688	5	12	37	371	503	10	15	49	539	566
Iowa	5	7	16	256	276	2	2	13	100	138	1	2	12	46	102
Kansas	—	7	19	213	267	—	1	7	25	28	—	3	11	145	19
Minnesota	—	13	51	370	447	—	2	14	112	96	—	3	14	49	178
Missouri	21	11	48	337	427	3	2	10	68	110	9	3	39	279	160
Nebraska§	—	5	41	235	150	—	2	7	49	100	—	0	3	15	2
North Dakota	—	0	30	40	27	—	0	28	3	1	—	0	9	3	30
South Dakota	—	3	22	145	94	—	0	5	14	30	—	0	1	2	75
S. Atlantic	278	262	457	6,423	6,223	14	12	48	374	468	38	47	85	1,438	2,020
Delaware	—	2	8	56	92	—	0	2	10	8	2	1	8	60	7
District of Columbia	—	0	2	—	44	—	0	1	—	5	—	0	2	—	13
Florida	157	103	189	2,960	2,604	6	3	10	100	88	8	9	24	277	574
Georgia	44	39	96	1,156	1,208	1	1	4	39	56	7	13	30	406	766
Maryland§	22	16	35	426	497	3	2	10	51	78	8	6	13	232	53
North Carolina	26	27	106	775	527	2	2	21	72	47	9	6	27	249	64
South Carolina§	1	16	54	384	565	—	0	3	19	28	—	4	14	77	414
Virginia§	20	20	88	521	553	2	3	27	67	131	4	5	59	131	106
West Virginia	8	4	23	145	133	—	0	3	16	27	—	0	3	6	23
E.S. Central	34	53	140	1,510	1,770	1	5	12	133	164	7	21	58	544	1,259
Alabama§	6	16	49	395	492	—	1	4	31	43	—	4	12	95	299
Kentucky	8	10	18	290	269	1	2	7	47	52	1	2	25	135	205
Mississippi	4	13	57	396	580	—	0	1	6	4	—	1	6	22	259
Tennessee§	16	15	62	429	429	—	2	6	49	65	6	12	48	292	496
W.S. Central	49	104	1,333	2,214	3,511	3	3	139	74	200	23	65	967	1,652	2,562
Arkansas§	24	12	38	347	395	3	1	5	23	32	10	8	21	222	315
Louisiana	5	18	54	428	600	—	0	1	—	6	1	5	17	99	446
Oklahoma	20	14	102	343	407	—	0	82	14	19	7	5	61	167	70
Texas§	—	53	1,204	1,096	2,109	—	2	55	37	143	5	46	889	1,164	1,731
Mountain	66	57	103	1,675	1,973	6	10	40	279	309	28	26	54	693	508
Arizona	19	19	43	555	578	3	1	4	39	40	22	16	38	512	237
Colorado	34	12	26	411	455	1	3	18	101	87	4	2	11	59	61
Idaho§	2	3	9	97	102	2	2	15	44	55	1	0	2	6	7
Montana§	—	2	7	73	69	—	0	3	15	26	—	0	5	13	4
Nevada§	11	4	12	156	142	—	0	3	16	13	1	1	13	38	130
New Mexico§	—	6	18	177	378	—	1	3	18	36	—	2	12	54	49
Utah	—	6	15	163	202	—	1	7	41	42	—	0	3	11	17
Wyoming§	—	1	6	43	47	—	0	2	5	10	—	0	1	—	3
Pacific	175	125	537	3,632	2,975	10	9	31	227	196	35	28	82	686	843
Alaska	—	2	9	69	31	—	0	1	—	4	—	0	1	3	—
California	125	94	516	2,755	2,163	2	5	15	131	100	30	22	75	548	732
Hawaii	2	5	13	149	164	—	0	1	2	11	—	1	4	21	25
Oregon§	6	7	20	249	266	—	1	7	26	27	—	1	10	24	42
Washington	42	11	85	410	351	8	3	16	68	54	5	3	11	90	44
American Samoa	—	0	1	—	1	—	0	0	—	—	—	0	2	3	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	—	8	—	0	0	—	—	—	0	1	—	14
Puerto Rico	—	9	40	188	397	—	0	0	—	—	—	0	2	5	19
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 2008 and 2009 are provisional.
