



# MMWR™

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### Contraceptive Use Among Postpartum Women – 12 States and New York City, 2004–2006

Postpartum use of highly effective contraceptive methods can prevent unintended pregnancies and ensure adequate birth spacing. Unintended pregnancies and short interpregnancy intervals are associated with adverse maternal and infant outcomes (1,2). In 2001, the year for which the most recent data are available, 49% of all pregnancies were unintended (3), and 21% of women gave birth within 24 months of a previous birth (4). Two *Healthy People 2010* goals are to increase the percentage of intended pregnancies to 70% (objective 9-1) and to reduce the percentage of births occurring within 24 months of a previous birth to 6% (objective 9-2) (5). To estimate the prevalence and types of contraception being used by women 2–9 months postpartum, CDC analyzed data from the 2004–2006 Pregnancy Risk Assessment Monitoring System (PRAMS) from 12 states and New York City. This report summarizes those results, which indicated that 88.0% of postpartum women reported current use of at least one contraceptive method; 61.7% reported using a method defined as highly effective, 20.0% used a method defined as moderately effective, and 6.4% used less effective methods. Rates of using highly effective contraceptive methods postpartum were lowest among Asian/Pacific Islanders (35.3%), women who had wanted to get pregnant sooner (49.9%), women aged  $\geq 35$  years (53.0%), and women who had no prenatal care (54.5%). State policy makers and health-care providers can use these results to promote use of highly effective contraception among postpartum women and target interventions for those with particularly low rates of usage, including women with no prenatal care.

PRAMS began in 1987 as an ongoing, state- and population-based surveillance system designed to monitor maternal behaviors and experiences that occur before, during, and after pregnancy among women who deliver live infants. The system currently is active in 39 reporting areas in the United States. PRAMS uses a mixed mode data-collection methodology; up

to three self-administered questionnaires are mailed monthly to a stratified random sample of mothers selected from birth certificates 2–4 months after delivery (median = 3.7 months). Nonresponders receive follow-up telephone interviews. Self-reported survey data are linked to birth certificate data and weighted for sample design, nonresponse, and noncoverage to create annual PRAMS analysis data sets.\*

The PRAMS questionnaire in each state includes core questions that appear on all PRAMS surveys, optional standard questions, and questions developed by the state. The 2004–2006 surveys incorporated various topics, including current contraceptive practices. Respondents were asked, “Are you or your husband or partner doing anything now to keep from getting pregnant?” (core question) and “What kind of birth control are you or your husband or partner using now to keep from getting pregnant?” (standard question). Participants who responded “no” to the first question were classified as using no method and were not asked the second question, which included response options for 13 specific contraceptive methods and “other,” with instructions to “check all that apply.” The standard question about postpartum contraceptive method type was used by 14 reporting areas; however, to minimize bias

\* Additional information regarding PRAMS is available at <http://www.cdc.gov/prams>.

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resulting from nonresponse, this report only includes data from 13 reporting areas that achieved overall weighted response rates of  $\geq 70\%$  for at least 1 year of the study period. Responses from Arkansas, Florida, Louisiana, Michigan, Mississippi, North Carolina, Nebraska, New York, New York City, Oregon, Rhode Island, South Carolina, and West Virginia were assessed for this report. To focus on postpartum women at risk for unintended pregnancy or short interpregnancy interval, responses from women who were currently pregnant ( $n = 362$ ) or not currently sexually active ( $n = 3,615$ ) were excluded. Respondents who answered “yes” to the core question and either did not respond to the second question ( $n = 267$ ) or only responded “other” ( $n = 310$ ) also were excluded.

Contraceptive methods were categorized by effectiveness based on published effectiveness rates for typical use (6). Women reporting use of more than one contraceptive method were classified as using the more effective method based on a hierarchy of effectiveness rates during the first year of typical use (6). Contraceptive effectiveness was categorized as highly effective ( $<10\%$  of women experience an unintended pregnancy; includes sterilization, intrauterine device, shot, pill, patch, and ring), moderately effective ( $10\%–15\%$  failure rate; includes condoms), and less effective ( $>15\%$  failure rate; includes diaphragm, cervical cap, sponge, rhythm, and withdrawal). Chi-square testing was used to identify statistically significant differences between subcategories of maternal characteristics.

Among 43,887 postpartum women in the sample, 88.0% reported current use of at least one method of contraception during 2004–2006 (Table 1). Women with the lowest rates of using at least one method included those with no prenatal care (76.9%), women who reported that for their most recent pregnancy they wanted to get pregnant sooner (80.1%), Asian/Pacific Islanders (82.8%), and women aged  $\geq 35$  years (83.2%) (Table 2). Among all respondents, 61.7% reported using highly effective contraceptive methods, 20.0% relied on moderately effective methods, 6.4% used less effective methods, and 12.0% used no method. Prevalence of using highly effective contraceptive methods varied from 43.2% in New York City to 79.3% in Mississippi (Table 1). Use of highly effective postpartum contraceptive methods also varied by the respondent’s age, ranging from 53.0% among women aged  $\geq 35$  years to 72.9% among those aged  $<20$  years; and by race, ranging from 35.3% among Asian/Pacific Islanders to 71.3% among black women and 71.5% among American Indian/Alaska Native women (Table 2). Women with Medicaid coverage before pregnancy had a higher rate of using highly effective methods (67.8%) than women without Medicaid (60.6%), and women with no prenatal care had a lower rate of using highly effective methods (54.5%) than women with early (60.5%) or late (66.5%) entry into prenatal care.

**TABLE 1. Percentage of postpartum (2–9 months) contraceptive use among nonpregnant, sexually active women who delivered live infants, by contraceptive effectiveness and state/area — Pregnancy Risk Assessment Monitoring System, 12 states and New York City, 2004–2006**

State/Area	Sample no.††	Highly effective*							
		At least one method*		Any highly effective method†		Permanent method§		Reversible method¶	
		%	(95% CI§§)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Arkansas	5,885	92.0	(91.0–92.9)	70.5	(68.8–72.1)	20.3	(19.0–21.7)	50.2	(48.4–51.9)
Florida	3,670	87.0	(85.3–88.4)	60.6	(58.2–62.8)	16.6	(14.9–18.4)	44.0	(41.7–46.2)
Louisiana	1,502	91.7	(89.9–93.2)	72.6	(69.9–75.0)	20.3	(18.0–22.7)	52.3	(49.4–55.2)
Michigan	3,430	88.5	(87.2–89.7)	60.4	(58.5–62.3)	15.7	(14.4–17.2)	44.7	(42.8–46.7)
Mississippi	2,210	92.3	(90.7–93.5)	79.3	(77.1–81.3)	21.0	(19.0–23.2)	58.3	(55.7–60.8)
Nebraska	3,213	90.8	(89.5–91.9)	63.2	(61.2–65.0)	12.7	(11.4–14.1)	50.5	(48.4–52.5)
New York	2,528	87.1	(85.4–88.6)	55.1	(52.7–57.6)	13.8	(12.2–15.6)	41.3	(38.9–43.8)
New York City	2,780	78.5	(76.5–80.3)	43.2	(40.8–45.4)	7.2	(6.1–8.4)	36.0	(33.8–38.2)
North Carolina	2,378	90.2	(88.7–91.6)	71.6	(69.2–73.7)	16.2	(14.4–18.1)	55.4	(52.8–57.8)
Oregon	5,101	91.8	(90.5–92.9)	64.4	(62.4–66.5)	13.5	(12.1–15.1)	50.9	(48.8–53.1)
Rhode Island	3,753	89.8	(88.6–90.9)	63.9	(62.1–65.7)	14.0	(12.8–15.4)	49.9	(48.0–51.8)
South Carolina	3,619	93.4	(92.0–94.6)	73.7	(71.3–76.9)	18.0	(16.0–20.1)	55.7	(53.1–58.3)
West Virginia	3,818	88.4	(86.9–89.9)	67.3	(65.1–69.4)	20.9	(19.0–22.8)	46.4	(44.2–48.7)
<b>Total</b>	<b>43,887</b>	<b>88.0</b>	<b>(87.5–88.5)</b>	<b>61.7</b>	<b>(60.9–62.4)</b>	<b>15.3</b>	<b>(14.7–15.8)</b>	<b>46.4</b>	<b>(45.6–47.2)</b>

State/Area	Moderately effective*		Less effective*		No method*	
	Condoms		Other methods**			
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Arkansas	16.6	(15.3–18.0)	4.9	(4.2–5.7)	8.0	(7.1–9.0)
Florida	21.1	(19.3–23.1)	5.3	(4.3–6.6)	13.1	(11.6–14.7)
Louisiana	15.1	(13.1–17.2)	4.1	(3.1–5.3)	8.3	(6.9–10.1)
Michigan	20.7	(19.2–22.3)	7.4	(6.4–8.5)	11.5	(10.3–12.8)
Mississippi	10.2	(8.7–11.8)	2.8	(2.1–3.8)	7.8	(6.5–9.3)
Nebraska	20.3	(18.7–21.9)	7.4	(6.4–8.5)	9.2	(8.1–10.5)
New York	22.8	(20.8–24.9)	9.2	(7.9–10.7)	12.9	(11.4–14.6)
New York City	27.0	(25.0–29.1)	8.4	(7.2–9.8)	21.5	(19.7–23.5)
North Carolina	13.7	(12.1–15.5)	5.0	(4.0–6.3)	9.8	(8.4–11.4)
Oregon	21.6	(19.9–23.4)	5.7	(4.8–6.8)	8.2	(7.1–9.5)
Rhode Island	18.5	(17.0–20.0)	7.5	(6.5–8.5)	10.2	(9.1–11.4)
South Carolina	15.5	(13.7–17.6)	4.2	(3.3–5.4)	6.6	(5.4–8.0)
West Virginia	16.5	(14.9–18.3)	4.6	(3.7–5.6)	11.6	(10.3–13.1)
<b>Total</b>	<b>20.0</b>	<b>(19.4–20.6)</b>	<b>6.4</b>	<b>(6.0–6.8)</b>	<b>12.0</b>	<b>(11.5–12.5)</b>

\* Percentages based on weighted data. Effectiveness determined by percentage of women who experience pregnancy during first year of typical use and categorized as highly effective (<10%), moderately effective (10%–15%), and less effective (>15%). Totals might not equal 100% because of rounding.

† Includes permanent and reversible methods.

§ Includes tubal ligation or vasectomy.

¶ Includes shot, pill, patch, ring, or intrauterine device.

\*\* Includes diaphragm, cervical cap, sponge, rhythm, or withdrawal.

†† Based on unweighted data.

§§ Confidence interval.

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**Editorial Note:** Despite availability and use of contraceptives, the overall unintended pregnancy rate in the United States has remained stable (3) and is one of the highest among industrialized nations (51 per 1,000 women annually) (2,3,5). In addition, the percentage of births occurring within 24 months of a previous birth increased from 11% in 1995 (5) to 21% in 2002 (4) (the most recent data available), moving away from the

*Healthy People 2010* target of 6% (5). Increased use of highly effective postpartum contraception is an important strategy to both prevent unintended pregnancy in the postpartum period and prevent short interpregnancy intervals (7).

This is the first population-based report to examine the prevalence of contraceptive use among postpartum women by contraceptive method effectiveness. The finding that 88% of postpartum women reported current use of some form of contraception is consistent with previous estimates of 78%–90% (7–10). Rates of using at least one method were generally uniform across reporting areas and maternal characteristics, although women with no prenatal care had the lowest rate at

**TABLE 2. Percentage of postpartum (2–9 months) contraceptive use among nonpregnant, sexually active women who delivered live infants, by contraceptive effectiveness and selected characteristics — Pregnancy Risk Assessment Monitoring System, 12 states and New York City, 2004–2006**