† Includes *E. coli* O157:H7; Shiga toxin-positive, serogroup non-O157; and Shiga toxin-positive, not serogrouped.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 15, 2009, and August 9, 2008 (32nd week)*

Reporting area	Streptococcal diseases, invasive, group A					*Streptococcus pneumoniae,* invasive disease, nondrug resistant† Age <5 years				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	28	101	239	3,661	3,864	4	36	122	1,103	1,163
New England	1	5	28	220	287	—	1	12	40	57
Connecticut	1	0	21	63	79	—	0	11	—	—
Maine§	—	0	2	13	20	—	0	1	3	1
Massachusetts	—	3	10	91	136	—	1	4	28	42
New Hampshire	—	1	4	31	19	—	0	2	7	7
Rhode Island§	—	0	2	9	21	—	0	2	—	7
Vermont§	—	0	3	13	12	—	0	1	2	—
Mid. Atlantic	4	19	43	748	799	1	4	33	169	152
New Jersey	—	3	6	98	145	—	1	4	31	45
New York (Upstate)	2	7	25	245	251	1	2	17	80	68
New York City	—	4	12	143	145	—	0	31	58	39
Pennsylvania	2	6	18	262	258	N	0	2	N	N
E.N. Central	4	17	42	695	754	—	6	18	160	211
Illinois	—	5	12	191	203	—	1	5	22	61
Indiana	—	3	23	113	99	—	0	13	19	22
Michigan	—	3	11	111	129	—	1	5	45	55
Ohio	4	4	13	177	206	—	1	6	48	37
Wisconsin	—	2	10	103	117	—	1	4	26	36
W.N. Central	—	6	37	306	284	—	2	11	97	58
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	1	5	37	32	N	0	1	N	N
Minnesota	—	0	34	139	136	—	0	10	54	14
Missouri	—	2	8	67	65	—	0	4	29	27
Nebraska§	—	1	3	32	27	—	0	1	5	6
North Dakota	—	0	4	11	8	—	0	3	4	5
South Dakota	—	0	3	20	16	—	0	2	5	6
S. Atlantic	14	22	47	818	778	1	6	16	209	224
Delaware	—	0	1	9	6	—	0	0	—	—
District of Columbia	—	0	2	—	8	N	0	0	N	N
Florida	9	6	12	199	176	—	1	6	48	42
Georgia	2	5	13	191	176	1	2	6	52	59
Maryland§	3	3	12	131	140	—	1	4	47	43
North Carolina	—	2	12	81	98	N	0	0	N	N
South Carolina§	—	1	5	50	45	—	1	6	32	40
Virginia§	—	3	9	123	100	—	0	4	18	35
West Virginia	—	1	4	34	29	—	0	3	12	5
E.S. Central	—	4	10	140	134	2	1	6	44	59
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	5	25	29	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	—	8
Tennessee§	—	3	9	115	105	2	1	6	44	51
W.S. Central	2	9	79	303	329	—	6	46	187	179
Arkansas§	—	0	2	14	7	—	0	4	19	10
Louisiana	—	0	3	9	13	—	0	3	13	10
Oklahoma	—	3	20	103	75	—	1	7	36	49
Texas§	2	6	59	177	234	—	4	34	119	110
Mountain	3	10	22	324	405	—	4	16	162	188
Arizona	—	3	7	107	142	—	2	10	83	86
Colorado	2	3	9	106	100	—	1	4	31	42
Idaho§	1	0	2	5	12	—	0	2	6	3
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	5	7	—	0	1	—	3
New Mexico§	—	2	7	60	101	—	0	4	15	25
Utah	—	1	6	40	37	—	0	5	27	28
Wyoming§	—	0	1	1	6	—	0	1	—	1
Pacific	—	4	10	107	94	—	1	6	35	35
Alaska	—	1	3	28	23	—	0	5	29	22
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	3	8	79	71	—	0	2	6	13
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 2008 and 2009 are provisional.
† Includes cases of invasive pneumococcal disease, in children aged <5 years, caused by *S. pneumoniae*, which is susceptible or for which susceptibility testing is not available (NNDSS event code 11717).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 15, 2009, and August 9, 2008 (32nd week)*

	Streptococcus pneumoniae, invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages					Aged <5 years									
		Previous 52 weeks					Previous 52 weeks					Previous 52 weeks			
Reporting area	Current week	Med	Max	Cum 2009	Cum 2008	Current week	Med	Max	Cum 2009	Cum 2008	Current week	Med	Max	Cum 2009	Cum 2008
United States	16	60	276	1,903	2,119	4	9	21	296	320	113	261	452	7,760	7,681
New England	—	1	48	33	45	—	0	5	2	6	8	5	15	205	198
Connecticut	—	0	48	—	—	—	0	5	—	—	—	1	5	39	18
Maine§	—	0	2	8	14	—	0	1	—	—	—	0	1	1	8
Massachusetts	—	0	1	2	—	—	0	1	2	—	8	4	11	144	141
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	11	12
Rhode Island§	—	0	6	7	18	—	0	1	—	4	—	0	5	10	14
Vermont§	—	0	2	11	13	—	0	0	—	2	—	0	2	—	5
Mid. Atlantic	2	4	14	115	218	1	0	3	20	19	25	35	51	1,141	1,016
New Jersey	—	0	0	—	—	—	0	0	—	—	2	4	13	140	138
New York (Upstate)	1	1	10	50	46	—	0	2	10	6	3	2	8	77	86
New York City	—	0	4	3	90	—	0	2	—	1	17	23	40	717	619
Pennsylvania	1	1	8	62	82	1	0	2	10	12	3	6	12	207	173
E.N. Central	2	10	41	416	457	1	1	7	60	62	13	23	44	626	698
Illinois	N	0	0	N	N	N	0	0	N	N	3	8	19	184	278
Indiana	—	3	32	134	159	—	0	6	18	19	6	2	10	97	81
Michigan	—	0	2	19	15	—	0	1	2	2	3	3	18	142	125
Ohio	2	7	18	263	283	1	1	4	40	41	—	6	15	174	182
Wisconsin	—	0	0	—	—	—	0	0	—	—	1	1	4	29	32
W.N. Central	—	2	161	90	150	—	0	3	20	30	—	6	14	172	250
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	12	12
Kansas	—	1	5	38	58	—	0	2	13	3	—	0	3	18	20
Minnesota	—	0	156	—	22	—	0	3	—	22	—	2	6	40	63
Missouri	—	1	5	40	64	—	0	1	5	2	—	3	10	83	148
Nebraska§	—	0	0	—	—	—	0	0	—	—	—	0	3	15	7
North Dakota	—	0	3	10	2	—	0	0	—	—	—	0	1	3	—
South Dakota	—	0	2	2	4	—	0	2	2	3	—	0	1	1	—
S. Atlantic	10	26	53	910	852	2	4	14	135	136	45	63	262	1,931	1,671
Delaware	—	0	2	13	3	—	0	0	—	—	—	0	3	22	10
District of Columbia	N	0	0	N	N	N	0	0	N	N	—	3	9	96	86
Florida	6	15	36	533	474	1	2	13	85	87	—	19	31	601	632
Georgia	3	8	25	275	289	1	1	5	43	41	6	14	227	419	349
Maryland§	—	0	1	4	4	—	0	0	—	1	11	6	16	189	204
North Carolina	N	0	0	N	N	N	0	0	N	N	15	9	19	340	164
South Carolina§	—	0	0	—	—	—	0	0	—	—	3	2	6	65	54
Virginia§	N	0	0	N	N	N	0	0	N	N	10	5	16	195	165
West Virginia	1	2	13	85	82	—	0	3	7	7	—	0	2	4	7