Characteristic	Sample <sup>†</sup>		Highly effective*							
			At least one method*		Any highly effective method <sup>§</sup>		Permanent method <sup>  </sup>		Reversible method <sup>**</sup>	
	No.	%*	%	(95% CI <sup>§§</sup> )	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Maternal age (yrs)</b>										
<20	5,828	9.8	90.1	(88.6–91.4)	72.9	(70.8–74.9)	1.1	(0.6–1.8)	71.8	(69.7–73.9)
20–24	11,566	25.3	89.1	(88.1–90.1)	68.7	(67.2–70.1)	9.8	(8.9–10.7)	58.9	(57.4–60.4)
25–29	11,623	27.4	88.8	(87.8–89.7)	60.5	(59.0–62.0)	15.3	(14.3–16.4)	45.1	(43.7–46.6)
30–34	9,310	23.5	88.0	(86.9–89.1)	56.1	(54.4–57.7)	19.2	(17.9–20.5)	36.9	(35.3–38.5)
≥35	5,557	14.1	83.2	(81.5–84.7)	53.0	(50.9–55.2)	28.4	(26.5–30.4)	24.6	(22.8–26.5)
<b>Race</b>										
Black	9,732	18.6	89.8	(88.7–90.8)	71.3	(69.7–72.7)	16.7	(15.5–17.9)	54.6	(53.0–56.2)
White	29,530	73.4	87.8	(87.1–88.4)	60.4	(59.4–61.3)	15.3	(14.6–16.0)	45.1	(44.2–46.0)
American Indian/Alaska Native	1,104	0.5	87.4	(79.6–92.5)	71.5	(63.0–78.7)	27.1	(19.9–35.8)	44.4	(36.3–53.0)
Asian/Pacific Islander	2,046	3.3	82.8	(79.2–85.8)	35.3	(31.3–39.5)	7.8	(5.7–10.7)	27.5	(23.9–31.3)
Other***	1,413	4.2	88.9	(86.3–91.2)	62.6	(58.8–66.2)	13.5	(11.0–16.4)	49.1	(45.2–53.0)
<b>Hispanic</b>										
Yes	5,806	16.8	89.1	(87.7–90.4)	61.0	(58.9–63.1)	12.7	(11.3–14.2)	48.3	(46.2–50.4)
No	37,366	83.2	87.8	(87.2–88.4)	61.8	(61.0–62.7)	15.8	(15.2–16.4)	46.0	(45.2–46.9)
<b>Maternal education (yrs)</b>										
<12	8,911	19.2	86.5	(85.1–87.7)	66.2	(64.4–68.0)	13.7	(12.4–15.0)	52.6	(50.7–54.4)
12	13,823	30.3	87.4	(86.4–88.4)	66.1	(64.7–67.4)	17.7	(16.6–18.8)	48.4	(47.0–49.8)
>12	20,768	50.5	89.1	(88.4–89.7)	57.5	(56.4–58.6)	14.4	(13.7–15.2)	43.1	(42.0–44.1)
<b>Marital status</b>										
Married	26,189	62.7	86.7	(86.0–87.4)	56.1	(55.1–57.1)	16.7	(16.0–17.5)	39.4	(38.4–40.4)
Other	17,668	37.3	90.3	(89.5–91.1)	71.0	(69.8–72.2)	12.8	(12.0–13.7)	58.2	(56.9–59.5)
<b>Parity</b>										
0	19,135	41.2	87.2	(86.4–88.0)	58.5	(57.3–59.7)	1.5	(1.2–1.8)	57.0	(55.8–58.2)
1–2	20,205	48.8	89.1	(88.4–89.8)	63.5	(62.4–64.6)	22.3	(21.4–23.2)	41.3	(40.2–42.4)
>2	4,351	10.0	86.4	(84.5–88.0)	66.0	(63.6–68.4)	38.1	(35.7–40.5)	27.9	(25.8–30.2)
<b>Prepregnancy insurance coverage</b>										
Yes	23,872	58.4	87.7	(86.9–88.3)	57.8	(56.8–58.8)	14.9	(14.2–15.7)	42.9	(41.9–43.9)
No	19,895	41.6	88.6	(87.8–89.4)	67.2	(66.0–68.3)	15.8	(15.0–16.7)	51.4	(50.2–52.6)
<b>Prepregnancy Medicaid coverage</b>										
Yes	7,804	15.7	85.3	(83.8–86.7)	67.8	(65.9–69.6)	16.3	(14.9–17.8)	51.5	(49.5–53.4)
No	35,944	84.3	88.6	(88.0–89.10)	60.6	(59.7–61.4)	15.1	(14.5–15.7)	45.5	(44.6–46.3)
<b>Pregnancy intendedness<sup>†††</sup></b>										
Wanted sooner	7,321	16.4	80.1	(78.5–81.6)	49.9	(47.9–51.8)	11.7	(10.5–13.0)	38.2	(36.3–40.1)
Wanted as occurred	16,874	41.7	87.2	(86.3–88.0)	57.1	(55.9–58.3)	12.9	(12.1–13.7)	44.2	(43.0–45.4)
Wanted later	14,287	31.8	91.8	(91.0–92.6)	69.4	(68.1–70.7)	13.5	(12.6–14.5)	55.9	(54.5–57.3)
Never wanted	4,779	10.0	93.2	(91.9–94.3)	75.9	(73.7–77.9)	36.3	(34.0–38.7)	39.6	(37.2–41.9)
<b>Prenatal care entry</b>										
Early (first trimester)	33,597	78.7	88.4	(87.8–88.9)	60.5	(59.7–61.4)	15.1	(14.4–15.7)	45.5	(44.6–46.4)
Late (second or third trimester)	8,837	20.5	87.6	(86.4–88.8)	66.5	(64.8–68.2)	16.5	(15.2–17.8)	50.0	(48.3–51.8)
No prenatal care	506	0.8	76.9	(68.5–83.6)	54.5	(46.1–62.7)	7.6	(4.3–13.0)	46.9	(38.7–55.4)

See Table 2 footnotes on next page.

**TABLE 2. (Continued) Percentage of postpartum (2–9 months) contraceptive use among nonpregnant, sexually active women who delivered live infants, by contraceptive effectiveness and selected characteristics — Pregnancy Risk Assessment Monitoring System, 12 states and New York City, 2004–2006**

Characteristic	Moderately effective*		Less effective*		No method*	
	Condoms		Other methods††		No method*	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Maternal age (yrs)</b>						
<20	15.0	(13.4–16.7)	2.3	(1.7–3.1)	9.9	(8.6–11.4)
20–24	16.8	(15.7–18.0)	3.7	(3.1–4.3)	10.9	(9.9–11.9)
25–29	20.8	(19.5–22.0)	7.6	(6.8–8.4)	11.2	(10.3–12.2)
30–34	23.3	(22.0–24.8)	8.6	(7.8–9.6)	12.0	(10.9–13.1)
≥35	22.1	(20.4–24.0)	8.0	(6.9–9.2)	16.8	(15.3–18.5)
<b>Race</b>						
Black	15.2	(14.1–16.4)	3.3	(2.8–4.0)	10.2	(9.3–11.3)
White	20.4	(19.6–21.1)	7.1	(6.6–7.6)	12.2	(11.6–12.9)
American Indian/Alaska Native	13.5	(8.8–20.1)	2.4†††	(0.9–6.3)	12.6	(7.5–20.4)
Asian/Pacific Islander	36.4	(32.3–40.5)	11.1	(8.7–14.1)	17.2	(14.2–20.8)
Other***	22.0	(19.0–25.4)	4.4	(3.1–6.2)	11.1	(8.9–13.7)
<b>Hispanic</b>						
Yes	22.6	(20.9–24.4)	5.5	(4.6–6.6)	10.9	(9.6–12.3)
No	19.4	(18.8–20.1)	6.6	(6.1–7.0)	12.2	(11.6–12.8)
<b>Maternal education (yrs)</b>						
<12	16.6	(15.3–18.1)	3.6	(2.9–4.5)	13.5	(12.3–14.9)
12	16.7	(15.6–17.8)	4.7	(4.1–5.3)	12.6	(11.7–13.6)
>12	23.1	(22.2–24.1)	8.5	(7.9–9.1)	10.9	(10.3–11.7)
<b>Marital status</b>						
Married	22.7	(21.9–23.6)	7.9	(7.3–8.4)	13.3	(12.7–14.0)
Other	15.4	(14.5–16.4)	3.9	(3.4–4.5)	9.7	(8.9–10.5)
<b>Parity</b>						
0	22.5	(21.5–23.5)	6.3	(5.7–6.9)	12.8	(12.0–13.6)
1–2	19.0	(18.2–19.9)	6.6	(6.0–7.2)	10.9	(10.2–11.6)
>2	14.5	(12.7–16.4)	5.9	(4.7–7.3)	13.7	(12.0–15.5)
<b>Prepregnancy insurance coverage</b>						
Yes	22.2	(21.4–23.1)	7.7	(7.1–8.2)	12.4	(11.7–13.1)
No	16.9	(16.0–17.9)	4.6	(4.0–5.1)	11.4	(10.6–12.2)
<b>Prepregnancy Medicaid coverage</b>						
Yes	14.0	(12.8–15.4)	3.5	(2.8–4.3)	14.7	(13.4–16.2)
No	21.1	(20.4–21.8)	6.9	(6.5–7.4)	11.4	(10.9–12.0)
<b>Pregnancy intendedness†††</b>						
Wanted sooner	21.8	(20.2–23.4)	8.5	(7.4–9.6)	19.9	(18.4–21.6)
Wanted as occurred	22.3	(21.3–23.4)	7.8	(7.1–8.5)	12.8	(12.0–13.7)
Wanted later	18.2	(17.2–19.3)	4.2	(3.7–4.8)	8.2	(7.4–9.0)
Never wanted	13.5	(11.9–15.3)	3.8	(2.9–5.0)	6.8	(5.7–8.0)
<b>Prenatal care entry</b>						
Early (first trimester)	20.9	(20.2–21.7)	6.9	(6.4–7.4)	11.7	(11.1–12.3)
Late (second or third trimester)	16.5	(15.2–17.8)	4.7	(3.9–5.5)	12.4	(11.2–13.6)
No prenatal care	19.0	(13.7–25.7)	—§§§	—§§§	23.1	(16.4–31.5)

\* Percentages based on weighted data. Effectiveness determined by percentage of women who experience pregnancy during first year of typical use and categorized as highly effective (<10%), moderately effective (10%–15%), and less effective (>15%). Totals might not equal 100% because of rounding.

† Based on unweighted data, N = 43,887; subcategories might not equal sample total because of missing data on maternal characteristics.

§ Includes permanent and reversible methods.

¶ Includes tubal ligation or vasectomy.

\*\* Includes shot, pill, patch, ring, or intrauterine device.

†† Includes diaphragm, cervical cap, sponge, rhythm, or withdrawal.

§§ Confidence interval.

¶¶ <60 respondents; might not be reliable.

\*\*\* Excludes data from Louisiana and Mississippi, which reported no respondents in this category.

††† Pregnancy intention of recent pregnancy that ended in a live birth.

§§§ Not reported (<30 respondents).

76.4%. However, the findings indicate substantial variation in use of highly effective contraceptive methods by reporting area and maternal characteristics. For example, some subgroups with the lowest rates of highly effective contraceptive method use included Asian/Pacific Islanders (35.3%), women who reported that their most recent pregnancy was wanted sooner (49.9%), women aged  $\geq 35$  years (53.0%), and women who had no prenatal care (54.5%). Additional analyses and research are needed to determine reasons for the variations found in the use of highly effective methods by reporting area and maternal characteristics.

These findings point to possible missed opportunities for promoting healthy birth spacing and reducing unintended pregnancies. Women who do not receive prenatal care, for example, might benefit from more consultation about postpartum contraceptive options. This population likely does not routinely access preventive health-care services. Therefore, for these women the period after delivery and before hospital discharge might constitute an especially opportune time for health-care providers to promote the use of effective contraception postpartum and adequate birth spacing.

Although use of condoms for protection against sexually transmitted diseases was not a focus of the study, 13% of the women reported use of condoms along with a highly effective method. All women not using condoms should be counseled regarding the use of condoms for the prevention of sexually transmitted diseases, including human immunodeficiency virus infection.<sup>†</sup>

The findings in this report are subject to at least four limitations. First, although population based, these findings are not nationally representative and are generalizable only to mothers with recent live births in the 13 reporting areas. Second, because PRAMS data are self-reported, prevalence rates of desirable behaviors might be overestimated and those for undesirable behaviors might be underestimated. Third, the survey did not ascertain use of some additional contraceptive methods, such as spermicides, emergency contraception, and lactational amenorrhea. Finally, because of the survey skip pattern, information was not obtained about contraceptive methods used by women who might have incorrectly reported they were not doing anything currently to keep from getting pregnant. If this occurred, particularly among respondents who had a tubal ligation or whose partners had a vasectomy, the use of highly effective contraceptive methods might have been underestimated.

Knowing the characteristics associated with low rates of effective contraceptive use during the postpartum period will

better enable health-care providers to target interventions. Health-care providers should consider encouraging postpartum women to use highly effective contraceptive methods to increase the proportion of pregnancies that are intended and promote healthy birth spacing.

### Acknowledgments

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## Evaluation of Rapid Influenza Diagnostic Tests for Detection of Novel Influenza A (H1N1) Virus – United States, 2009

The recent appearance and worldwide spread of novel influenza A (H1N1) virus (1,2) has highlighted the need to evaluate commercially available, widely used, rapid influenza diagnostic tests (RIDTs) for their ability to detect these viral antigens in

<sup>†</sup> Additional information on sexually transmitted disease prevention and treatment available at <http://www.cdc.gov/std/treatment>.

respiratory clinical specimens. As an initial assessment, CDC conducted an evaluation of multiple RIDTs. Sixty-five clinical respiratory specimens collected during April–May 2009\* that had previously tested positive either for novel influenza A (H1N1) or for seasonal influenza A (H1N1) or A (H3N2) viruses by real-time reverse transcription–polymerase chain reaction (rRT-PCR) assay were used in the evaluation. The results showed that, although the RIDTs were capable of detecting novel A (H1N1) virus from respiratory specimens containing high levels of virus (as indicated by low cycle threshold [Ct] values), the overall sensitivity was low (40%–69%) among all specimens tested and declined substantially as virus levels decreased (and Ct values increased). These findings indicate that, although a positive RIDT result can be used in making treatment decisions, a negative result does not rule out infection with novel influenza A (H1N1) virus. Patients with illnesses compatible with novel influenza A (H1N1) virus infection but with negative RIDT results should be treated empirically based on the level of clinical suspicion, underlying medical conditions, severity of illness, and risk for complications. If a more definitive determination of infection with influenza virus is required, testing with rRT-PCR or virus isolation should be performed. Additional evaluations of the accuracy of RIDTs in detecting novel influenza A (H1N1) virus should be conducted.