E.S. Central	—	5	25	188	231	—	1	3	27	42	8	23	36	700	653
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	16	266	273
Kentucky	—	1	5	53	56	—	0	2	7	9	1	1	10	37	50
Mississippi	—	0	3	—	28	—	0	1	—	8	—	4	18	128	92
Tennessee§	—	3	23	135	147	—	0	3	20	25	7	8	19	269	238
W.S. Central	1	1	6	68	74	—	0	3	14	12	6	49	80	1,465	1,301
Arkansas§	1	0	5	38	13	—	0	3	9	3	1	4	35	124	98
Louisiana	—	1	5	30	61	—	0	1	5	9	5	13	40	303	351
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	7	35	46
Texas§	—	0	0	—	—	—	0	0	—	—	—	31	46	1,003	806
Mountain	1	2	7	81	90	—	0	3	17	11	—	7	18	170	400
Arizona	—	0	0	—	—	—	0	0	—	—	—	2	8	22	207
Colorado	—	0	0	—	—	—	0	0	—	—	—	1	5	55	97
Idaho§	N	0	1	N	N	N	0	1	N	N	—	0	2	3	2
Montana§	—	0	1	—	—	—	0	0	—	—	—	0	7	—	—
Nevada§	1	1	4	30	43	—	0	2	7	5	—	1	7	60	50
New Mexico§	—	0	0	—	—	—	0	0	—	—	—	1	5	28	25
Utah	—	1	6	42	46	—	0	3	9	6	—	0	2	—	16
Wyoming§	—	0	2	9	1	—	0	1	1	—	—	0	1	2	3
Pacific	—	0	1	2	2	—	0	1	1	2	8	46	67	1,350	1,494
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	1
California	N	0	0	N	N	N	0	0	N	N	4	41	59	1,241	1,351
Hawaii	—	0	1	2	2	—	0	1	1	2	—	0	3	19	14
Oregon§	N	0	0	N	N	N	0	0	N	N	3	1	4	29	8
Washington	N	0	0	N	N	N	0	0	N	N	1	2	8	61	120
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	—	—	5	3	11	126	91
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 2008 and 2009 are provisional.
† Includes cases of invasive pneumococcal disease caused by drug-resistant *S. pneumoniae* (DRSP) (NNDSS event code 11720).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending August 15, 2009, and August 9, 2008 (32nd week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease† Neuroinvasive					West Nile virus disease† Nonneuroinvasive§				
	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008	Current week	Previous 52 weeks Med	Previous 52 weeks Max	Cum 2009	Cum 2008
United States	53	451	1,035	11,972	19,987	—	1	75	52	209	—	0	77	29	281
New England	—	10	46	186	1,089	—	0	2	—	1	—	0	1	—	2
Connecticut	—	0	21	—	552	—	0	2	—	1	—	0	1	—	2
Maine¶	—	0	11	—	174	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	1	1	—	—	0	1	—	—	—	0	0	—	—
New Hampshire	—	4	11	138	172	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	1	4	—	—	0	1	—	—	—	0	0	—	—
Vermont¶	—	2	17	43	191	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	14	38	58	1,016	1,586	—	0	8	2	10	—	0	4	—	3
New Jersey	N	0	0	N	N	—	0	2	—	—	—	0	1	—	1
New York (Upstate)	N	0	0	N	N	—	0	5	1	4	—	0	2	—	—
New York City	—	0	0	—	—	—	0	2	—	3	—	0	1	—	2
Pennsylvania	14	38	58	1,016	1,586	—	0	2	1	3	—	0	1	—	—
E.N. Central	21	154	254	4,100	4,862	—	0	8	—	5	—	0	3	—	6
Illinois	—	33	73	835	673	—	0	4	—	1	—	0	2	—	3
Indiana	—	0	19	193	—	—	0	1	—	1	—	0	1	—	—
Michigan	2	48	90	1,297	2,069	—	0	4	—	1	—	0	2	—	—
Ohio	18	42	91	1,398	1,568	—	0	3	—	2	—	0	1	—	—
Wisconsin	1	13	55	377	552	—	0	2	—	—	—	0	1	—	3
W.N. Central	3	22	114	658	793	—	0	6	3	21	—	0	21	6	68
Iowa	N	0	0	N	N	—	0	1	—	2	—	0	1	1	2
Kansas	—	5	22	176	314	—	0	2	—	5	—	0	3	2	8
Minnesota	—	0	0	—	—	—	0	2	1	—	—	0	2	—	5
Missouri	3	10	51	425	449	—	0	3	1	2	—	0	1	—	—
Nebraska¶	N	0	0	N	N	—	0	1	—	1	—	0	4	1	15
North Dakota	—	0	108	57	—	—	0	0	—	2	—	0	11	—	20
South Dakota	—	0	4	—	30	—	0	1	1	9	—	0	3	2	18
S. Atlantic	4	56	146	1,379	3,252	—	0	4	—	4	—	0	4	—	5
Delaware	—	0	4	8	26	—	0	0	—	—	—	0	0	—	1
District of Columbia	—	0	3	—	18	—	0	2	—	—	—	0	1	—	—
Florida	2	28	67	906	1,153	—	0	2	—	1	—	0	0	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	1	—	2
Maryland¶	N	0	0	N	N	—	0	2	—	1	—	0	3	—	1
North Carolina	N	0	0	N	N	—	0	1	—	1	—	0	1	—	—
South Carolina¶	—	4	54	154	579	—	0	0	—	—	—	0	1	—	—
Virginia¶	—	1	119	28	996	—	0	0	—	—	—	0	0	—	1
West Virginia	2	9	32	283	480	—	0	0	—	1	—	0	0	—	—
E.S. Central	—	14	28	358	830	—	0	7	11	15	—	0	6	4	31
Alabama¶	—	14	28	356	820	—	0	3	—	3	—	0	2	—	3
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	1	2	10	—	0	4	10	7	—	0	5	4	24
Tennessee¶	N	0	0	N	N	—	0	2	1	5	—	0	3	—	4
W.S. Central	7	94	747	3,247	6,037	—	0	8	14	28	—	0	6	1	31
Arkansas¶	—	4	47	96	469	—	0	1	1	5	—	0	0	—	2
Louisiana	—	1	6	64	55	—	0	3	3	5	—	0	5	—	9
Oklahoma	N	0	0	N	N	—	0	1	—	2	—	0	0	—	5
Texas¶	7	86	721	3,087	5,513	—	0	6	10	16	—	0	2	1	15
Mountain	4	33	83	922	1,454	—	0	12	17	26	—	0	22	13	69
Arizona	—	0	0	—	—	—	0	10	6	11	—	0	8	1	9
Colorado	4	13	44	353	582	—	0	4	2	6	—	0	10	7	22
Idaho¶	N	0	0	N	N	—	0	1	1	3	—	0	6	—	18
Montana¶	—	2	20	105	221	—	0	1	1	—	—	0	2	—	3
Nevada¶	N	0	0	N	N	—	0	2	6	4	—	0	1	4	6
New Mexico¶	—	2	20	134	157	—	0	1	—	1	—	0	1	—	—
Utah	—	12	31	330	484	—	0	2	—	1	—	0	5	—	8
Wyoming¶	—	0	1	—	10	—	0	1	1	—	—	0	2	1	3
Pacific	—	3	12	106	84	—	0	38	5	99	—	0	23	5	66
Alaska	—	2	11	83	42	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	37	5	99	—	0	18	5	60
Hawaii	—	1	4	23	42	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	2	—	—	—	0	4	—	6
Washington	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	1	3	—	55	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	8	23	276	398	—	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 2008 and 2009 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table I.