Original clinical materials (e.g., specimens from nasopharyngeal swabs and oropharyngeal swabs) collected from patients with confirmed novel influenza A (H1N1) or seasonal influenza A (H1N1) or (H3N2) virus infection and provided largely by state health laboratories were used in the study. The presence of novel or seasonal influenza A virus was confirmed by rRT-PCR assay developed by CDC and approved as a Section 501(k) device by the Food and Drug Administration. Detailed data regarding sensitivity (99.3%) and specificity (92.3%) for the seasonal influenza A CDC rRT-PCR assay compared with viral culture are available.<sup>†</sup> The original clinical specimens were tested using RIDTs from three companies: Inverness Medical BinaxNOW Influenza A&B (Binax, Inc., Scarborough, Maine); Becton Dickinson Directigen EZ Flu A+B (Becton, Dickinson and Company, Sparks, Maryland); and Quidel QuickVue Influenza A+B (Quidel Corporation, San Diego, California). RIDTs from four other companies were tested with limited numbers of specimens; those results are not presented in this report.

Each clinical specimen was characterized by the Ct value demonstrated in the universal influenza type A rRT-PCR assay

with the M gene used as the target.<sup>§</sup> The numbers of specimens positive using each of the three RIDTs were determined within four intervals of Ct values: <20, 20 to <25, 25–30, and >30.<sup>¶</sup> Ct values are indicators of the amount of virus in a specimen, with lower values indicating higher viral titers (i.e., greater amounts of viral material in the specimen). Sensitivity of each rapid test was determined as the percentage of RIDT-positive specimens among the number of specimens that tested positive by rRT-PCR.

A total of 65 original clinical specimens were tested. Forty-five of the specimens were positive for novel influenza A (H1N1) virus, five were positive for seasonal influenza A (H1N1), and 15 were positive for seasonal influenza A (H3N2), all by CDC rRT-PCR assay.

For the nine specimens with high viral titers (Ct values <20), one RIDT had nine positive results, and the other two had eight positives, demonstrating 89%–100% sensitivity in detecting novel influenza A (H1N1) virus when compared with rRT-PCR. However, among the 36 specimens with Ct values  $\geq$ 20 that had tested positive for novel influenza A (H1N1) by rRT-PCR, the sensitivity of the three RIDT tests declined substantially (Table 1). Overall, for the 45 specimens that had tested positive for novel influenza A (H1N1) by rRT-PCR, the sensitivity of the three RIDT tests was 40% for BinaxNOW Influenza A&B, 49% for Directigen EZ Flu A+B,\*\* and 69% for QuickVue Influenza A+B.

Sensitivity of the RIDTs was generally greater for seasonal influenza A (H1N1) and (H3N2) than for novel influenza A (H1N1), although the number of specimens tested was small, especially for seasonal influenza A (H1N1). None of the specimens had a Ct value <20. Compared with rRT-PCR, the three tests demonstrated sensitivity ranging from 60% to 80% for seasonal A (H1N1) and from 80% to 83% for seasonal A (H3N2) (Table 1).

To evaluate approximate viral titers in clinical specimens positive for novel influenza A (H1N1) virus, serial 10-fold dilutions (from  $10^{-1}$  through  $10^{-5}$ ) of the virus isolate A/California/4/2009, an early representative strain of novel H1N1, was prepared. This virus was grown in Madin-Darby canine kidney (MDCK) cells and had a titer of  $10^{7.5}$  50% tissue culture infectious dose (TCID<sub>50</sub>/mL). Each virus dilution was tested in duplicate using the three RIDTs. Only specimens that tested positive for both test runs were considered positive. Limits of detection were measured as Ct values for

<sup>§</sup> CDC protocol of rRT-PCR testing for influenza A (H1N1) virus is available at <http://www.who.int/csr/resources/publications/swineflu/realtimeptpcr/en/index.html>.

<sup>¶</sup> A Ct value of 37 or lower is considered a positive rRT-PCR result.

\*\* Only 43 of the 45 specimens positive for novel influenza A (H1N1) by rRT-PCR were tested using this RIDT.

\* One H3N2 specimen was collected in March.

<sup>†</sup> Additional information available at [http://www.accessdata.fda.gov/cdrh\\_docs/pdf8/k080570.pdf](http://www.accessdata.fda.gov/cdrh_docs/pdf8/k080570.pdf).

**TABLE 1. Comparison of the number of positive influenza A test results from three RIDTs\* with the number of positive results from rRT-PCR† assay, by influenza A type and cycle threshold (Ct) interval — United States, 2009**

RIDT	Influenza A virus type	No. of specimens positive by RIDT/ No. positive by rRT-PCR				Total no. of specimens positive by RIDT/ Total no. positive by rRT-PCR	
		Ct interval‡				Total no. positive by RIDT/	Total no. positive by rRT-PCR
		(<20)	(20 to <25)	(25–30)	(>30)		
BinaxNOW Influenza A&B	Novel H1N1	8/9	7/17	2/13	1/6	18/45	(40)
	Seasonal H1N1	—¶	2/3	1/2	—	3/5	(60)
	Seasonal H3N2	—	10/10	2/4	0/1	12/15	(80)
Directigen EZ Flu A+B	Novel H1N1	8/9	10/16	2/12	1/6	21/43**	(49)
	Seasonal H1N1	—	2/2	1/2	—	3/4**	(75)
	Seasonal H3N2	—	8/8	2/3	0/1	10/12**	(83)
QuickVue A+B	Novel H1N1	9/9	13/17	6/13	3/6	31/45	(69)
	Seasonal H1N1	—	2/3	2/2	—	4/5	(80)
	Seasonal H3N2	—	10/10	2/4	0/1	12/15	(80)

\* Rapid influenza A diagnostic tests.

† Real-time reverse transcription–polymerase chain reaction.

‡ A Ct value of 37 or lower is considered a positive rRT-PCR result.

¶ No data available.

\*\* For this RIDT, insufficient material was available to test two specimens that were rRT-PCR positive for novel H1N1, one for seasonal H1N1, and three for seasonal H3N2.

the three RIDTs. The limit of detection of MDCK-grown A/California/4/2009 was the same for QuickVue A+B and Directigen EZ Flu A+B, but BinaxNOW Influenza A&B was 10-fold higher ( $10^{-2}$  versus  $10^{-3}$ ) (Table 2).

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**Editorial Note:** The sensitivity of RIDTs to detect seasonal influenza viruses compared with virus isolation or rRT-PCR varies among commercial kits and has been shown to be low in some reports (3–5). In this evaluation, the sensitivity of three RIDTs to detect novel influenza A (H1N1) viral antigen in clinical specimens ranged from 40% to 69% and declined substantially with lower viral titers (as determined by Ct values). These findings are compatible with other recent studies, which reported that the sensitivity of some RIDTs to detect novel influenza A (H1N1) in clinical specimens ranged from 10% to 51% (6,7). Overall, the findings in this report demonstrate that these RIDTs are capable of detecting novel influenza A (H1N1) in respiratory specimens, but that many infections will be missed, especially in specimens with low viral titers.

RIDTs do not distinguish among influenza A virus subtypes, and RIDT sensitivity might vary by subtype of influenza A (4,6,8). Therefore, when using a positive RIDT result to help determine the appropriate course of clinical treatment or other action, the result should always be interpreted in the context of currently circulating strains. Conversely, as indicated by the results of this and other studies, a negative RIDT result should not be interpreted as indicating the absence of infection. In this

analysis, the sensitivity of all three assays evaluated declined as the viral titer in the specimen decreased. The amount of virus found in respiratory specimens can be affected by timing of the specimen collection; viral titers are highest in the first 3 days of illness. Other factors that can affect the amount of virus in the specimen include age (e.g., children generally shed more virus and for longer periods than adults), type of specimen collected, and transportation and storage of the specimen before testing. Testing with rRT-PCR or virus isolation should be performed if a more definitive determination of the presence of influenza virus is required. In the titered cultured virus results presented in this report, all three RIDTs detected the cultured novel H1N1 influenza A/California/4/2009 virus with a lower limit of detection between  $10^{4.5}$  and  $10^{5.5}$  TCID<sub>50</sub>, slightly higher TCID<sub>50</sub> levels than for detection of seasonal influenza viruses. These findings are consistent with the analytical sensitivities of RIDTs to detect novel influenza A (H1N1) virus described in one report (9), but higher than those described in another report (10).

The findings in this report are subject to at least three limitations. First, relatively few clinical specimens were tested for each RIDT across the range of Ct values, limiting the ability to compare results between different RIDTs, particularly for seasonal influenza A (H1N1). Second, clinical specimens were not tested immediately after collection but were stored and shipped to CDC under varying conditions. The clinical materials used in this evaluation were prepared and shipped in different (often unknown) transport media that might not be optimal for some of the RIDTs. Finally, the data used to estimate virus load in clinical materials obtained by comparing with different dilutions of influenza A/California/4/2009



**TABLE 2. Limits of detection of Madin-Darby canine kidney (MDCK)-grown influenza A/California/4/2009 (H1N1) for three rapid influenza diagnostic tests (RIDTs), by selected measurement values — United States, 2009**

RIDT	Values		
	Lowest dilution with positive result	TCID <sub>50</sub> /mL*	Ct†
BinaxNOW Influenza A&B	10 <sup>-2</sup>	10 <sup>5.5</sup>	22.15
Directigen EZ Flu A+B	10 <sup>-3</sup>	10 <sup>4.5</sup>	26.05
QuickVue A+B	10 <sup>-3</sup>	10 <sup>4.5</sup>	26.05

\* TCID<sub>50</sub> = 50% tissue culture infectious dose.

† Ct (cycle threshold) values reported as an average of three reactions each of duplicate dilution series.

grown in MDCK cells should be viewed with caution, because Ct limit of detection values for cultured viruses can vary with the virus strain, its passage history, and the substrate used for propagation (e.g., MDCK cells or chicken embryos). Optimizing specimen collection, transportation, and testing practices to ensure that specimens have the highest amount of virus possible would be expected to increase the likelihood of detecting influenza virus, when present, using RIDTs and other diagnostic tests.

The results described in this report should be viewed as preliminary. More data are needed on the clinical performance of all RIDTs to detect novel influenza A (H1N1) virus in different respiratory specimens. Because of the limitations of RIDTs and until additional data are available, all results from RIDTs, both positive and negative, when used for clinical decision-making in a patient with suspected novel influenza A (H1N1) virus infection, should be interpreted in the context of circulating influenza virus strains in the patient's community, level of clinical suspicion, severity of illness, and risk for complications. Additional CDC guidance on interpretation of RIDTs for testing of patients with suspected novel influenza A (H1N1) virus infection is available at [http://www.cdc.gov/h1n1flu/guidance/rapid\\_testing.htm](http://www.cdc.gov/h1n1flu/guidance/rapid_testing.htm).

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## Updated Recommendations of the Advisory Committee on Immunization Practices (ACIP) Regarding Routine Poliovirus Vaccination

This report updates Advisory Committee on Immunization Practices (ACIP) recommendations for routine poliovirus vaccination. These updates aim to 1) emphasize the importance of the booster dose at age  $\geq 4$  years, 2) extend the minimum interval from dose 3 to dose 4 from 4 weeks to 6 months, 3) add a precaution for the use of minimum intervals in the first 6 months of life, and 4) clarify the poliovirus vaccination schedule when specific combination vaccines are used.

On June 17, 1999, ACIP recommended that all poliovirus vaccine administered in the United States be an inactivated poliovirus vaccine (IPV) beginning January 1, 2000. This policy was implemented to eliminate the risk for vaccine-associated paralytic poliomyelitis, a rare condition that has been associated with use of the live oral poliovirus vaccine (OPV). Since 1999, no OPV has been distributed in the United States. Under these ACIP recommendations, the routine IPV vaccination schedule in the United States consists of 4 doses administered at ages 2 months, 4 months, 6–18 months, and 4–6 years with the minimum interval between all IPV doses as 4 weeks (1,2).

Since the ACIP recommendation was made 10 years ago, three different combination vaccines containing IPV have been licensed for routine use in the United States (Table). Because of potential confusion in using different vaccine products for routine and catch-up immunization, ACIP recommends the following:

**TABLE. Currently licensed vaccines containing inactivated poliovirus vaccine (IPV) — United States, 2009\***

Vaccine composition	Trade name	Manufacturer	Approved use in ACIP <sup>†</sup> routine schedule	Comments
IPV	Ipol (Poliovax <sup>§</sup> )	Sanofi Pasteur	2, 4, 6–18 mos, and 4–6 yrs	Approved for use in infants, children, and adults <sup>¶</sup>
DTaP-HepB-IPV**	Pediarix	GlaxoSmithKline	2, 4, and 6 mos	Approved for first 3 doses of IPV through age 6 yrs <sup>††</sup>
DTaP-IPV/Hib <sup>§§</sup>	Pentacel	Sanofi Pasteur	2, 4, 6, and 15–18 mos	Approved for 4 doses of IPV through age 4 yrs <sup>¶¶</sup>
DTaP-IPV***	Kinrix	GlaxoSmithKline	4–6 yrs	Approved for booster dose at age 4–6 yrs <sup>†††</sup>

\* As of August 5, 2009.

<sup>†</sup> Advisory Committee on Immunization Practices. Full schedule available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5751a5.htm>.

<sup>§</sup> Not currently distributed in the United States.

<sup>¶</sup> Package insert available at <http://www.fda.gov/downloads/biologicsbloodvaccines/vaccines/approvedproducts/ucm133479.pdf>.

\*\* Diphtheria and tetanus toxoids and acellular pertussis adsorbed, hepatitis B (recombinant), and inactivated poliovirus vaccine combined.

<sup>††</sup> Package insert available at <http://www.fda.gov/downloads/biologicsbloodvaccines/vaccines/approvedproducts/ucm168055.pdf>.

<sup>§§</sup> Diphtheria and tetanus toxoids and acellular pertussis adsorbed, inactivated poliovirus, and *Haemophilus b* conjugate (tetanus toxoid conjugate) vaccine.

<sup>¶¶</sup> Package insert available at <http://www.fda.gov/downloads/biologicsbloodvaccines/vaccines/approvedproducts/ucm109810.pdf>.

\*\*\* Diphtheria and tetanus toxoids and acellular pertussis adsorbed, and inactivated poliovirus vaccine.

<sup>†††</sup> Package insert available at <http://www.fda.gov/downloads/biologicsbloodvaccines/vaccines/approvedproducts/ucm107220.pdf>.

- The 4-dose IPV series should continue to be administered at ages 2 months, 4 months, 6–18 months, and 4–6 years.
- The final dose in the IPV series should be administered at age  $\geq 4$  years regardless of the number of previous doses.
- The minimum interval from dose 3 to dose 4 is extended from 4 weeks to 6 months.
- The minimum interval from dose 1 to dose 2, and from dose 2 to dose 3, remains 4 weeks.
- The minimum age for dose 1 remains age 6 weeks.

ACIP also is making a new recommendation concerning the use of minimum age and minimum intervals for children in the first 6 months of life. Use of the minimum age and minimum intervals for vaccine administration in the first 6 months of life are recommended only if the vaccine recipient is at risk for imminent exposure to circulating poliovirus (e.g., during an outbreak or because of travel to a polio-endemic region). ACIP is making this precaution because shorter intervals and earlier start dates lead to lower seroconversion rates (3–5).

In addition, ACIP is clarifying the poliovirus vaccination schedule to be used for specific combination vaccines. When DTaP-IPV/Hib\* (Pentacel) is used to provide 4 doses at ages 2, 4, 6, and 15–18 months, an additional booster dose of age-appropriate IPV-containing vaccine (IPV [Ipol] or DTaP-IPV<sup>†</sup> [Kinrix]) should be administered at age 4–6 years. This will result in a 5-dose IPV vaccine series, which is considered acceptable by ACIP. DTaP-IPV/Hib is not indicated for the booster dose at age 4–6 years. ACIP recommends that the minimum interval from dose 4 to dose 5 should be at least 6 months to provide an optimum booster response. In accordance with existing recommendations, if a child misses an IPV

dose at age 4–6 years, the child should receive a booster dose as soon as feasible (2).

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### Notice to Readers

#### Publication of HIV Testing Algorithms: a Status Report

In the past 20 years, advances in human immunodeficiency virus (HIV) diagnostics have resulted in approval by the Food and Drug Administration of 1) rapid tests for screening at the point of contact, 2) immunoassays that are more sensitive earlier during seroconversion, and 3) HIV-1 RNA assays for the diagnosis of acute infection and for confirmation of reactive antibody tests. As a result of these developments, CDC and the Association of Public Health Laboratories (APHL) convened a panel of HIV diagnostic subject matter experts to examine alternatives to the two-test HIV confirmatory algorithm that has been recommended for use in the United States since 1989 (1). That panel's efforts culminated in publication of *HIV Testing Algorithms: a Status Report*, which describes

\* Diphtheria and tetanus toxoids and acellular pertussis adsorbed, inactivated poliovirus, and *Haemophilus b* conjugate (tetanus toxoid conjugate) vaccine.

<sup>†</sup> Diphtheria and tetanus toxoids and acellular pertussis adsorbed, and inactivated poliovirus vaccine.

proposed alternative combinations of tests that might be used for diagnosing HIV infection.

The status report does not contain formal guidelines or recommendations but reviews the supporting evidence and limitations regarding the proposed algorithms, and the additional data needed to substantiate each of them. The report is intended to solicit performance data from laboratories to validate the proposed algorithms and feedback regarding operational parameters associated with the algorithms.

The report is available online at <http://www.aphl.org/hiv/statusreport> and <http://hivtestingconference.org>. Inquiries, comments, and descriptions of pertinent performance data should be directed to APHL via e-mail at [hiv.algorithm@aphl.org](mailto:hiv.algorithm@aphl.org).

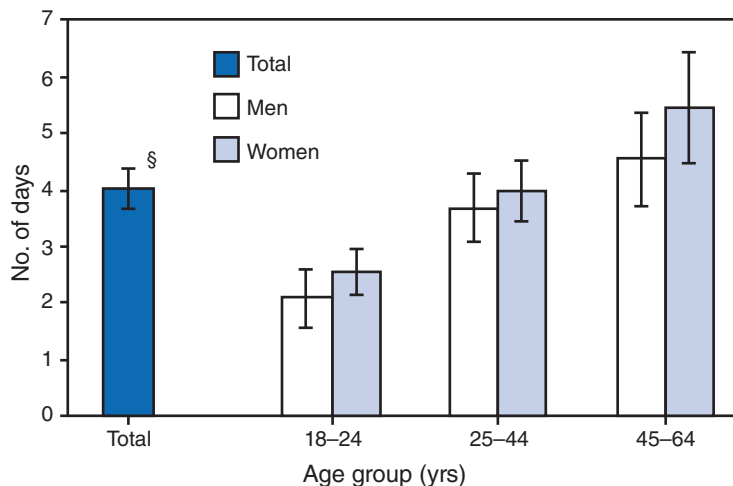
#### Reference

1. CDC. Interpretation and use of the Western blot assay for serodiagnosis of human immunodeficiency virus type 1 infections. MMWR 1989;38 (No. SU-7).

## QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

### Average Number of Work-Loss Days During the Preceding 12 Months Among Persons Aged 18–64 Years,\* by Age Group and Sex — National Health Interview Survey, United States, 2007†



\* Based on responses to the question, "In the past 12 months...about how many days did you miss work at a job or business because of illness or injury (do not include maternity leave)?" Only respondents who had worked in the past week were asked this question.

† 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.

§ 95% confidence interval.

In 2007, U.S. adults who had worked in the past week missed 4.0 days of work on average during the 12 months preceding the interview. Work-loss days increased with age for both men and women. Men aged 18–24 years missed 2.1 days of work, aged 25–44 years missed 3.7 days, and aged 45–64 years missed 4.5 days. Women aged 18–24 years missed 2.6 days of work, aged 25–44 years missed 4.0 days, and aged 45–64 years missed 5.5 days.

**SOURCES:** National Health Interview Survey 2007 data. Available at <http://www.cdc.gov/nchs/nhis.htm>. 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](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 1, 2009 (30th week)\***

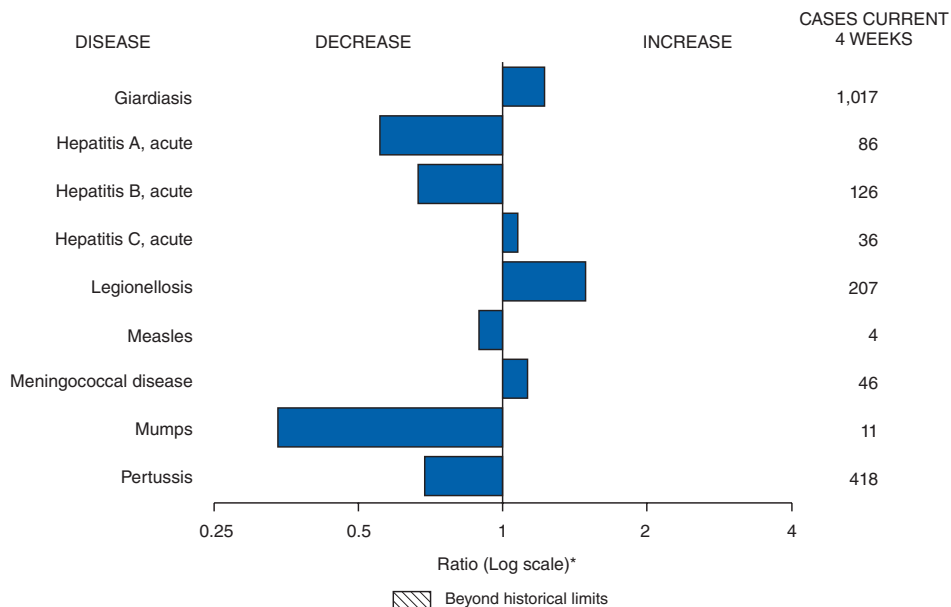
Disease	Current week	Cum 2009	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2008	2007	2006	2005	2004	
Anthrax	—	—	—	—	1	1	—	—	
Botulism:									
foodborne	—	10	0	17	32	20	19	16	
infant	—	29	2	109	85	97	85	87	
other (wound and unspecified)	—	13	1	19	27	48	31	30	
Brucellosis	—	53	2	80	131	121	120	114	
Chancroid	—	22	1	25	23	33	17	30	
Cholera	—	2	0	5	7	9	8	6	
Cyclosporiasis§	2	69	6	139	93	137	543	160	NY (1), FL (1)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup	—	2	4	62	55	67	80	112	
eastern equine	—	—	0	4	4	8	21	6	
Powassan	—	—	0	2	7	1	1	1	
St. Louis	—	4	0	13	9	10	13	12	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis/Anaplasmosis§,**:									
<i>Ehrlichia chaffeensis</i>	9	317	28	1,137	828	578	506	338	NY (1), OH (1), MO (2), NC (2), GA (1), TN (1), AR (1)
<i>Ehrlichia ewingii</i>	—	—	0	9	—	—	—	—	
<i>Anaplasma phagocytophilum</i>	6	227	30	1,026	834	646	786	537	NY (3), WI (2), FL (1)
undetermined	2	69	8	180	337	231	112	59	WI (1), TN (1)
<i>Haemophilus influenzae</i> ,††									
invasive disease (age <5 yrs):									
serotype b	—	13	0	30	22	29	9	19	
nonserotype b	—	124	3	244	199	175	135	135	
unknown serotype	2	137	3	163	180	179	217	177	NY (1), FL (1)
Hansen disease§	—	34	1	80	101	66	87	105	
Hantavirus pulmonary syndrome§	—	6	1	18	32	40	26	24	
Hemolytic uremic syndrome, postdiarrheal§	4	103	7	330	292	288	221	200	NY (2), TN (2)
Hepatitis C viral, acute	6	952	16	878	845	766	652	720	PA (2), MI (2), FL (1), TN (1)
HIV infection, pediatric (age <13 years)§§	—	—	3	—	—	—	380	436	
Influenza-associated pediatric mortality§,¶¶	1	99	0	90	77	43	45	—	NYC (1)
Listeriosis	12	329	21	759	808	884	896	753	PA (2), OH (1), MI (1), WV (1), FL (1), TX (3), CA (3)
Measles***	3	46	1	140	43	55	66	37	TN (1), CA (2)
Meningococcal disease, invasive†††:									
A, C, Y, and W-135	1	167	4	330	325	318	297	—	TX (1)
serogroup B	—	95	3	188	167	193	156	—	
other serogroup	1	16	1	38	35	32	27	—	WV (1)
unknown serogroup	6	293	9	616	550	651	765	—	PA (1), OH (1), FL (2), TX (1), CA (1)
Mumps	1	189	14	454	800	6,584	314	258	PA (1)
Novel influenza A virus infections	—	§§§	—	2	4	N	N	N	
Plague	—	4	0	2	7	17	8	3	
Poliomyelitis, paralytic	—	—	—	—	—	—	1	—	
Polio virus infection, nonparalytic§	—	—	—	—	—	N	N	N	
Psittacosis§	—	7	0	8	12	21	16	12	
Q fever total§,¶¶¶:									
acute	—	46	3	124	171	169	136	70	
chronic	—	41	1	110	—	—	—	—	
Rabies, human	—	5	0	14	—	—	—	—	
Rubella, human	—	1	0	2	1	3	2	7	
Rubella****	—	2	0	16	12	11	11	10	
Rubella, congenital syndrome	—	1	—	—	—	1	1	—	
SARS-CoV§,††††	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	92	2	157	132	125	129	132	CT (1)
Syphilis, congenital (age <1 yr)	—	101	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	—	11	0	39	5	15	16	5	
Tularemia	1	33	5	123	137	95	154	134	AR (1)
Typhoid fever	7	190	8	449	434	353	324	322	OH (1), MN (1), MD (1), FL (1), TX (1), CA (2)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	—	40	0	63	37	6	2	—	
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	—	—	2	1	3	1	
Vibriosis (noncholera <i>Vibrio</i> species infections)§	12	182	11	492	549	N	N	N	MD (1), NC (1), FL (1), AZ (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 1, 2009 (30th 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. Ninety-eight influenza-associated pediatric deaths occurring during the 2008–09 influenza season have been reported.  
 \*\*\* Of the three measles cases reported for the current week, two were indigenous, and one 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 1, 2009, with historical data**