§ 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 August 15, 2009 (32nd week)

Reporting area	All causes, by age (years) All Ages	≥65	45–64	25–44	1–24	<1	P&I[†] Total
New England	518	355	117	27	9	10	52
Boston, MA	134	79	40	8	3	4	15
Bridgeport, CT	35	29	5	1	—	—	7
Cambridge, MA	15	13	1	—	—	1	1
Fall River, MA	28	21	6	—	1	—	5
Hartford, CT	46	28	11	4	3	—	1
Lowell, MA	26	22	4	—	—	—	1
Lynn, MA	7	6	1	—	—	—	—
New Bedford, MA	25	19	4	2	—	—	3
New Haven, CT	26	18	5	2	1	—	5
Providence, RI	52	35	11	2	1	3	2
Somerville, MA	4	2	1	1	—	—	—
Springfield, MA	35	24	7	3	—	1	2
Waterbury, CT	18	15	3	—	—	—	—
Worcester, MA	67	44	18	4	—	1	10
Mid. Atlantic	1,927	1,297	437	133	37	23	78
Albany, NY	34	26	5	3	—	—	1
Allentown, PA	28	21	3	4	—	—	1
Buffalo, NY	75	39	21	11	3	1	2
Camden, NJ	37	17	9	8	3	—	—
Elizabeth, NJ	10	8	2	—	—	—	2
Erie, PA	34	25	9	—	—	—	3
Jersey City, NJ	18	9	6	2	—	1	—
New York City, NY	972	667	220	62	16	7	42
Newark, NJ	25	12	7	4	1	1	—
Paterson, NJ	3	2	1	—	—	—	—
Philadelphia, PA	335	208	89	23	9	6	9
Pittsburgh, PA[§]	33	24	8	1	—	—	2
Reading, PA	25	16	6	2	—	1	—
Rochester, NY	132	99	20	6	2	5	5
Schenectady, NY	23	19	3	1	—	—	3
Scranton, PA	30	22	8	—	—	—	1
Syracuse, NY	55	44	7	3	1	—	4
Trenton, NJ	27	17	8	—	2	—	1
Utica, NY	18	14	3	1	—	—	2
Yonkers, NY	13	8	2	2	—	1	—
E.N. Central	1,409	966	308	76	29	30	65
Akron, OH	37	29	6	—	1	1	1
Canton, OH	36	29	7	—	—	—	4
Chicago, IL	U	U	U	U	U	U	U
Cincinnati, OH	82	44	20	8	4	6	7
Cleveland, OH	210	132	56	15	6	1	6
Columbus, OH	218	147	49	16	2	4	9
Dayton, OH	U	U	U	U	U	U	U
Detroit, MI	U	U	U	U	U	U	U
Evansville, IN	54	44	8	2	—	—	—
Fort Wayne, IN	65	49	11	—	3	2	3
Gary, IN	11	7	2	2	—	—	1
Grand Rapids, MI	51	31	15	3	1	1	3
Indianapolis, IN	217	138	51	14	6	8	8
Lansing, MI	36	26	9	1	—	—	—
Milwaukee, WI	83	60	18	3	1	1	7
Peoria, IL	52	33	14	2	1	2	4
Rockford, IL	64	49	11	3	1	—	2
South Bend, IN	46	31	10	3	—	2	—
Toledo, OH	65	43	16	3	2	1	4
Youngstown, OH	82	74	5	1	1	1	6
W.N. Central	588	379	134	47	11	16	34
Des Moines, IA	81	56	15	6	1	3	10
Duluth, MN	29	20	4	2	2	1	1
Kansas City, KS	22	14	5	2	1	—	—
Kansas City, MO	93	63	24	2	1	3	4
Lincoln, NE	42	36	3	2	1	—	4
Minneapolis, MN	60	35	16	4	2	3	4
Omaha, NE	84	55	21	7	1	—	2
St. Louis, MO	79	38	22	14	—	4	4
St. Paul, MN	45	31	10	4	—	—	5
Wichita, KS	53	31	14	4	2	2	—

Reporting area	All causes, by age (years) All Ages	≥65	45–64	25–44	1–24	<1	P&I[†] Total
S. Atlantic	1,263	752	347	95	33	36	71
Atlanta, GA	177	112	43	12	5	5	8
Baltimore, MD	136	85	29	11	5	6	11
Charlotte, NC	100	57	28	10	3	2	9
Jacksonville, FL	123	86	26	7	2	2	11
Miami, FL	184	114	46	15	4	5	6
Norfolk, VA	51	28	19	2	2	—	1