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

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TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending August 1, 2009, and July 26, 2008 (30th week)\*

Reporting area	Giardiasis					Gonorrhea					Haemophilus influenzae, invasive All ages, all serotypes†				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	222	318	641	8,685	9,082	2,857	5,548	7,164	148,919	189,909	14	53	124	1,686	1,780
<b>New England</b>	2	22	64	554	791	81	97	301	2,798	2,916	—	3	16	96	99
Connecticut	—	6	14	141	180	31	46	275	1,290	1,305	—	0	12	37	22
Maine§	2	4	12	103	79	2	2	9	78	52	—	0	2	14	8
Massachusetts	—	9	27	150	337	45	37	112	1,158	1,273	—	1	5	32	48
New Hampshire	—	3	10	69	73	1	2	6	62	66	—	0	2	7	8
Rhode Island§	—	1	8	32	48	—	5	19	184	199	—	0	7	3	6
Vermont§	—	3	15	59	74	2	1	4	26	21	—	0	1	3	7
<b>Mid. Atlantic</b>	38	60	116	1,600	1,710	428	591	1,138	17,436	18,737	6	11	25	364	328
New Jersey	—	7	21	108	280	—	91	127	2,541	3,103	—	2	7	62	54
New York (Upstate)	21	24	81	664	564	89	104	664	2,949	3,483	5	3	20	84	92
New York City	3	16	30	413	460	231	210	577	6,507	5,816	—	2	11	82	58
Pennsylvania	14	16	46	415	406	108	188	267	5,439	6,335	1	4	10	136	124
<b>E.N. Central</b>	21	44	90	1,166	1,372	576	1,108	1,627	29,196	39,264	—	8	27	251	289
Illinois	—	9	32	207	374	171	356	499	8,875	11,480	—	3	9	88	89
Indiana	N	0	11	N	N	106	149	256	4,315	5,020	—	1	22	74	52
Michigan	6	12	22	320	294	221	290	493	8,512	9,659	—	0	3	15	17
Ohio	14	16	31	434	446	22	251	482	4,960	9,435	—	1	6	65	90
Wisconsin	1	8	19	205	258	56	94	149	2,534	3,670	—	0	4	9	41
<b>W.N. Central</b>	21	25	143	842	929	94	290	393	7,829	9,632	—	3	15	97	130
Iowa	7	6	18	164	166	10	31	53	906	888	—	0	0	—	2
Kansas	—	3	11	67	70	42	36	83	1,149	1,267	—	0	2	11	15
Minnesota	—	0	106	250	259	—	44	67	1,110	1,850	—	0	10	30	37
Missouri	12	7	22	217	255	24	138	184	3,715	4,585	—	1	4	33	50
Nebraska§	2	3	10	93	108	11	22	51	703	813	—	0	4	18	18
North Dakota	—	0	16	8	10	—	2	7	33	68	—	0	4	5	8
South Dakota	—	2	11	43	61	7	8	20	213	161	—	0	0	—	—
<b>S. Atlantic</b>	68	67	108	2,046	1,515	694	1,203	2,042	31,246	47,471	8	12	30	460	459
Delaware	—	0	3	17	26	20	16	37	530	663	—	0	1	3	6
District of Columbia	—	0	5	—	38	—	50	88	1,524	1,474	—	0	2	—	4
Florida	60	35	57	1,093	644	247	415	507	12,059	13,886	4	4	10	160	117
Georgia	—	13	67	515	375	1	251	876	5,377	8,602	2	3	9	100	93
Maryland§	4	5	10	135	140	122	118	212	3,253	3,554	2	1	6	56	72
North Carolina	N	0	0	N	N	—	0	542	—	7,508	—	1	17	48	45
South Carolina§	—	2	8	50	68	184	163	414	4,337	5,600	—	1	5	30	39
Virginia§	2	8	31	210	188	114	152	308	3,864	5,742	—	1	6	42	66
West Virginia	2	1	5	26	36	6	11	26	302	442	—	0	3	21	17
<b>E.S. Central</b>	7	8	22	189	238	270	510	771	14,565	17,092	—	3	9	100	92
Alabama§	2	4	12	85	137	—	148	216	3,465	5,746	—	0	4	24	15
Kentucky	N	0	0	N	N	—	80	153	1,962	2,540	—	0	5	15	6
Mississippi	N	0	0	N	N	129	145	253	4,392	4,035	—	0	1	—	11
Tennessee§	5	4	13	104	101	141	162	301	4,746	4,771	—	2	6	61	60
<b>W.S. Central</b>	7	8	22	208	198	340	895	1,356	24,990	29,688	—	2	22	74	84
Arkansas§	—	2	8	68	65	87	83	134	2,483	2,689	—	0	2	13	11
Louisiana	—	2	10	61	74	—	157	420	4,220	5,568	—	0	1	11	8
Oklahoma	7	3	18	79	59	253	69	614	2,861	2,783	—	1	20	49	59
Texas§	N	0	0	N	N	—	563	725	15,426	18,648	—	0	1	1	6
<b>Mountain</b>	26	27	62	709	756	92	170	313	4,076	6,821	—	5	11	153	202
Arizona	4	3	10	101	64	4	47	82	832	2,025	—	1	7	53	82
Colorado	13	9	27	238	272	12	56	152	1,419	2,071	—	1	6	50	39
Idaho§	7	3	14	83	90	1	2	13	53	94	—	0	2	2	10
Montana§	—	2	10	64	43	—	2	6	45	65	—	0	1	1	2
Nevada§	1	2	8	53	63	52	30	86	983	1,391	—	0	2	12	11
New Mexico§	—	1	8	48	52	21	23	52	581	807	—	0	3	15	30
Utah	1	6	18	91	152	2	5	15	115	303	—	1	2	19	27
Wyoming§	—	1	4	31	20	—	2	8	48	65	—	0	2	1	1
<b>Pacific</b>	32	54	130	1,371	1,573	282	561	775	16,783	18,288	—	2	8	91	97
Alaska	—	2	10	80	43	—	17	40	768	299	—	0	4	20	13
California	23	35	59	936	1,074	251	472	658	14,013	15,047	—	0	3	20	35
Hawaii	—	0	4	8	23	—	13	19	361	345	—	0	3	18	12
Oregon§	—	7	17	166	252	—	20	48	546	714	—	1	3	30	35
Washington	9	7	74	181	181	31	46	81	1,095	1,883	—	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	—	3	15	49	100	3	4	24	156	159	—	0	1	1	—
U.S. Virgin Islands	—	0	0	—	—	—	2	7	63	79	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 1, 2009, and July 26, 2008 (30th week)\***

Reporting area	Hepatitis (viral, acute), by type†										Legionellosis				
	A				B										
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
	Med	Max				Med	Max				Med	Max			
<b>United States</b>	21	36	89	1,027	1,558	19	68	197	1,768	2,161	43	50	110	1,297	1,486
<b>New England</b>	2	1	8	37	76	—	1	4	17	46	4	2	18	48	89
Connecticut	2	0	4	14	14	—	0	3	7	17	2	1	5	29	16
Maine§	—	0	5	1	4	—	0	2	7	9	—	0	2	2	4
Massachusetts	—	0	2	14	40	—	0	2	1	13	—	0	6	6	38
New Hampshire	—	0	2	3	6	—	0	2	2	3	1	0	4	5	14
Rhode Island§	—	0	2	3	10	—	0	1	—	3	—	0	14	4	12
Vermont§	—	0	1	2	2	—	0	1	—	1	1	0	1	2	5
<b>Mid. Atlantic</b>	1	5	13	122	171	—	6	17	173	274	14	14	55	479	444
New Jersey	—	1	5	21	39	—	1	5	31	79	—	2	14	69	60
New York (Upstate)	—	1	4	29	37	—	1	11	37	36	9	5	24	145	120
New York City	—	2	6	34	57	—	1	4	36	61	—	2	18	91	60
Pennsylvania	1	1	4	38	38	—	2	8	69	98	5	6	24	174	204
<b>E.N. Central</b>	—	5	12	134	213	3	10	21	258	283	8	8	29	208	344
Illinois	—	1	9	51	78	—	2	7	29	105	—	1	13	9	45
Indiana	—	0	3	13	12	—	1	18	70	23	—	1	5	18	32
Michigan	—	1	5	39	77	—	3	8	78	77	—	2	10	47	101
Ohio	—	1	4	26	26	3	1	13	60	65	8	4	17	129	152
Wisconsin	—	0	3	5	20	—	0	4	21	13	—	0	6	5	14
<b>W.N. Central</b>	—	2	16	69	190	—	2	16	80	48	—	2	8	41	70
Iowa	—	0	3	17	88	—	0	3	15	13	—	0	2	12	9
Kansas	—	0	1	7	12	—	0	2	4	6	—	0	1	2	1
Minnesota	—	0	12	13	26	—	0	11	14	4	—	0	3	6	8
Missouri	—	0	3	15	23	—	1	5	36	19	—	1	5	14	37
Nebraska§	—	0	2	15	39	—	0	2	10	5	—	0	1	6	14
North Dakota	—	0	2	—	—	—	0	1	—	1	—	0	3	1	—
South Dakota	—	0	1	2	2	—	0	1	1	—	—	0	1	—	1
<b>S. Atlantic</b>	11	7	15	238	203	7	18	31	552	536	9	9	22	257	245
Delaware	—	0	1	3	5	U	0	1	U	U	—	0	5	8	6
District of Columbia	U	0	0	U	U	U	0	0	U	U	—	0	2	—	8
Florida	5	4	8	112	78	3	6	11	179	187	4	3	7	89	79
Georgia	3	1	4	39	29	3	3	9	88	101	—	1	5	32	20
Maryland§	1	1	4	25	25	—	1	5	43	49	—	2	10	58	68
North Carolina	2	1	7	24	35	—	1	19	128	51	4	0	7	36	12
South Carolina§	—	0	3	20	7	—	1	4	24	43	—	0	1	3	6
Virginia§	—	1	6	15	21	—	2	10	45	62	1	1	5	29	30
West Virginia	—	0	1	—	3	1	1	19	45	43	—	0	3	2	16
<b>E.S. Central</b>	—	1	5	25	46	—	7	11	168	215	1	2	5	55	74
Alabama§	—	0	2	6	7	—	2	7	53	56	—	0	1	6	10
Kentucky	—	0	2	4	16	—	2	7	45	56	—	1	3	23	37
Mississippi	—	0	1	7	4	—	0	3	8	22	—	0	1	1	1
Tennessee§	—	0	4	8	19	—	2	6	62	81	1	1	4	25	26
<b>W.S. Central</b>	2	3	43	98	154	7	11	99	254	438	—	1	21	42	44
Arkansas§	—	0	1	4	4	—	1	5	23	32	—	0	2	3	6
Louisiana	—	0	2	2	8	—	1	4	23	55	—	0	1	2	8
Oklahoma	—	0	6	1	7	2	2	17	52	59	—	0	6	3	3
Texas§	2	3	37	91	135	5	6	76	156	292	—	1	19	34	27
<b>Mountain</b>	1	3	8	92	144	—	3	9	76	115	—	2	8	57	44
Arizona	1	2	6	44	75	—	1	4	28	46	—	0	3	24	12
Colorado	—	0	5	27	26	—	0	3	15	18	—	0	2	6	3
Idaho§	—	0	1	2	14	—	0	2	4	4	—	0	1	—	2
Montana§	—	0	1	4	—	—	0	1	—	—	—	0	2	4	4
Nevada§	—	0	3	6	5	—	0	3	16	27	—	0	2	8	6
New Mexico§	—	0	1	5	14	—	0	2	5	7	—	0	2	—	3
Utah	—	0	2	4	7	—	0	3	5	8	—	0	4	14	14
Wyoming§	—	0	0	—	3	—	0	2	3	5	—	0	1	1	—
<b>Pacific</b>	4	8	18	212	361	2	7	36	190	206	7	3	12	110	132
Alaska	—	0	1	6	3	—	0	2	5	6	—	0	1	3	1
California	4	6	17	162	295	1	5	28	142	143	5	3	9	85	100
Hawaii	—	0	2	4	8	—	0	1	3	4	—	0	1	1	5
Oregon§	—	0	2	12	21	—	0	3	20	28	—	0	2	7	12
Washington	—	1	4	28	34	1	1	8	20	25	2	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	31	—	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 1, 2009, and July 26, 2008 (30th week)\*

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All groups				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	578	539	1,637	10,999	17,202	25	22	46	584	604	8	17	48	571	795
<b>New England</b>	42	66	552	1,080	6,864	—	0	5	15	31	—	0	4	18	23
Connecticut	—	0	136	—	2,562	—	0	4	4	6	—	0	1	2	1
Maine§	33	8	73	300	92	—	0	1	1	1	—	0	1	3	4
Massachusetts	—	11	203	117	3,010	—	0	4	6	15	—	0	3	9	15
New Hampshire	—	15	98	452	962	—	0	1	1	3	—	0	1	1	2
Rhode Island§	—	0	78	54	113	—	0	1	1	2	—	0	1	2	1
Vermont§	9	5	41	157	125	—	0	1	2	4	—	0	1	1	—
<b>Mid. Atlantic</b>	428	238	1,401	7,098	6,644	—	5	17	130	149	1	2	5	62	84
New Jersey	4	37	211	1,817	2,378	—	0	4	—	34	—	0	2	8	11
New York (Upstate)	272	87	1,368	1,951	1,804	—	1	10	27	15	—	0	2	16	22
New York City	—	1	54	7	380	—	3	11	75	77	—	0	2	9	17
Pennsylvania	152	53	407	3,323	2,082	—	1	4	28	23	1	1	4	29	34
<b>E.N. Central</b>	5	21	149	778	1,355	1	3	6	81	94	1	3	9	109	140
Illinois	—	1	5	30	80	—	1	4	31	48	—	1	6	25	50
Indiana	—	0	6	15	19	—	0	2	11	4	—	0	6	35	17
Michigan	1	1	10	30	23	—	0	3	13	10	—	0	5	17	23
Ohio	2	1	6	20	13	1	1	5	23	20	1	0	3	26	32
Wisconsin	2	17	135	683	1,220	—	0	2	3	12	—	0	1	6	18
<b>W.N. Central</b>	14	5	336	107	257	—	1	7	32	35	—	1	9	42	72
Iowa	—	1	8	43	75	—	0	3	5	3	—	0	1	4	14
Kansas	—	0	4	13	6	—	0	2	3	3	—	0	2	8	3
Minnesota	14	1	326	39	168	—	0	7	13	16	—	0	4	9	21
Missouri	—	0	2	4	2	—	0	2	7	7	—	0	2	14	22
Nebraska§	—	0	3	7	3	—	0	1	3	6	—	0	1	5	10
North Dakota	—	0	10	—	—	—	0	0	—	—	—	0	3	—	1
South Dakota	—	0	1	1	3	—	0	1	1	—	—	0	1	2	1
<b>S. Atlantic</b>	88	65	223	1,782	1,923	11	6	15	193	160	3	2	9	104	112
Delaware	18	12	56	531	504	—	0	1	2	1	—	0	1	2	1
District of Columbia	—	0	5	—	38	—	0	2	—	2	—	0	0	—	—
Florida	1	1	6	23	24	7	1	7	57	27	2	1	4	39	40
Georgia	3	0	6	29	25	—	1	4	38	37	—	0	2	20	14
Maryland§	66	30	163	861	926	1	1	8	48	44	—	0	1	5	12
North Carolina	—	1	7	37	6	3	0	5	21	17	—	0	5	16	10
South Carolina§	—	0	3	14	14	—	0	1	1	6	—	0	1	8	16
Virginia§	—	12	61	223	294	—	1	4	24	25	—	0	2	9	15
West Virginia	—	1	17	64	92	—	0	1	2	1	1	0	2	5	4
<b>E.S. Central</b>	—	0	3	11	29	1	0	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	1	0	2	8	3	—	0	1	4	7
Mississippi	—	0	0	—	1	—	0	0	—	1	—	0	1	1	9
Tennessee§	—	0	3	8	16	—	0	3	7	4	—	0	1	9	17
<b>W.S. Central</b>	—	1	21	18	49	7	1	10	25	29	2	1	12	49	81
Arkansas§	—	0	0	—	—	—	0	1	1	—	—	0	2	5	13
Louisiana	—	0	1	—	1	—	0	1	1	2	—	0	3	9	18
Oklahoma	—	0	2	—	—	1	0	2	2	2	—	0	3	4	10
Texas§	—	1	21	18	48	6	1	10	21	25	2	1	9	31	40
<b>Mountain</b>	1	1	13	21	26	—	0	4	13	16	—	1	4	44	42
Arizona	—	0	2	2	4	—	0	2	3	6	—	0	2	10	5
Colorado	—	0	1	2	2	—	0	3	6	3	—	0	2	13	9
Idaho§	1	0	2	8	4	—	0	1	1	—	—	0	1	5	4
Montana§	—	0	13	1	2	—	0	1	1	—	—	0	2	4	4
Nevada§	—	0	2	7	5	—	0	1	—	4	—	0	2	4	7
New Mexico§	—	0	2	—	6	—	0	1	—	1	—	0	1	3	6
Utah	—	0	1	—	2	—	0	2	2	2	—	0	1	1	5
Wyoming§	—	0	1	1	1	—	0	0	—	—	—	0	2	4	2
<b>Pacific</b>	—	3	13	104	55	5	3	10	74	79	1	4	14	124	203
Alaska	—	0	2	3	3	—	0	1	3	3	—	0	2	2	5
California	—	3	7	91	32	3	2	8	55	59	1	2	8	80	150
Hawaii	N	0	0	N	N	—	0	1	1	2	—	0	1	3	4
Oregon§	—	0	3	7	16	—	0	2	6	4	—	0	7	26	25
Washington	—	0	12	3	4	2	0	3	9	11	—	0	6	13	19
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 1, 2009, and July 26, 2008 (30th week)\***

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	104	260	1,697	6,981	4,704	37	67	138	1,970	2,342	28	30	179	747	1,007
<b>New England</b>	—	15	33	254	548	9	8	15	193	214	—	0	2	4	3
Connecticut	—	0	4	18	33	5	3	10	85	102	—	0	0	—	—
Maine†	—	1	10	63	16	1	1	5	33	31	—	0	2	4	—
Massachusetts	—	8	26	105	432	—	0	0	—	—	—	0	1	—	1
New Hampshire	—	1	7	49	19	1	1	7	23	23	—	0	0	—	1
Rhode Island†	—	0	5	11	41	—	0	3	21	18	—	0	2	—	1
Vermont†	—	0	2	8	7	2	1	4	31	40	—	0	0	—	—
<b>Mid. Atlantic</b>	11	23	64	602	554	13	15	30	347	503	—	1	29	35	74
New Jersey	—	4	12	92	115	—	0	0	—	—	—	0	6	—	51
New York (Upstate)	1	5	41	108	195	13	8	20	229	263	—	0	29	4	10
New York City	—	0	21	48	48	—	0	2	—	11	—	0	4	20	6
Pennsylvania	10	11	33	354	196	—	6	17	118	229	—	0	2	11	7
<b>E.N. Central</b>	32	50	238	1,511	812	4	2	28	103	101	—	2	15	41	74
Illinois	—	14	45	255	126	2	1	20	40	36	—	1	10	26	56
Indiana	—	5	158	188	28	—	0	12	12	3	—	0	3	2	2
Michigan	3	10	21	326	118	1	1	9	31	37	—	0	2	4	2
Ohio	29	18	57	665	475	1	0	7	20	25	—	0	3	9	14
Wisconsin	—	4	10	77	65	N	0	0	N	N	—	0	0	—	—
<b>W.N. Central</b>	21	33	872	1,057	391	6	5	17	151	160	2	4	25	108	250
Iowa	—	5	21	107	64	—	0	5	9	12	—	0	1	2	6
Kansas	—	4	12	118	33	2	1	6	55	44	—	0	1	1	—
Minnesota	—	0	808	165	110	—	0	11	29	26	—	0	0	—	—
Missouri	21	15	51	546	132	4	1	8	27	25	2	3	24	99	233
Nebraska†	—	4	32	92	38	—	0	2	—	23	—	0	4	6	8
North Dakota	—	0	24	15	1	—	0	9	4	16	—	0	1	—	—
South Dakota	—	0	10	14	13	—	0	4	27	14	—	0	0	—	3
<b>S. Atlantic</b>	12	26	71	903	452	1	25	111	893	1,051	10	14	54	315	299
Delaware	—	0	3	8	6	—	0	0	—	—	—	0	3	5	20
District of Columbia	—	0	2	—	1	—	0	0	—	—	—	0	0	—	6
Florida	10	8	32	308	126	—	0	95	100	138	—	0	3	5	5
Georgia	—	3	11	106	48	—	4	71	225	229	2	1	5	24	45
Maryland†	1	3	10	61	58	—	6	13	184	264	—	1	7	26	38
North Carolina	—	0	65	199	77	N	2	4	N	N	8	9	36	203	106
South Carolina†	—	3	16	118	63	—	0	0	—	—	—	0	9	14	17
Virginia†	—	4	24	94	67	—	10	24	315	359	—	2	15	35	56
West Virginia	1	0	2	9	6	1	2	6	69	61	—	0	1	3	6
<b>E.S. Central</b>	6	13	33	429	170	1	2	7	65	104	1	4	19	132	166
Alabama†	4	3	19	164	23	—	0	0	—	—	—	1	6	28	43
Kentucky	1	4	15	126	37	1	1	4	31	24	—	0	0	—	1
Mississippi	—	1	4	30	69	—	0	2	—	2	—	0	1	5	7
Tennessee†	1	3	14	109	41	—	2	6	34	78	1	3	17	99	115
<b>W.S. Central</b>	1	54	389	1,260	647	—	0	7	31	61	15	2	161	94	120
Arkansas†	—	4	38	123	46	—	0	5	23	34	13	0	61	41	13
Louisiana	—	2	7	62	40	—	0	0	—	—	—	0	2	2	3
Oklahoma	1	0	45	18	19	—	0	6	7	25	2	0	98	40	80
Texas†	—	44	304	1,057	542	—	0	1	1	2	—	0	6	11	24
<b>Mountain</b>	12	16	31	476	501	—	2	9	52	38	—	1	3	16	19
Arizona	1	3	8	107	140	N	0	0	N	N	—	0	2	3	6
Colorado	10	5	12	170	85	—	0	0	—	—	—	0	1	—	—
Idaho†	1	1	5	45	21	—	0	2	—	4	—	0	1	—	—
Montana†	—	0	4	11	63	—	0	4	15	3	—	0	2	8	3
Nevada†	—	0	3	7	21	—	0	5	2	3	—	0	2	1	—
New Mexico†	—	1	10	30	28	—	0	2	15	19	—	0	1	1	2
Utah	—	4	19	105	133	—	0	6	3	2	—	0	1	1	3
Wyoming†	—	0	2	1	10	—	0	4	17	7	—	0	2	2	5
<b>Pacific</b>	9	22	98	489	629	3	4	13	135	110	—	0	1	2	2
Alaska	—	4	21	56	63	—	0	4	18	12	N	0	0	N	N
California	—	6	19	128	312	3	4	12	115	94	—	0	1	2	—
Hawaii	—	0	3	17	6	—	0	0	—	—	N	0	0	N	N
Oregon†	—	3	13	131	95	—	0	2	2	4	—	0	1	—	2
Washington	9	6	76	157	153	—	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	22	37	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 1, 2009, and July 26, 2008 (30th week)\***