Richmond, VA	65	34	24	3	3	1	2
Savannah, GA	62	30	21	9	1	1	7
St. Petersburg, FL	42	25	9	3	1	4	5
Tampa, FL	178	112	47	12	6	1	9
Washington, D.C.	139	64	55	10	1	9	1
Wilmington, DE	6	5	—	1	—	—	1
E.S. Central	826	522	215	53	22	14	56
Birmingham, AL	135	81	36	12	5	1	10
Chattanooga, TN	92	69	16	5	—	2	4
Knoxville, TN	102	73	25	2	2	—	4
Lexington, KY	72	44	21	5	1	1	3
Memphis, TN	175	95	53	15	8	4	12
Mobile, AL	84	51	22	6	1	4	6
Montgomery, AL	36	28	7	—	—	1	5
Nashville, TN	130	81	35	8	5	1	12
W.S. Central	1,212	728	336	82	42	24	66
Austin, TX	96	55	32	7	1	1	9
Baton Rouge, LA	U	U	U	U	U	U	U
Corpus Christi, TX	52	37	10	5	—	—	4
Dallas, TX	181	100	59	7	6	9	7
El Paso, TX	71	39	24	7	1	—	3
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	369	219	98	27	20	5	26
Little Rock, AR	63	37	16	4	4	2	1
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	197	119	51	17	8	2	8
Shreveport, LA	56	38	14	1	1	2	3
Tulsa, OK	127	84	32	7	1	3	5
Mountain	895	584	200	72	21	15	42
Albuquerque, NM	U	U	U	U	U	U	U
Boise, ID	62	38	13	7	2	2	2
Colorado Springs, CO	48	32	9	6	—	1	2
Denver, CO	71	33	26	9	1	2	3
Las Vegas, NV	253	173	60	14	5	1	11
Ogden, UT	40	30	7	1	—	2	5
Phoenix, AZ	155	91	36	19	4	4	7
Pueblo, CO	23	19	2	1	1	—	—
Salt Lake City, UT	113	70	28	10	3	2	7
Tucson, AZ	130	98	19	5	5	1	5
Pacific	1,644	1,087	380	106	36	35	143
Berkeley, CA	10	9	1	—	—	—	1
Fresno, CA	119	74	28	12	4	1	13
Glendale, CA	37	30	6	1	—	—	12
Honolulu, HI	88	58	15	10	3	2	11
Long Beach, CA	64	38	18	4	2	2	5
Los Angeles, CA	221	142	50	9	9	11	19
Pasadena, CA	24	20	3	1	—	—	3
Portland, OR	119	72	40	5	—	2	4
Sacramento, CA	188	120	48	11	6	3	17
San Diego, CA	139	87	39	8	3	2	14
San Francisco, CA	120	78	22	15	3	2	8
San Jose, CA	159	112	31	7	3	6	18
Santa Cruz, CA	30	20	8	2	—	—	1
Seattle, WA	130	92	28	8	1	1	4
Spokane, WA	62	41	15	2	1	3	7
Tacoma, WA	134	94	28	11	1	—	6
Total[¶]	**10,282**	**6,670**	**2,474**	**691**	**240**	**203**	**607**

U: Unavailable. —:No reported cases.

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

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

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

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Data are compiled in the National Center for Public Health Informatics, Division of Integrated Surveillance Systems and Services. Address all inquiries about the *MMWR* Series, including material to be considered for publication, to Editor, *MMWR* Series, Mailstop E-90, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333 or to *mmwrq@cdc.gov.*

☆ U.S. Government Printing Office: 2009-523-019/41195 Region IV ISSN: 0149-2195