Reporting area	Salmonellosis					Shiga toxin-producing <i>E. coli</i> (STEC) <sup>†</sup>					Shigellosis				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	605	858	2,323	20,801	23,204	51	80	255	1,881	2,371	178	323	1,268	8,518	10,560
<b>New England</b>	2	25	246	835	1,374	1	3	52	105	146	—	2	24	78	136
Connecticut	—	0	220	220	491	—	0	52	52	47	—	0	19	19	40
Maine <sup>§</sup>	1	2	8	65	81	—	0	3	10	6	—	0	6	3	10
Massachusetts	—	16	41	263	621	—	1	9	15	65	—	2	9	40	72
New Hampshire	1	3	42	177	85	1	1	3	21	14	—	0	3	5	4
Rhode Island <sup>§</sup>	—	2	11	78	50	—	0	1	—	7	—	0	1	8	8
Vermont <sup>§</sup>	—	1	7	32	46	—	0	6	7	7	—	0	2	3	2
<b>Mid. Atlantic</b>	90	89	189	2,320	2,957	6	6	23	123	259	15	55	74	1,593	1,368
New Jersey	—	12	44	192	719	—	1	7	19	85	—	16	35	334	418
New York (Upstate)	66	24	65	659	690	6	3	12	61	74	4	5	23	122	378
New York City	5	19	49	589	667	—	1	5	37	30	1	9	23	233	472
Pennsylvania	19	29	78	880	881	—	0	8	6	70	10	21	57	904	100
<b>E.N. Central</b>	39	97	156	2,656	2,799	5	14	74	344	374	34	79	132	1,649	1,922
Illinois	—	25	50	645	832	—	1	10	62	69	—	14	34	316	572
Indiana	—	11	50	311	321	—	2	13	55	41	—	2	21	51	445
Michigan	5	18	38	521	521	—	3	43	75	74	2	5	24	131	64
Ohio	33	27	52	836	714	4	3	15	69	86	31	40	80	852	639
Wisconsin	1	12	30	343	411	1	3	16	83	104	1	11	42	299	202
<b>W.N. Central</b>	41	52	109	1,468	1,510	15	12	42	342	434	20	14	49	499	515
Iowa	5	7	16	224	247	2	2	17	92	111	—	3	12	45	93
Kansas	6	7	19	213	244	—	1	7	25	24	2	3	11	145	11
Minnesota	14	13	56	349	373	6	2	14	100	83	5	3	24	48	152
Missouri	14	11	48	279	396	6	2	10	61	103	11	3	37	241	155
Nebraska <sup>§</sup>	2	5	41	228	139	1	2	12	47	82	2	0	3	15	1
North Dakota	—	0	30	32	27	—	0	28	3	1	—	0	9	3	29
South Dakota	—	4	22	143	84	—	0	5	14	30	—	0	1	2	74
<b>S. Atlantic</b>	223	262	457	5,706	5,516	6	13	48	335	386	30	48	85	1,334	1,905
Delaware	2	2	8	48	82	—	0	2	8	8	3	0	8	52	7
District of Columbia	—	0	2	—	41	—	0	1	—	5	—	0	2	—	10
Florida	163	103	180	2,614	2,334	3	2	10	89	82	7	9	26	251	532
Georgia	50	39	96	1,045	1,065	1	1	8	37	46	12	13	30	387	743
Maryland <sup>§</sup>	2	16	35	374	438	1	2	11	44	57	7	6	13	216	44
North Carolina	1	27	106	742	469	—	2	21	70	40	—	6	27	240	60
South Carolina <sup>§</sup>	—	16	57	333	473	—	0	3	16	24	—	4	17	71	388
Virginia <sup>§</sup>	1	19	88	430	493	—	3	27	57	98	1	4	59	112	101
West Virginia	4	4	23	120	121	1	0	3	14	26	—	0	3	5	20
<b>E.S. Central</b>	26	53	140	1,247	1,538	3	5	12	122	145	4	22	58	521	1,193
Alabama <sup>§</sup>	4	15	49	348	416	1	1	4	29	41	—	4	12	90	281
Kentucky	10	10	18	254	242	—	2	7	40	41	1	2	25	132	202
Mississippi	—	13	57	284	485	—	0	1	6	3	—	1	6	17	252
Tennessee <sup>§</sup>	12	14	62	361	395	2	2	6	47	60	3	13	48	282	458
<b>W.S. Central</b>	27	87	1,333	1,761	3,058	2	4	139	68	186	41	69	967	1,566	2,317
Arkansas <sup>§</sup>	13	12	38	299	340	1	1	5	19	28	6	9	21	205	282
Louisiana	—	15	54	330	524	—	0	1	—	5	—	5	20	88	408
Oklahoma	14	14	102	306	338	1	0	82	13	18	4	5	61	149	63
Texas <sup>§</sup>	—	49	1,204	826	1,856	—	2	55	36	135	31	48	889	1,124	1,564
<b>Mountain</b>	34	57	106	1,511	1,774	4	10	40	244	272	17	27	54	644	448
Arizona	8	19	43	509	505	1	1	4	30	36	10	17	40	479	209
Colorado	18	12	26	359	427	—	3	18	94	80	5	2	11	52	51
Idaho <sup>§</sup>	4	3	9	92	96	2	2	15	37	51	—	0	2	5	6
Montana <sup>§</sup>	—	2	7	69	59	—	0	3	14	23	—	0	5	13	3
Nevada <sup>§</sup>	3	4	10	141	132	—	0	3	16	10	2	1	13	36	119
New Mexico <sup>§</sup>	—	6	22	143	340	—	1	4	17	30	—	2	12	48	43
Utah	1	7	19	155	172	1	1	7	31	32	—	1	3	11	14
Wyoming <sup>§</sup>	—	1	6	43	43	—	0	2	5	10	—	0	1	—	3
<b>Pacific</b>	123	125	537	3,297	2,678	9	9	31	198	169	17	29	82	634	756
Alaska	—	2	9	67	27	—	0	1	—	4	—	0	1	3	—
California	96	95	516	2,524	1,928	5	5	15	123	88	15	25	75	512	652
Hawaii	2	5	13	138	145	—	0	2	2	9	—	0	3	16	25
Oregon <sup>§</sup>	1	7	20	214	243	—	1	7	16	24	—	1	10	20	39
Washington	24	11	85	354	335	4	3	16	57	44	2	3	11	83	40
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	—	13	40	185	351	—	0	0	—	—	—	0	4	5	12
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 1, 2009, and July 26, 2008 (30th week)\*

Reporting area	Streptococcal diseases, invasive, group A				<i>Streptococcus pneumoniae</i> , invasive disease, nondrug resistant†					
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
		Med	Max				Med	Max		
<b>United States</b>	39	102	239	3,532	3,715	9	35	122	1,066	1,127
<b>New England</b>	—	5	28	178	279	—	1	12	26	56
Connecticut	—	0	21	53	78	—	0	11	—	—
Maine§	—	0	2	13	20	—	0	1	2	1
Massachusetts	—	2	10	60	132	—	1	2	15	42
New Hampshire	—	1	4	30	17	—	0	2	7	7
Rhode Island§	—	0	2	9	20	—	0	2	—	6
Vermont§	—	0	3	13	12	—	0	1	2	—
<b>Mid. Atlantic</b>	6	19	42	716	772	3	5	33	162	144
New Jersey	—	2	6	83	142	—	1	4	28	42
New York (Upstate)	2	7	25	241	245	3	2	17	76	65
New York City	—	4	12	139	141	—	0	31	58	37
Pennsylvania	4	6	18	253	244	N	0	2	N	N
<b>E.N. Central</b>	4	17	42	741	733	1	6	18	167	205
Illinois	—	5	12	181	198	—	1	5	19	60
Indiana	—	3	23	184	96	—	0	13	32	21
Michigan	1	3	11	109	125	—	1	5	44	54
Ohio	3	4	13	170	201	—	1	6	48	36
Wisconsin	—	2	10	97	113	1	1	4	24	34
<b>W.N. Central</b>	8	6	37	290	272	—	2	11	91	56
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	1	5	37	32	N	0	1	N	N
Minnesota	7	0	34	125	127	—	0	10	50	13
Missouri	—	2	8	65	64	—	0	4	27	26
Nebraska§	—	1	3	32	25	—	0	1	5	6
North Dakota	—	0	4	11	8	—	0	3	4	5
South Dakota	1	0	3	20	16	—	0	2	5	6
<b>S. Atlantic</b>	15	22	47	774	739	1	6	16	206	217
Delaware	—	0	1	9	6	—	0	0	—	—
District of Columbia	—	0	2	—	8	N	0	0	N	N
Florida	6	6	12	185	167	—	1	6	48	39
Georgia	4	5	13	184	168	1	2	6	50	58
Maryland§	1	3	12	122	134	—	1	4	45	43
North Carolina	3	2	12	79	93	N	0	0	N	N
South Carolina§	—	2	5	49	42	—	1	6	33	37
Virginia§	—	3	9	116	93	—	0	4	18	35
West Virginia	1	1	4	30	28	—	0	3	12	5
<b>E.S. Central</b>	1	4	10	135	125	—	1	6	42	59
Alabama§	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	5	23	28	N	0	0	N	N
Mississippi	N	0	0	N	N	—	0	2	—	8
Tennessee§	1	3	9	112	97	—	1	6	42	51
<b>W.S. Central</b>	2	9	79	290	316	3	6	46	182	173
Arkansas§	—	0	2	13	7	1	0	4	19	10
Louisiana	—	0	3	9	13	—	0	3	13	10
Oklahoma	—	3	20	98	72	2	1	7	35	47
Texas§	2	6	59	170	224	—	4	34	115	106
<b>Mountain</b>	2	9	22	307	393	1	4	16	158	183
Arizona	1	3	7	102	136	1	2	10	82	85
Colorado	1	3	9	103	100	—	1	4	30	40
Idaho§	—	0	2	4	12	—	0	2	6	3
Montana§	N	0	0	N	N	N	0	0	N	N
Nevada§	—	0	1	5	6	—	0	1	—	3
New Mexico§	—	2	7	52	97	—	0	4	15	25
Utah	—	1	6	40	36	—	0	5	25	26
Wyoming§	—	0	1	1	6	—	0	1	—	1
<b>Pacific</b>	1	4	10	101	86	—	1	6	32	34
Alaska	—	1	4	27	19	—	0	5	27	22
California	N	0	0	N	N	N	0	0	N	N
Hawaii	1	3	8	74	67	—	0	2	5	12
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 (NNDS event code 11717).

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending August 1, 2009, and July 26, 2008 (30th week)\*

Reporting area	<i>Streptococcus pneumoniae</i> , invasive disease, drug resistant†										Syphilis, primary and secondary				
	All ages				Aged <5 years										
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
	Med	Max				Med	Max				Med	Max			
<b>United States</b>	15	61	276	1,950	2,074	2	9	21	296	309	121	262	452	7,237	7,159
<b>New England</b>	—	1	48	32	45	—	0	5	1	6	4	5	15	186	186
Connecticut	—	0	48	—	—	—	0	5	—	—	—	1	5	36	14
Maine§	—	0	2	8	14	—	0	1	—	—	—	0	1	1	8
Massachusetts	—	0	1	1	—	—	0	1	1	—	4	4	11	129	137
New Hampshire	—	0	3	5	—	—	0	0	—	—	—	0	2	11	10
Rhode Island§	—	0	6	7	18	—	0	1	—	4	—	0	5	9	12
Vermont§	—	0	2	11	13	—	0	0	—	2	—	0	2	—	5
<b>Mid. Atlantic</b>	—	4	14	111	215	—	0	3	19	17	46	34	51	1,081	962
New Jersey	—	0	0	—	—	—	0	0	—	—	—	4	13	133	120
New York (Upstate)	—	1	10	49	45	—	0	2	10	6	4	2	8	73	83
New York City	—	0	4	3	89	—	0	2	—	—	40	22	36	677	592
Pennsylvania	—	1	8	59	81	—	0	2	9	11	2	6	12	198	167
<b>E.N. Central</b>	1	12	41	501	453	—	1	8	67	61	13	24	44	583	648
Illinois	N	0	0	N	N	N	0	0	N	N	1	9	19	174	252
Indiana	—	4	32	225	158	—	0	6	28	19	1	2	10	85	78
Michigan	—	0	2	18	15	—	0	1	2	2	10	3	18	141	120
Ohio	1	7	18	258	280	—	1	4	37	40	—	6	15	157	169
Wisconsin	—	0	0	—	—	—	0	0	—	—	1	1	4	26	29
<b>W.N. Central</b>	1	2	161	90	148	—	1	3	20	28	1	6	14	165	236
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	12	12
Kansas	—	1	5	38	58	—	0	2	13	3	1	0	3	14	17
Minnesota	—	0	156	—	20	—	0	3	—	20	—	2	6	37	60
Missouri	1	1	5	40	64	—	0	1	5	2	—	3	10	83	140
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	—
<b>S. Atlantic</b>	12	26	53	887	823	2	4	14	132	131	29	63	262	1,781	1,554
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	81
Florida	8	15	36	524	453	2	2	13	84	83	—	20	31	563	586
Georgia	4	8	25	268	282	—	1	5	41	40	5	14	227	385	327
Maryland§	—	0	1	4	4	—	0	0	—	1	5	6	16	168	190
North Carolina	N	0	0	N	N	N	0	0	N	N	9	8	19	308	159
South Carolina§	—	0	0	—	—	—	0	0	—	—	2	2	6	61	50
Virginia§	N	0	0	N	N	N	0	0	N	N	8	5	16	174	144
West Virginia	—	2	13	78	81	—	0	3	7	7	—	0	2	4	7
<b>E.S. Central</b>	—	5	25	186	229	—	1	3	27	42	13	22	36	640	606
Alabama§	N	0	0	N	N	N	0	0	N	N	—	8	16	237	257
Kentucky	—	1	5	51	56	—	0	2	7	9	—	1	10	31	49
Mississippi	—	0	3	—	27	—	0	1	—	8	8	3	18	122	81
Tennessee§	—	3	23	135	146	—	0	3	20	25	5	8	19	250	219
<b>W.S. Central</b>	—	1	6	64	73	—	0	3	13	12	9	49	80	1,377	1,199
Arkansas§	—	0	5	37	13	—	0	3	9	3	9	4	35	123	90
Louisiana	—	1	5	27	60	—	0	1	4	9	—	13	40	298	316
Oklahoma	N	0	0	N	N	N	0	0	N	N	—	1	7	33	45
Texas§	—	0	0	—	—	—	0	0	—	—	—	31	46	923	748
<b>Mountain</b>	1	2	7	77	87	—	0	3	16	11	3	8	18	167	379
Arizona	—	0	0	—	—	—	0	0	—	—	1	3	8	22	195
Colorado	—	0	0	—	—	—	0	0	—	—	—	1	5	53	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	28	42	—	0	2	6	5	1	1	7	59	45
New Mexico§	—	0	0	—	—	—	0	0	—	—	1	1	5	28	23
Utah	—	1	6	40	44	—	0	3	9	6	—	0	2	—	15
Wyoming§	—	0	2	9	1	—	0	1	1	—	—	0	1	2	2
<b>Pacific</b>	—	0	1	2	1	—	0	1	1	1	3	46	67	1,257	1,389
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	1
California	N	0	0	N	N	N	0	0	N	N	2	41	59	1,158	1,262
Hawaii	—	0	1	2	1	—	0	1	1	1	—	0	3	17	14
Oregon§	N	0	0	N	N	N	0	0	N	N	—	1	4	24	8
Washington	N	0	0	N	N	N	0	0	N	N	1	2	9	58	104
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	—	—	2	3	11	120	88
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 1, 2009, and July 26, 2008 (30th week)\*

Reporting area	West Nile virus disease†														
	Varicella (chickenpox)					Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008	Current week	Previous 52 weeks		Cum 2009	Cum 2008
	Med	Max				Med	Max				Med	Max			
<b>United States</b>	49	490	1,035	13,741	19,683	—	1	75	23	116	—	0	77	11	148
<b>New England</b>	5	11	46	181	1,054	—	0	2	—	—	—	0	1	—	2
Connecticut	—	0	21	—	533	—	0	2	—	—	—	0	1	—	2
Maine¶	—	0	11	—	166	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
New Hampshire	5	4	11	134	169	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	1	4	—	—	0	1	—	—	—	0	0	—	—
Vermont¶	—	3	17	43	186	—	0	0	—	—	—	0	0	—	—
<b>Mid. Atlantic</b>	5	38	58	977	1,559	—	0	8	1	3	—	0	4	—	—
New Jersey	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
New York (Upstate)	N	0	0	N	N	—	0	5	1	1	—	0	2	—	—
New York City	—	0	0	—	—	—	0	2	—	1	—	0	2	—	—
Pennsylvania	5	38	58	977	1,559	—	0	2	—	1	—	0	1	—	—
<b>E.N. Central</b>	9	157	254	4,194	4,795	—	0	8	—	3	—	0	3	—	3
Illinois	—	33	73	835	665	—	0	4	—	1	—	0	2	—	2
Indiana	—	0	35	332	—	—	0	1	—	1	—	0	1	—	—
Michigan	6	48	90	1,282	2,041	—	0	4	—	—	—	0	2	—	—
Ohio	3	42	91	1,373	1,545	—	0	3	—	1	—	0	1	—	—
Wisconsin	—	13	55	372	544	—	0	2	—	—	—	0	1	—	1
<b>W.N. Central</b>	4	22	114	648	780	—	0	6	2	10	—	0	21	3	34
Iowa	N	0	0	N	N	—	0	1	—	2	—	0	1	—	1
Kansas	—	6	22	176	307	—	0	2	—	4	—	0	3	—	6
Minnesota	—	0	0	—	—	—	0	2	1	—	—	0	2	—	5
Missouri	4	10	51	417	445	—	0	3	—	1	—	0	1	—	—
Nebraska¶	N	0	0	N	N	—	0	1	—	1	—	0	6	1	5
North Dakota	—	0	108	55	—	—	0	2	—	—	—	0	11	—	10
South Dakota	—	0	4	—	28	—	0	5	1	2	—	0	6	2	7
<b>S. Atlantic</b>	22	56	146	1,362	3,161	—	0	4	—	3	—	0	4	—	1
Delaware	—	0	4	8	26	—	0	0	—	—	—	0	1	—	—
District of Columbia	—	0	3	—	18	—	0	2	—	—	—	0	1	—	—
Florida	11	28	67	897	1,128	—	0	2	—	—	—	0	0	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	1	—	1
Maryland¶	N	0	0	N	N	—	0	2	—	1	—	0	3	—	—
North Carolina	N	0	0	N	N	—	0	1	—	1	—	0	1	—	—
South Carolina¶	—	4	54	154	570	—	0	0	—	—	—	0	1	—	—
Virginia¶	—	3	119	28	968	—	0	0	—	—	—	0	1	—	—
West Virginia	11	9	32	275	451	—	0	0	—	1	—	0	0	—	—
<b>E.S. Central</b>	—	14	28	372	827	—	0	7	6	10	—	0	7	—	20
Alabama¶	—	14	28	370	817	—	0	3	—	—	—	0	2	—	1
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	1	2	10	—	0	4	5	6	—	0	7	—	15
Tennessee¶	N	0	0	N	N	—	0	2	1	4	—	0	3	—	4
<b>W.S. Central</b>	—	122	747	4,988	5,992	—	0	8	3	17	—	0	6	—	21
Arkansas¶	—	4	47	96	466	—	0	1	1	4	—	0	1	—	1
Louisiana	—	1	6	55	52	—	0	3	—	2	—	0	5	—	6
Oklahoma	N	0	0	N	N	—	0	1	—	2	—	0	1	—	4
Texas¶	—	115	721	4,837	5,474	—	0	6	2	9	—	0	4	—	10
<b>Mountain</b>	4	33	83	914	1,435	—	0	12	8	11	—	0	22	6	39
Arizona	—	0	0	—	—	—	0	10	4	5	—	0	8	1	1
Colorado	4	13	44	345	573	—	0	4	—	2	—	0	10	2	16
Idaho¶	N	0	0	N	N	—	0	1	1	2	—	0	6	—	12
Montana¶	—	2	20	105	216	—	0	1	1	—	—	0	2	—	—
Nevada¶	N	0	0	N	N	—	0	2	2	2	—	0	3	3	2
New Mexico¶	—	3	20	134	152	—	0	1	—	—	—	0	1	—	—
Utah	—	12	31	330	484	—	0	2	—	—	—	0	5	—	6
Wyoming¶	—	0	1	—	10	—	0	0	—	—	—	0	2	—	2
<b>Pacific</b>	—	3	12	105	80	—	0	38	3	59	—	0	23	2	28
Alaska	—	2	11	83	39	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	37	3	59	—	0	20	2	26
Hawaii	—	1	4	22	41	—	0	0	—	—	—	0	0	—	—
Oregon¶	N	0	0	N	N	—	0	2	—	—	—	0	4	—	2
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	—	9	23	274	380	—	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 1, 2009 (30th week)

Reporting area	All causes, by age (years)						P&I†	Total	Reporting area	All causes, by age (years)						P&I†	Total
	All Ages	≥65	45-64	25-44	1-24	<1				All Ages	≥65	45-64	25-44	1-24	<1		
<b>New England</b>	435	299	91	26	10	9	34	<b>S. Atlantic</b>	1,133	650	321	93	35	34	71		
Boston, MA	123	69	34	10	5	5	14	Atlanta, GA	112	47	42	10	4	9	5		
Bridgeport, CT	31	24	5	1	1	—	—	Baltimore, MD	146	74	47	15	3	7	12		
Cambridge, MA	19	14	3	1	—	1	4	Charlotte, NC	130	84	36	8	1	1	10		
Fall River, MA	22	18	4	—	—	—	2	Jacksonville, FL	171	103	46	13	5	4	7		
Hartford, CT	51	34	13	1	3	—	4	Miami, FL	90	52	23	9	4	2	7		
Lowell, MA	15	14	1	—	—	—	1	Norfolk, VA	44	24	11	4	3	2	2		
Lynn, MA	6	4	1	1	—	—	—	Richmond, VA	59	26	23	5	3	2	5		
New Bedford, MA	25	18	4	3	—	—	1	Savannah, GA	48	29	14	1	1	3	4		
New Haven, CT	U	U	U	U	U	U	U	St. Petersburg, FL	58	34	17	4	2	1	6		
Providence, RI	57	44	10	3	—	—	2	Tampa, FL	206	136	42	20	5	3	11		
Somerville, MA	2	2	—	—	—	—	—	Washington, D.C.	60	36	18	2	4	—	1		
Springfield, MA	31	22	5	1	1	2	1	Wilmington, DE	9	5	2	2	—	—	1		
Waterbury, CT	16	12	2	2	—	—	2	<b>E.S. Central</b>	847	518	232	61	16	20	59		
Worcester, MA	37	24	9	3	—	1	3	Birmingham, AL	182	116	43	14	3	6	9		
<b>Mid. Atlantic</b>	2,214	1,446	551	123	53	41	107	Chattanooga, TN	77	50	21	5	—	1	3		
Albany, NY	53	36	14	2	—	1	3	Knoxville, TN	76	48	19	6	—	3	10		
Allentown, PA	24	18	5	—	1	—	—	Lexington, KY	48	27	19	2	—	—	5		
Buffalo, NY	73	46	21	3	1	2	7	Memphis, TN	162	94	42	15	5	6	17		
Camden, NJ	36	18	11	2	4	1	—	Mobile, AL	116	68	38	7	3	—	4		
Elizabeth, NJ	13	10	2	1	—	—	1	Montgomery, AL	53	29	18	6	—	—	3		
Erie, PA	41	23	11	5	1	1	1	Nashville, TN	133	86	32	6	5	4	8		
Jersey City, NJ	9	5	4	—	—	—	2	<b>W.S. Central</b>	1,447	883	381	97	42	44	57		
New York City, NY	1,025	679	249	55	24	18	37	Austin, TX	80	49	19	6	3	3	4		
Newark, NJ	27	19	6	1	—	1	1	Baton Rouge, LA	67	42	15	7	—	3	—		
Paterson, NJ	10	4	6	—	—	—	1	Corpus Christi, TX	63	46	13	—	2	2	2		
Philadelphia, PA	564	337	162	36	16	13	28	Dallas, TX	182	99	53	15	8	7	9		
Pittsburgh, PA‡	26	21	3	2	—	—	3	El Paso, TX	95	53	28	7	3	4	2		
Reading, PA	25	17	6	1	1	—	3	Fort Worth, TX	U	U	U	U	U	U	U		
Rochester, NY	102	78	15	6	2	1	5	Houston, TX	418	246	107	28	20	17	12		
Schenectady, NY	17	13	2	2	—	—	1	Little Rock, AR	74	46	22	3	2	1	3		
Scranton, PA	22	15	3	2	1	1	1	New Orleans, LA	U	U	U	U	U	U	U		
Syracuse, NY	87	66	15	2	2	2	8	San Antonio, TX	237	148	68	16	1	4	10		
Trenton, NJ	22	12	9	1	—	—	2	Shreveport, LA	79	50	23	2	2	2	6		
Utica, NY	16	11	4	1	—	—	1	Tulsa, OK	152	104	33	13	1	1	9		
Yonkers, NY	22	18	3	1	—	—	2	<b>Mountain</b>	1,051	704	213	80	31	23	47		
<b>E.N. Central</b>	1,840	1,191	441	94	56	55	104	Albuquerque, NM	112	75	25	7	3	2	4		
Akron, OH	36	26	8	—	—	—	2	Boise, ID	52	39	5	6	1	1	3		
Canton, OH	24	21	3	—	—	—	1	Colorado Springs, CO	60	41	9	5	3	2	1		
Chicago, IL	328	171	104	20	15	15	33	Denver, CO	68	42	17	7	1	1	5		
Cincinnati, OH	71	44	19	2	1	5	9	Las Vegas, NV	263	184	62	15	1	1	14		
Cleveland, OH	221	159	47	6	4	5	3	Ogden, UT	56	39	12	4	—	1	5		
Columbus, OH	175	127	32	11	2	3	13	Phoenix, AZ	171	98	37	16	11	9	5		
Dayton, OH	105	66	30	6	3	—	2	Pueblo, CO	25	18	6	—	1	—	1		
Detroit, MI	166	84	47	14	14	7	7	Salt Lake City, UT	136	85	28	12	7	4	7		
Evansville, IN	35	28	5	1	1	—	2	Tucson, AZ	108	83	12	8	3	2	2		
Fort Wayne, IN	70	54	10	3	1	2	—	<b>Pacific</b>	1,557	990	381	118	39	29	135		
Gary, IN	13	11	—	—	1	1	—	Berkeley, CA	12	8	3	1	—	—	3		
Grand Rapids, MI	48	38	8	2	—	—	—	Fresno, CA	130	87	30	7	3	3	11		
Indianapolis, IN	186	102	57	12	5	10	15	Glendale, CA	29	25	2	2	—	—	6		
Lansing, MI	37	29	5	3	—	—	3	Honolulu, HI	76	51	17	5	1	2	5		
Milwaukee, WI	72	46	17	4	3	2	2	Long Beach, CA	45	24	15	3	3	—	6		
Peoria, IL	41	32	8	—	1	—	4	Los Angeles, CA	259	156	62	26	8	7	33		
Rockford, IL	43	32	7	2	2	—	2	Pasadena, CA	18	12	2	—	3	1	1		
South Bend, IN	47	35	8	3	1	—	3	Portland, OR	112	80	25	6	—	1	5		
Toledo, OH	75	50	18	3	1	3	3	Sacramento, CA	203	137	44	13	7	2	18		
Youngstown, OH	47	36	8	2	1	—	2	San Diego, CA	130	86	35	6	1	2	8		
<b>W.N. Central</b>	488	304	124	33	16	11	37	San Francisco, CA	106	58	32	12	1	3	14		
Des Moines, IA	U	U	U	U	U	U	U	San Jose, CA	165	109	39	8	5	4	13		
Duluth, MN	34	25	8	1	—	—	—	Santa Cruz, CA	32	20	6	5	1	—	3		
Kansas City, KS	14	7	6	1	—	—	—	Seattle, WA	113	58	35	14	3	3	5		
Kansas City, MO	98	61	29	3	2	3	6	Spokane, WA	49	29	15	3	1	1	2		
Lincoln, NE	44	34	6	2	2	—	3	Tacoma, WA	78	50	19	7	2	—	2		
Minneapolis, MN	53	32	14	3	2	2	7	<b>Total¶</b>	<b>11,012</b>	<b>6,985</b>	<b>2,735</b>	<b>725</b>	<b>298</b>	<b>266</b>	<b>651</b>		
Omaha, NE	90	59	22	4	1	4	7										
St. Louis, MO	37	18	13	5	1	—	5										
St. Paul, MN	59	33	14	7	4	1	9										
Wichita, KS	59	35	12	7	4	1	—										

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 &gt;100,000. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

† Pneumonia and influenza.

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

¶ Total includes unknown ages.

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